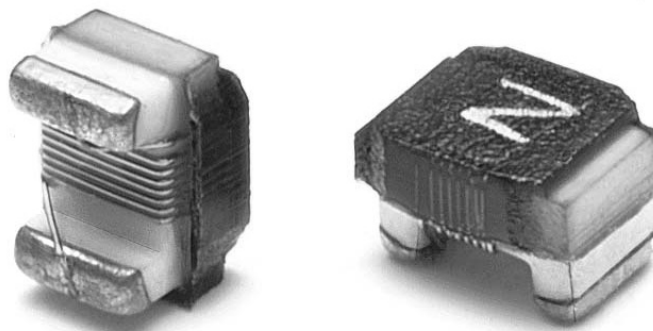


# RF Chip Inductors

Wire-Wound - 0402, 0603, 0805, 1008, 1206



Pulse Electronics - leading supplier of magnetics for consumer applications

# Table of Contents



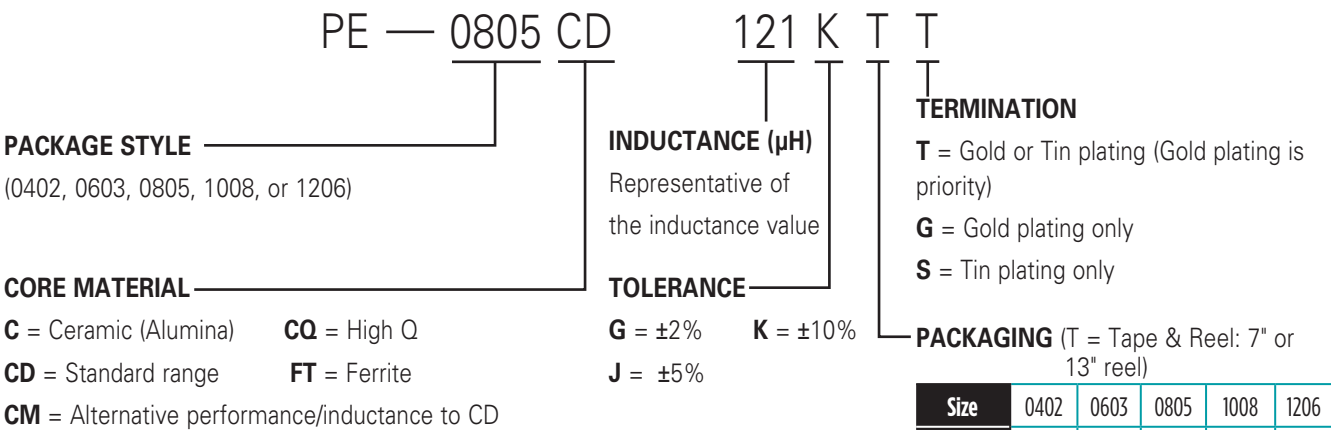
The 0402 to 1206 series range of Miniature Chip Inductors contains the very latest in wire-wound technology and Ceramic or Ferrite Core, thus providing the ultimate in performance demanded by today's Wireless products. The Inductors provide high Q and SRFs in an industry standard size and footprint. Pulse chip inductors manufactured after February 2005 are in compliance with RoHS requirements.

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|                                        |       |
|----------------------------------------|-------|
| Part Number Legend .....               | 2     |
| Selection Guide .....                  | 3     |
| Performance Specifications             |       |
| Environmental Testing .....            | 4     |
| Mechanical Testing .....               | 4-5   |
| Tape and Reel Specification .....      | 5     |
| Miniature Wire-wound RF Chip Inductors |       |
| 0402CD Series .....                    | 6-7   |
| 0603CD Series .....                    | 8-10  |
| 0805CD Series .....                    | 11-13 |
| 0805CM Series .....                    | 14-15 |
| 0805FT Series .....                    | 16-17 |
| 1008CD Series .....                    | 18-20 |
| 1008CM Series .....                    | 21-22 |
| 1008CQ Series .....                    | 23-24 |
| 1206CD Series .....                    | 25-27 |

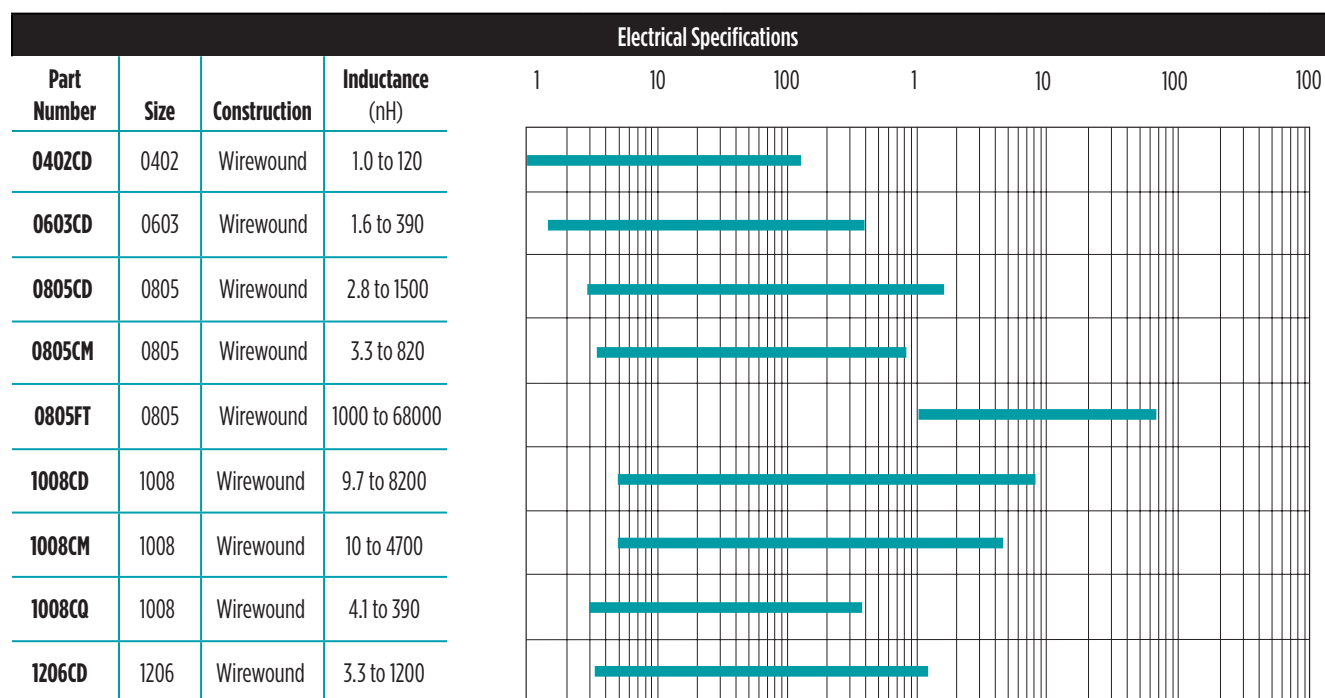
# WIRE-WOUND RF CHIP INDUCTORS

## PART NUMBER LEGEND



# WIRE-WOUND RF CHIP INDUCTORS

## SELECTION GUIDES



**CD Series:** Standard 100% compatible with other market leaders.

**CM Series:** Offers improved electrical performance or alternative inductance values to Pulse CD series.

**CQ Series:** Offers high Q and high Idc series.

**FT Series:** Ferrite core offers higher inductance values.

## Competition Cross Reference

| Type | Competition | Pulse Wire-Wound Inductors |        |                  |        |        |                  |        |
|------|-------------|----------------------------|--------|------------------|--------|--------|------------------|--------|
|      |             | 0402CD                     | 0603CD | 0805CD           | 0805FT | 1008CQ | 1008CD           | 1206CD |
|      | Coilcraft   | 0402CS                     | 0603CS | 0805CS/<br>HS/HT |        | 1008HQ | 1008CS/<br>HT/CT | 1206CS |
|      | Murata      |                            |        | LQW1608A         |        |        | LQN21A           |        |
|      | Taiyo Yuden |                            |        | LB2012T          |        |        | LEM_2520T        |        |
|      | TDK         |                            |        |                  | NL2016 |        | NLH2520          |        |

# WIRE-WOUND RF CHIP INDUCTORS

## PERFORMANCE TESTING

### Electrical Testing

|                                                                              |                                                                                                                   |                                                                                                                                                                          |
|------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Storage and Operating Temperature Range:</b><br><br><b>-40° to +125°C</b> | Inductors are subjected to the extremes for 48 hours.<br>Then tested at 25 °C                                     | There shall be no deformation or change in appearance<br><br>Inductance shall not change by more than $\pm 5\%$<br><br>Q values shall not change by more than $\pm 10\%$ |
| <b>Thermal:</b><br><br><b>-40° to +85°C</b>                                  | Inductors are subjected to 30 cycles for 30 minutes at each extreme.<br>Then tested at 25 °C                      |                                                                                                                                                                          |
| <b>Moisture Resistance</b>                                                   | Inductors are subjected to 10 cycles of 24 hours at 70°C with 90 to 95% Relative Humidity<br>Then tested at 25 °C |                                                                                                                                                                          |
| <b>Operating Life</b>                                                        | Inductors are subjected to 1000 hours at 85C with 85% Relative Humidity with the rated current applied            | There shall be no Damaged, Open or Shorted Windings                                                                                                                      |

### Mechanical Testing

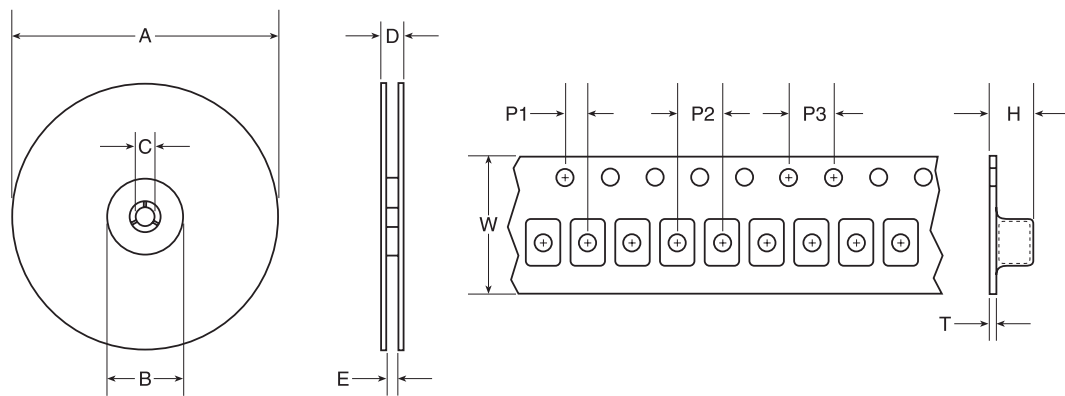
| <b>Temperature Range:</b>                         | Inductors are subjected to the following:<br>Use a solder pot at 260C, with RMA Flux. Each termination is immersed in 63Sn/37Pb molten solder for 4 to 6 seconds.                                                                                                                                                                                                                                                                                                                                                                                                                                           | There shall be no deformation or change in appearance<br><br>Inductance shall not change by more than $\pm 5\%$<br><br>Q values shall not change by more than $\pm 10\%$ |               |                  |   |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------------|---|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>Recommended Solder Heat Resistance Profile</b> | <table><caption>Recommended Solder Heat Resistance Profile Data</caption><thead><tr><th>TIME (SECOND)</th><th>TEMPERATURE (C°)</th></tr></thead><tbody><tr><td>0</td><td>25</td></tr><tr><td>25</td><td>30</td></tr><tr><td>50</td><td>40</td></tr><tr><td>75</td><td>60</td></tr><tr><td>100</td><td>125</td></tr><tr><td>125</td><td>150</td></tr><tr><td>150</td><td>165</td></tr><tr><td>175</td><td>180</td></tr><tr><td>200</td><td>210</td></tr><tr><td>225</td><td>250</td></tr><tr><td>250</td><td>210</td></tr><tr><td>275</td><td>170</td></tr><tr><td>300</td><td>150</td></tr></tbody></table> |                                                                                                                                                                          | TIME (SECOND) | TEMPERATURE (C°) | 0 | 25 | 25 | 30 | 50 | 40 | 75 | 60 | 100 | 125 | 125 | 150 | 150 | 165 | 175 | 180 | 200 | 210 | 225 | 250 | 250 | 210 | 275 | 170 | 300 | 150 |
| TIME (SECOND)                                     | TEMPERATURE (C°)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                          |               |                  |   |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0                                                 | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                          |               |                  |   |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 25                                                | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                          |               |                  |   |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 50                                                | 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                          |               |                  |   |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 75                                                | 60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                          |               |                  |   |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 100                                               | 125                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                          |               |                  |   |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 125                                               | 150                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                          |               |                  |   |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 150                                               | 165                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                          |               |                  |   |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 175                                               | 180                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                          |               |                  |   |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 200                                               | 210                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                          |               |                  |   |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 225                                               | 250                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                          |               |                  |   |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 250                                               | 210                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                          |               |                  |   |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 275                                               | 170                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                          |               |                  |   |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 300                                               | 150                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                          |               |                  |   |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

# WIRE-WOUND RF CHIP INDUCTORS

## PERFORMANCE SPECIFICATIONS

| Electrical Specifications  |                                                                                                                                         |                                                                                                                                                                          |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Vibration (Random)</b>  | Samplers are subjected to random vibrations as per NAVMAT P9492                                                                         | There shall be no deformation or change in appearance<br><br>Inductance shall not change by more than $\pm 5\%$<br><br>Q values shall not change by more than $\pm 10\%$ |
| <b>Mechanical Shock</b>    | Inductors are subjected to one half sine wave pulse (8700 g's for 0.3ms) in each directional axis for a total of 18 shocks              |                                                                                                                                                                          |
| <b>Moisture Resistance</b> | Reflow Inductors on to test pads using 63 Sn/37 Pb solder paste (IR Reflow profile = 200°C for 30 seconds or peak 235°C for 20 seconds) | The inductors shall withstand a minimum force of 1000 g's in any direction using a dynamometer force gauge.                                                              |

## Tape and Reel Specifications



### Electrical Specifications @ 25°C - Operating Temperature -40°C to +125°C

| Series | Parts per Reel | Reels Dimensions (mm) |     |    |      |      | Tape Dimensions (mm) |    |    |    |     |     |
|--------|----------------|-----------------------|-----|----|------|------|----------------------|----|----|----|-----|-----|
|        |                | A                     | B   | C  | D    | E    | W                    | P1 | P2 | P3 | H   | T   |
| 0402CD | 3000           | 178                   | 50  | 13 | 14.4 | 8.4  | 8                    | 2  | 4  | 4  | 1.1 | 0.3 |
| 0603CD | 2000           | 178                   | 50  | 13 | 14.4 | 8.4  | 8                    | 2  | 4  | 4  | 1.7 | 0.3 |
| 0805CD | 2000           | 178                   | 50  | 13 | 14.4 | 8.4  | 8                    | 2  | 4  | 4  | 2.1 | 0.3 |
| 0805CM | 2000           | 178                   | 50  | 13 | 14.4 | 8.4  | 8                    | 2  | 4  | 4  | 2.1 | 0.3 |
| 0805FT | 2000           | 178                   | 50  | 13 | 14.4 | 8.4  | 8                    | 2  | 4  | 4  | 2.1 | 0.3 |
| 1008CD | 1600           | 178                   | 50  | 13 | 14.4 | 8.4  | 8                    | 2  | 4  | 4  | 2.6 | 0.3 |
| 1008CM | 1600           | 178                   | 50  | 13 | 14.4 | 8.4  | 8                    | 2  | 4  | 4  | 2.6 | 0.3 |
| 1008CQ | 1600           | 178                   | 50  | 13 | 14.4 | 8.4  | 8                    | 2  | 4  | 4  | 2.6 | 0.3 |
| 1206CD | 3000           | 330                   | 101 | 13 | 18.4 | 12.4 | 12                   | 2  | 4  | 4  | 2.0 | 0.4 |

**Notes:** P1, P2 and P3 are same for all chip inductor series. Keeping the same dimensions for guide hole and pocket pitch (P1), pocket pitch (P2), guide hold pitch (P3) and tape width (8mm) for all series, enables the packaging machine to maintain the same settings while changing models. The only difference between the series are the parts per reel which contributes to a different length of tapes/reel per model.

# WIRE-WOUND RF CHIP INDUCTORS - 0402CD SERIES



- Wirewound ceramic core construction
- High Q values
- High self resonant frequency
- Industry standard 0402 (1005) surface mount land pattern

Electrical Specifications @ 25°C

| Part Number     | Inductance 1<br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q 2<br>(MIN) | SRF 3<br>(MHz MIN) | Rdc<br>(MHz MIN) | I <sub>dc</sub><br>(mA MAX) |
|-----------------|----------------------|-----------------------|-----------------------|--------------|--------------------|------------------|-----------------------------|
| PE-0402CD3N6KTT | 3.6 @ 250MHz         | ±10% (K)              | ±5% (J)               | 20 @ 250MHz  | 6000               | 0.066            | 840                         |
| PE-0402CD3N9KTT | 3.9 @ 250MHz         | ±10% (K)              | ±5% (J)               | 20 @ 250MHz  | 5800               | 0.066            | 840                         |
| PE-0402CD5N6KTT | 5.6 @ 250MHz         | ±10% (K)              | ±5% (J)               | 23 @ 250MHz  | 5800               | 0.083            | 760                         |
| PE-0402CD6N2KTT | 6.2 @ 250MHz         | ±10% (K)              | ±5% (J)               | 23 @ 250MHz  | 5800               | 0.083            | 760                         |
| PE-0402CD6N8KTT | 6.8 @ 250MHz         | ±10% (K)              | ±5% (J)               | 20 @ 250MHz  | 5800               | 0.083            | 680                         |
| PE-0402CD7N5KTT | 7.5 @ 250MHz         | ±10% (K)              | ±5% (J)               | 25 @ 250MHz  | 5800               | 0.104            | 680                         |
| PE-0402CD8N2KTT | 8.2 @ 250MHz         | ±10% (K)              | ±5% (J)               | 25 @ 250MHz  | 4400               | 0.104            | 680                         |
| PE-0402CD9N0KTT | 9.0 @ 250MHz         | ±10% (K)              | ±5% (J)               | 25 @ 250MHz  | 4160               | 0.104            | 680                         |
| PE-0402CD100KTT | 10 @ 250MHz          | ±10% (K)              | ±5% (J), ±2% (G)      | 21 @ 250MHz  | 3900               | 0.195            | 480                         |
| PE-0402CD150KTT | 15 @ 250MHz          | ±10% (K)              | ±5% (J), ±2% (G)      | 26 @ 250MHz  | 3280               | 0.172            | 560                         |
| PE-0402CD680KTT | 68 @ 250MHz          | ±10% (K)              | ±5% (J)               | 18 @ 250MHz  | 1840               | 0.970            | 100                         |
| PE-0402CD820KTT | 82 @ 250MHz          | ±10% (K)              | ±5% (J)               | 16 @ 250MHz  | 1680               | 1.250            | 100                         |

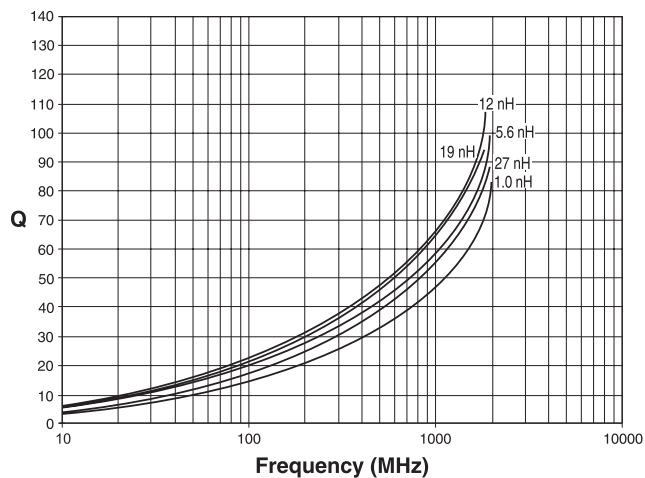
## Notes:

1. Inductance measured using a HP4286A RF Impedance Analyzer. (Please note that inductance information is not stamped on part, because of the extremely small size).
2. Q measured using a HP4291A RF Impedance Analyzer with a HP16193A Test Fixture.
3. SRF measured using a HP8753C Network Analyzer.

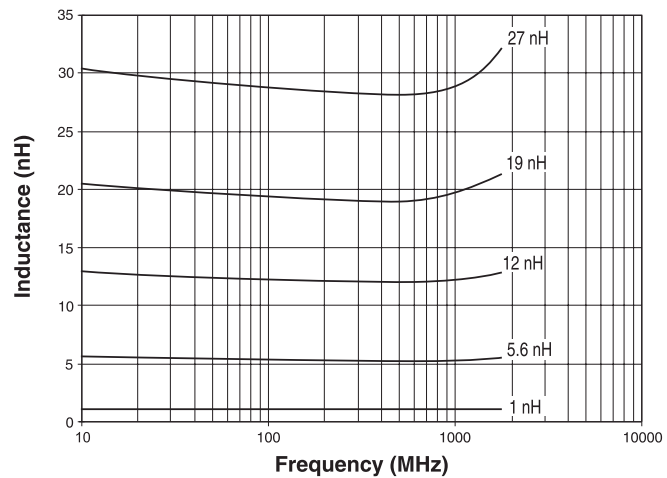
4. R<sub>dc</sub> measured using a Valhalla Scientific model 4100 ATC Digital Ohmmeter.
5. Based on a 15°C maximum temperature rise.
6. Component Weight: 0.002 grams typical.

# WIRE-WOUND RF CHIP INDUCTORS - 0402CD SERIES

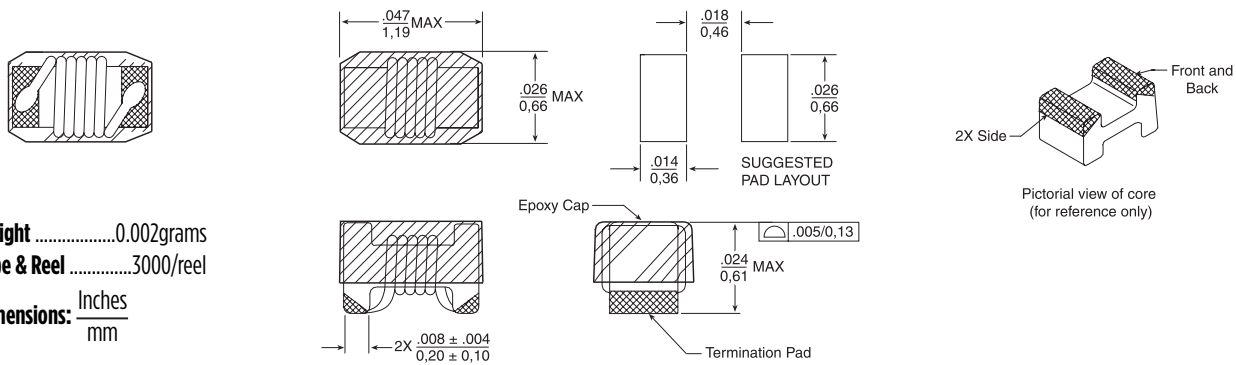
## Typical Q vs Frequency



## Typical Inductance vs Frequency



## Mechanical



Weight .....0.002grams

Tape & Reel .....3000/reel

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified,  
all tolerances are  $\pm \frac{.010}{0.25}$

# WIRE-WOUND RF CHIP INDUCTORS - 0603CD SERIES



- Wirewound ceramic core construction
- High Q values
- High self resonant frequency
- Industry standard 0603 (1608) surface mount land pattern

See page 3 for Competition Cross Reference

## Electrical Specifications @ 25°C

| Part Number     | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | I <sub>dc</sub> <sup>5</sup><br>(mA MAX) |
|-----------------|---------------------------------|-----------------------|-----------------------|-------------------------|-------------------------------|-----------------------------|------------------------------------------|
| PE-0603CD1N6KTT | 1.6 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 24 @ 250MHz             | >6000                         | 0.030                       | 700                                      |
| PE-0603CD010KTT | 1.7 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 16 @ 250MHz             | >6000                         | 0.050                       | 700                                      |
| PE-0603CD1N8KTT | 1.8 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 16 @ 250MHz             | >6000                         | 0.045                       | 700                                      |
| PE-0603CD2N2KTT | 2.2 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 18 @ 250MHz             | >6000                         | 0.110                       | 700                                      |
| PE-0603CD3N3KTT | 3.3 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 35 @ 250MHz             | >6000                         | 0.045                       | 700                                      |
| PE-0603CD3N6KTT | 3.6 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 20 @ 250MHz             | >6000                         | 0.070                       | 700                                      |
| PE-0603CD030KTT | 3.9 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 20 @ 250MHz             | >6000                         | 0.080                       | 700                                      |
| PE-0603CD4N3KTT | 4.3 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 20 @ 250MHz             | >6000                         | 0.102                       | 700                                      |
| PE-0603CD040KTT | 4.55 @ 250MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 20 @ 250MHz             | 5800                          | 0.106                       | 700                                      |
| PE-0603CD4N7KTT | 4.7 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 20 @ 250MHz             | 5800                          | 0.116                       | 700                                      |
| PE-0603CD5N1KTT | 5.1 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 20 @ 250MHz             | 5700                          | 0.108                       | 700                                      |
| PE-0603CD5N6KTT | 5.6 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 25 @ 250MHz             | 5500                          | 0.108                       | 700                                      |
| PE-0603CD6N2KTT | 6.2 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 25 @ 250MHz             | 5800                          | 0.110                       | 700                                      |
| PE-0603CD060KTT | 6.68 @ 250MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 25 @ 250MHz             | 5800                          | 0.110                       | 700                                      |
| PE-0603CD6N8KTT | 6.8 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 27 @ 250MHz             | 5800                          | 0.110                       | 700                                      |
| PE-0603CD7N5KTT | 7.5 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 28 @ 250MHz             | 4800                          | 0.115                       | 700                                      |
| PE-0603CD080KTT | 8.2 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 30 @ 250MHz             | 4600                          | 0.120                       | 700                                      |
| PE-0603CD8N7KTT | 8.7 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 28 @ 250MHz             | 4600                          | 0.109                       | 700                                      |
| PE-0603CD9N5KTT | 9.5 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 28 @ 250MHz             | 5400                          | 0.135                       | 700                                      |
| PE-0603CD100KTT | 10 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 30 @ 250MHz             | 4800                          | 0.130                       | 700                                      |
| PE-0603CD110KTT | 11 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 30 @ 250MHz             | 4000                          | 0.086                       | 700                                      |
| PE-0603CD120KTT | 12 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 30 @ 250MHz             | 4000                          | 0.130                       | 700                                      |
| PE-0603CD130KTT | 13 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 38 @ 250MHz             | 3600                          | 0.106                       | 700                                      |
| PE-0603CD150KTT | 15 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 30 @ 250MHz             | 4000                          | 0.170                       | 700                                      |
| PE-0603CD160KTT | 16 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 35 @ 250MHz             | 3300                          | 0.170                       | 700                                      |
| PE-0603CD180KTT | 18 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 35 @ 180MHz             | 3100                          | 0.170                       | 700                                      |
| PE-0603CD220KTT | 22 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 35 @ 250MHz             | 3000                          | 0.190                       | 700                                      |
| PE-0603CD230KTT | 23 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 38 @ 250MHz             | 2850                          | 0.190                       | 700                                      |
| PE-0603CD240KTT | 24 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 35 @ 250MHz             | 2650                          | 0.200                       | 600                                      |

(Continued on next page)

# WIRE-WOUND RF CHIP INDUCTORS - 0603CD SERIES

| Electrical Specifications @ 25°C (continued) |                                 |                       |                       |                         |                               |                             |                                          |
|----------------------------------------------|---------------------------------|-----------------------|-----------------------|-------------------------|-------------------------------|-----------------------------|------------------------------------------|
| Part Number                                  | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | I <sub>dc</sub> <sup>5</sup><br>(mA MAX) |
| PE-0603CD270KTT                              | 27 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 35 @ 250MHz             | 2800                          | 0.220                       | 600                                      |
| PE-0603CD300KTT                              | 30 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 37 @ 250MHz             | 2250                          | 0.144                       | 600                                      |
| PE-0603CD330KTT                              | 33 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 35 @ 250MHz             | 2300                          | 0.220                       | 600                                      |
| PE-0603CD360KTT                              | 36 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 37 @ 250MHz             | 2080                          | 0.250                       | 600                                      |
| PE-0603CD390KTT                              | 39 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 35 @ 250MHz             | 2200                          | 0.250                       | 600                                      |
| PE-0603CD430KTT                              | 43 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 35 @ 250MHz             | 2000                          | 0.280                       | 600                                      |
| PE-0603CD470KTT                              | 47 @ 200MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 35 @ 200MHz             | 2000                          | 0.280                       | 600                                      |
| PE-0603CD510KTT                              | 51 @ 200MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 35 @ 200MHz             | 1900                          | 0.270                       | 600                                      |
| PE-0603CD560KTT                              | 56 @ 200MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 35 @ 200MHz             | 1900                          | 0.310                       | 600                                      |
| PE-0603CD680KTT                              | 68 @ 200MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 35 @ 200MHz             | 1700                          | 0.340                       | 600                                      |
| PE-0603CD720KTT                              | 72 @ 150MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 34 @ 150MHz             | 1700                          | 0.490                       | 400                                      |
| PE-0603CD820KTT                              | 82 @ 150MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 34 @ 150MHz             | 1700                          | 0.540                       | 400                                      |
| PE-0603CD101KTT                              | 98.50 @ 150MHz                  | ±10% (K)              | ±5% (J), ±2% (G)      | 34 @ 150MHz             | 1400                          | 0.580                       | 400                                      |
| PE-0603CDR10KTT                              | 100 @ 150MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 34 @ 150MHz             | 1400                          | 0.580                       | 400                                      |
| PE-0603CD111KTT                              | 110 @ 150MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 33 @ 150MHz             | 1300                          | 0.610                       | 300                                      |
| PE-0603CDR12KTT                              | 120 @ 150MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 32 @ 150MHz             | 1300                          | 0.650                       | 300                                      |
| PE-0603CD121KTT                              | 122 @ 150MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 33 @ 150MHz             | 1300                          | 0.650                       | 300                                      |
| PE-0603CD151KTT                              | 150 @ 150MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 28 @ 150MHz             | 990                           | 0.920                       | 280                                      |
| PE-0603CD181KTT                              | 180 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 25 @ 100MHz             | 990                           | 1.250                       | 240                                      |
| PE-0603CD211KTT                              | 210 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 27 @ 100MHz             | 895                           | 2.060                       | 220                                      |
| PE-0603CD221KTT                              | 220 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 25 @ 100MHz             | 900                           | 1.900                       | 200                                      |
| PE-0603CD251KTT                              | 250 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 25 @ 100MHz             | 822                           | 3.550                       | 180                                      |
| PE-0603CD271KTT                              | 270 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 24 @ 100MHz             | 860                           | 2.300                       | 170                                      |
| PE-0603CD331KTT                              | 330 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 22 @ 100MHz             | 500                           | 2.300                       | 150                                      |
| PE-0603CD391KTT                              | 390 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 20 @ 100MHz             | 350                           | 2.900                       | 130                                      |

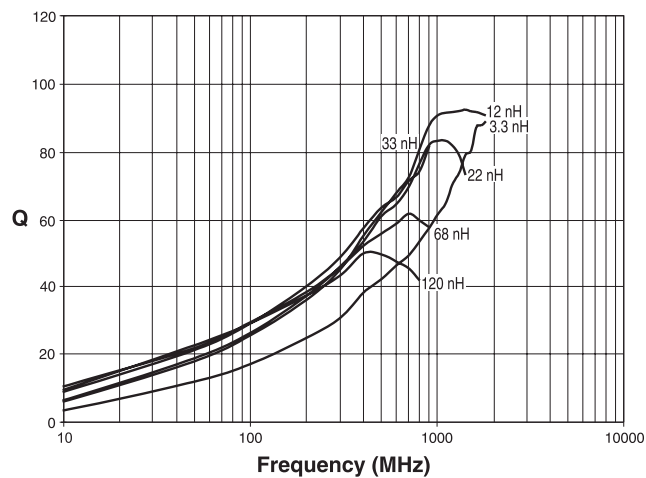
## Notes:

1. Inductance measured using a HP4286A RF Impedance Analyzer. (Please note that inductance information is not stamped on part, because of the extremely small size).
2. Q measured using a HP4291A RF Impedance Analyzer with a HP16193A Test Fixture.
3. SRF measured using a HP8753C Network Analyzer.
4. Rdc measured using a Valhalla Scientific model 4100 ATC Digital Ohmmeter.
5. Based on a 15°C maximum temperature rise.
6. 5-sides o top side epoxy cap.

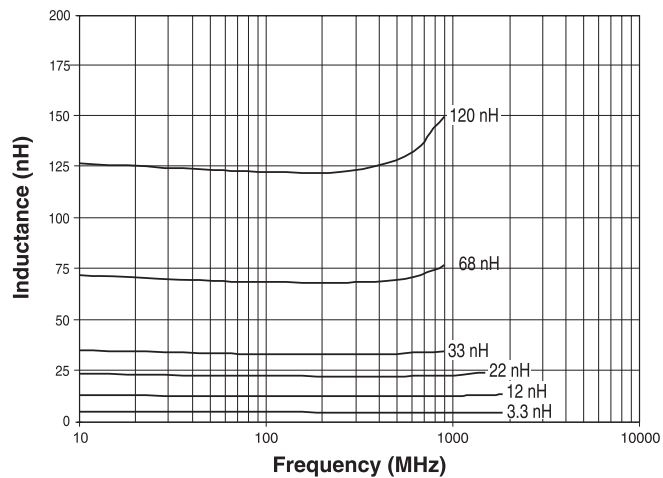
(Continued on next page)

# WIRE-WOUND RF CHIP INDUCTORS - 0603CD Series

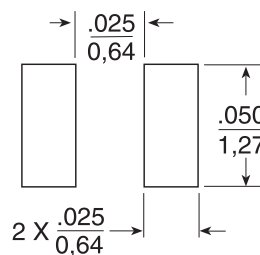
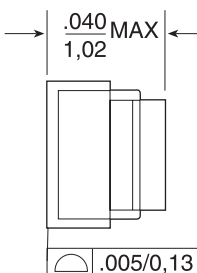
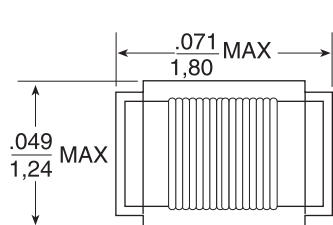
## Typical Q vs Frequency



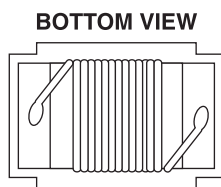
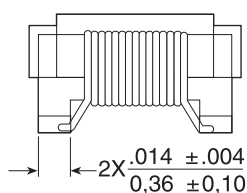
## Typical Inductance vs Frequency



## Mechanical



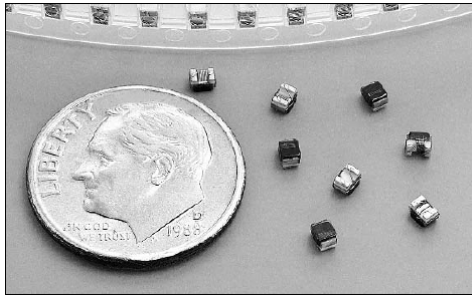
**SUGGESTED PAD LAYOUT**



**Dimensions:**  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified,  
all tolerances are  $\pm \frac{.010}{0,25}$

# WIRE-WOUND RF CHIP INDUCTORS - 0805CD SERIES



- ⦿ Wirewound ceramic core construction
- ⦿ High Q values
- ⦿ High self resonant frequency
- ⦿ Industry standard 0805 (2012) surface mount land pattern

See page 3 for Competition Cross Reference

Electrical Specifications @ 25°C

| Part Number     | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | Idc <sup>5</sup><br>(mA MAX) |
|-----------------|---------------------------------|-----------------------|-----------------------|-------------------------|-------------------------------|-----------------------------|------------------------------|
| PE-0805CD2N8KTT | 2.8 @ 250MHz                    | ±10% (K)              | ±5% (J)               | 80 @ 1500MHz            | >6000                         | 0.06                        | 600                          |
| PE-0805CD3N0KTT | 3.0 @ 250MHz                    | ±10% (K)              | ±5% (J)               | 65 @ 1500MHz            | >6000                         | 0.06                        | 600                          |
| PE-0805CD030KTT | 3.32 @ 250MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 40 @ 1500MHz            | 6000                          | 0.08                        | 600                          |
| PE-0805CD050KTT | 5.6 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 1500MHz            | 5500                          | 0.10                        | 600                          |
| PE-0805CD060KTT | 6.5 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 1000MHz            | 5000                          | 0.11                        | 600                          |
| PE-0805CD7N5KTT | 7.5 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 1000MHz            | 4500                          | 0.14                        | 600                          |
| PE-0805CD080KTT | 7.9 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 1000MHz            | 4700                          | 0.12                        | 600                          |
| PE-0805CD100KTT | 10.2 @ 250MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 500MHz             | 4100                          | 0.14                        | 600                          |
| PE-0805CD120KTT | 11.9 @ 250MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 500MHz             | 4000                          | 0.15                        | 600                          |
| PE-0805CD150KTT | 14.9 @ 250MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 500MHz             | 3400                          | 0.17                        | 600                          |
| PE-0805CD180KTT | 17.95 @ 250MHz                  | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 500MHz             | 3300                          | 0.20                        | 600                          |
| PE-0805CD220KTT | 21.7 @ 250MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 500MHz             | 2600                          | 0.22                        | 500                          |
| PE-0805CD240KTT | 24 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 500MHz             | 2000                          | 0.22                        | 500                          |
| PE-0805CD270KTT | 26.5 @ 250MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 500MHz             | 2500                          | 0.25                        | 500                          |
| PE-0805CD330KTT | 32.75 @ 250MHz                  | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 2050                          | 0.27                        | 500                          |
| PE-0805CD360KTT | 36 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 500MHz             | 1700                          | 0.27                        | 500                          |
| PE-0805CD390KTT | 38.5 @ 250MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 2000                          | 0.29                        | 500                          |
| PE-0805CD430KTT | 43 @ 200MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 1650                          | 0.34                        | 500                          |
| PE-0805CD470KTT | 46.6 @ 200MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 1650                          | 0.31                        | 500                          |
| PE-0805CD560KTT | 55.5 @ 200MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 1550                          | 0.34                        | 500                          |
| PE-0805CD680KTT | 67.8 @ 200MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 1450                          | 0.38                        | 500                          |
| PE-0805CD820KTT | 82.7 @ 150MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 1300                          | 0.42                        | 400                          |
| PE-0805CD910KTT | 91 @ 150MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 65 @ 500MHz             | 1200                          | 0.44                        | 400                          |
| PE-0805CD101KTT | 98.7 @ 150MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 1200                          | 0.46                        | 400                          |
| PE-0805CD111KTT | 110 @ 150MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 250MHz             | 1000                          | 0.48                        | 400                          |

(Continued on next page)

# WIRE-WOUND RF CHIP INDUCTORS - 0805CD Series

Electrical Specifications @ 25°C (continued)

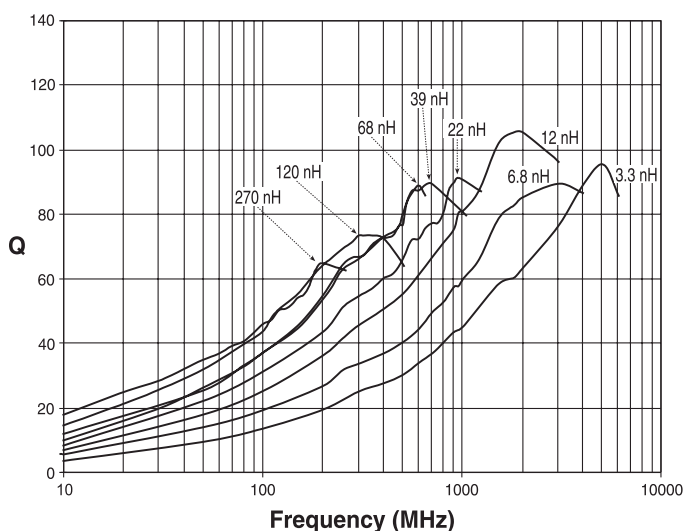
| Part Number     | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | I <sub>dc</sub> <sup>5</sup><br>(mA MAX) |
|-----------------|---------------------------------|-----------------------|-----------------------|-------------------------|-------------------------------|-----------------------------|------------------------------------------|
| PE-0805CD121KTT | 119.7 @ 150MHz                  | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 250MHz             | 1100                          | 0.51                        | 400                                      |
| PE-0805CD151KTT | 149.4 @ 100MHz                  | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 250MHz             | 920                           | 0.56                        | 400                                      |
| PE-0805CD181KTT | 179.6 @ 100MHz                  | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 250MHz             | 870                           | 0.64                        | 400                                      |
| PE-0805CD221KTT | 217 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 250MHz             | 850                           | 0.70                        | 400                                      |
| PE-0805CD241KTT | 240 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 44 @ 250MHz             | 690                           | 1.00                        | 350                                      |
| PE-0805CD271KTT | 269 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 250MHz             | 650                           | 1.00                        | 350                                      |
| PE-0805CD331KTT | 331 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 250MHz             | 600                           | 1.40                        | 310                                      |
| PE-0805CD391KTT | 386 @ 50MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 35 @ 250MHz             | 560                           | 1.50                        | 290                                      |
| PE-0805CD471KTT | 477 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 33 @ 100MHz             | 375                           | 1.76                        | 250                                      |
| PE-0805CD561KTT | 545 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 23 @ 50MHz              | 340                           | 1.90                        | 230                                      |
| PE-0805CD681KTT | 674 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 23 @ 50MHz              | 188                           | 2.20                        | 190                                      |
| PE-0805CD821KTT | 783 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 23 @ 50MHz              | 215                           | 2.35                        | 180                                      |
| PE-0805CD102KTT | 1000 @ 25MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 20 @ 50MHz              | 200                           | 3.60                        | 150                                      |
| PE-0805CD122KTT | 1200 @ 25MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 20 @ 50MHz              | 200                           | 4.10                        | 120                                      |
| PE-0805CD152KTT | 1500 @ 25MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 20 @ 50MHz              | 200                           | 5.00                        | 100                                      |

\*\*\* For other inductance values in 0805 size, please refer to 0805CM (page 14) and 0805FT (page 16). \*\*\*

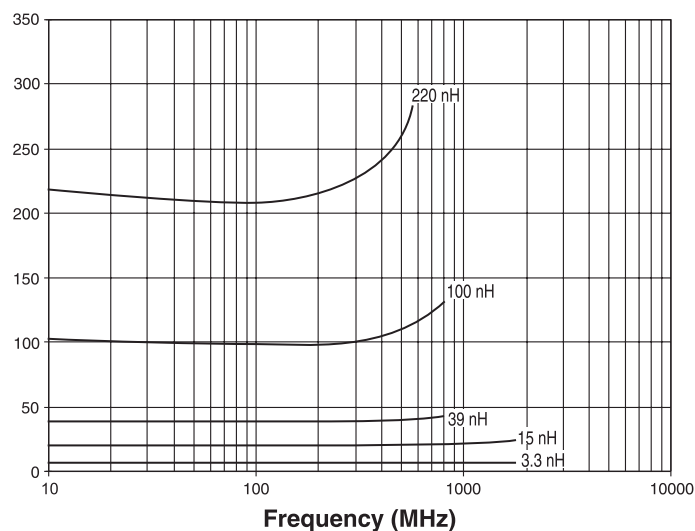
## Notes:

- Inductance measured using a HP4286A RF Impedance Analyzer. (Please note that inductance information is not stamped on part, because of the extremely small size).
- Q measured using a HP4291A RF Impedance Analyzer with a HP16193A Test Fixture.
- SRF measured using a HP8753C Network Analyzer.
- Rdc measured using a Valhalla Scientific model 4100 ATC Digital Ohmmeter.
- Based on a 15°C maximum temperature rise.

Typical Q vs Frequency

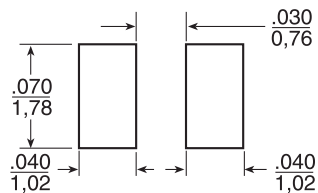
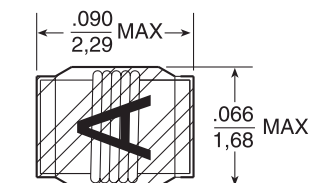


Typical Inductance vs Frequency

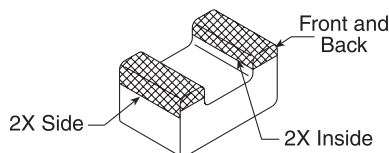
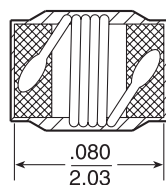
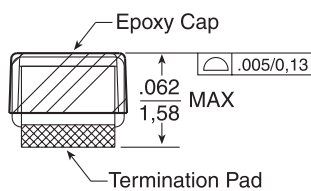
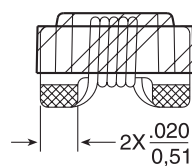


# WIRE-WOUND RF CHIP INDUCTORS - 0805CD SERIES

## Mechanical



**SUGGESTED PAD LAYOUT**



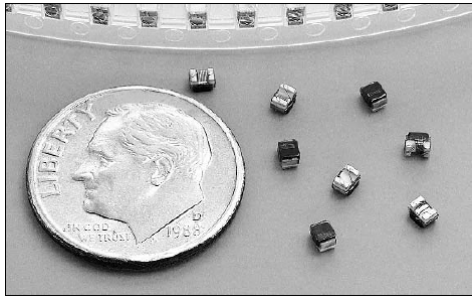
**Weight** .....0.012grams

**Tape & Reel** .....2000/reel

**Dimensions:**  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified,  
all tolerances are  $\pm \frac{.010}{0,25}$

# WIRE-WOUND RF CHIP INDUCTORS - 0805CM SERIES



-  Wirewound ceramic core construction
  -  High Q values
  -  High self resonant frequency
  -  Industry standard 0805 (2012) surface mount land pattern
- See page 3 for Competition Cross Reference

Electrical Specifications @ 25°C

| Part Number     | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | Idc <sup>5</sup><br>(mA MAX) |
|-----------------|---------------------------------|-----------------------|-----------------------|-------------------------|-------------------------------|-----------------------------|------------------------------|
| PE-0805CM030KTT | 3.3 @ 250MHz                    | ±10% (K)              | ±5% (J)               | 37 @ 1500MHz            | 5000                          | 0.08                        | 600                          |
| PE-0805CM060KTT | 6.8 @ 250MHz                    | ±10% (K)              | ±5% (J)               | 46 @ 1000MHz            | 5000                          | 0.15                        | 600                          |
| PE-0805CM080KTT | 8.2 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 47 @ 1000MHz            | 3900                          | 0.13                        | 600                          |
| PE-0805CM100KTT | 10 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 3900                          | 0.10                        | 600                          |
| PE-0805CM120KTT | 12 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 500MHz             | 2900                          | 0.13                        | 600                          |
| PE-0805CM150KTT | 15 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 500MHz             | 2700                          | 0.15                        | 600                          |
| PE-0805CM180KTT | 18 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 500MHz             | 2600                          | 0.13                        | 600                          |
| PE-0805CM220KTT | 22 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 500MHz             | 2200                          | 0.13                        | 500                          |
| PE-0805CM270KTT | 27 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 500MHz             | 2000                          | 0.23                        | 500                          |
| PE-0805CM330KTT | 33 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 58 @ 500MHz             | 1800                          | 0.18                        | 500                          |
| PE-0805CM390KTT | 39 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 1600                          | 0.23                        | 500                          |
| PE-0805CM470KTT | 47 @ 200MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 1650                          | 0.25                        | 500                          |
| PE-0805CD560KTT | 56 @ 200MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 1300                          | 0.16                        | 500                          |
| PE-0805CM680KTT | 68 @ 200MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 1350                          | 0.18                        | 500                          |
| PE-0805CM820KTT | 82 @ 150MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 1300                          | 0.36                        | 400                          |
| PE-0805CM101KTT | 100 @ 150MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 500MHz             | 1100                          | 0.36                        | 400                          |
| PE-0805CM121KTT | 120 @ 150MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 250MHz             | 1100                          | 0.56                        | 350                          |
| PE-0805CM151KTT | 150 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 250MHz             | 900                           | 0.56                        | 350                          |
| PE-0805CM181KTT | 180 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 250MHz             | 875                           | 0.69                        | 300                          |
| PE-0805CM221KTT | 220 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 250MHz             | 800                           | 0.85                        | 300                          |
| PE-0805CM271KTT | 270 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 40 @ 100MHz             | 800                           | 0.90                        | 300                          |
| PE-0805CM331KTT | 330 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 40 @ 100MHz             | 775                           | 1.28                        | 300                          |
| PE-0805CM391KTT | 390 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 40 @ 100MHz             | 725                           | 1.70                        | 300                          |
| PE-0805CM471KTT | 470 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 38 @ 100MHz             | 600                           | 3.25                        | 240                          |
| PE-0805CM561KTT | 560 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 40 @ 100MHz             | 600                           | 3.10                        | 240                          |
| PE-0805CM681KTT | 680 @ 50MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 32 @ 50MHz              | 550                           | 3.50                        | 240                          |
| PE-0805CM821KTT | 820 @ 50MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 23 @ 50MHz              | 215                           | 2.35                        | 200                          |

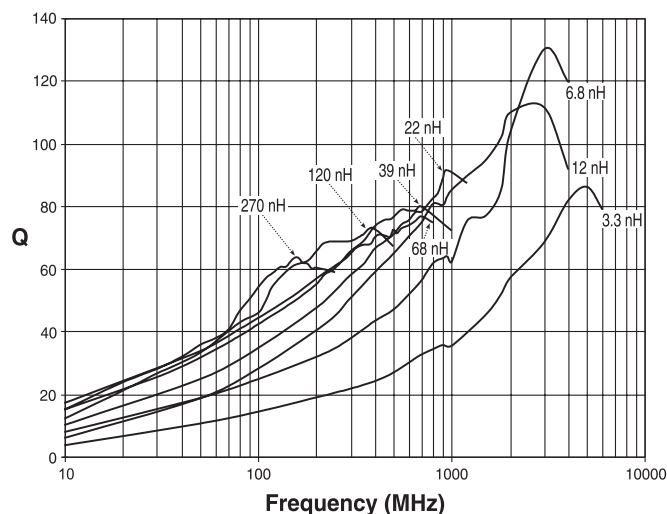
(Continued on next page)

# WIRE-WOUND RF CHIP INDUCTORS - 0805CM SERIES

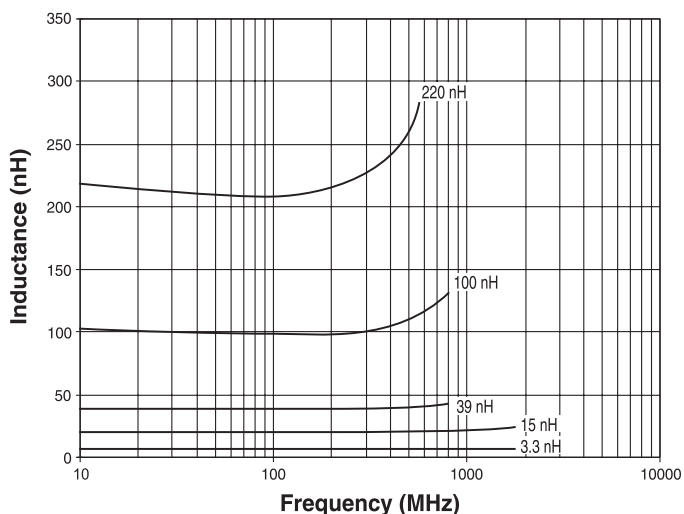
## Notes:

1. Inductance measured using a HP4286A RF Impedance Analyzer. (Please note that inductance information is not stamped on part, because of the extremely small size).
2. Q measured using a HP4291A RF Impedance Analyzer with a HP16193A Test Fixture.
3. SRF measured using a HP8753C Network Analyzer.
4. Rdc measured using a Valhalla Scientific model 4100 ATC Digital Ohmmeter.
5. Based on a 15°C maximum temperature rise.

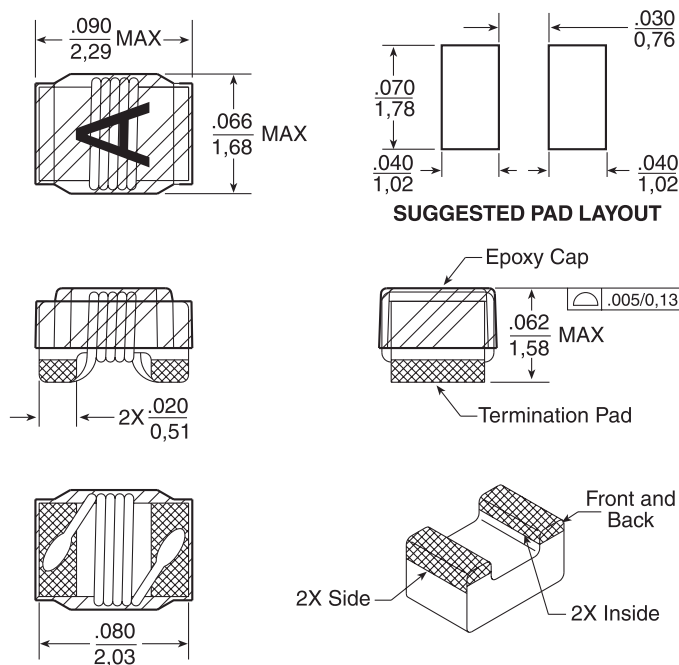
### Typical Q vs Frequency



### Typical Inductance vs Frequency



## Mechanical



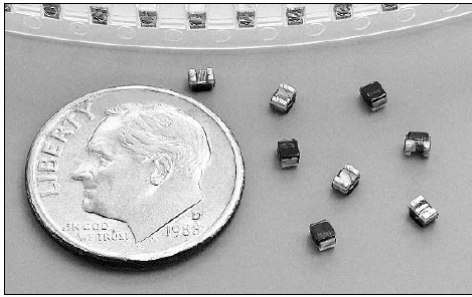
Weight .....0.012grams

Tape & Reel .....2000/reel

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified,  
all tolerances are  $\pm \frac{.010}{0.25}$

# WIRE-WOUND RF CHIP INDUCTORS - 0805FT SERIES



- Wirewound ceramic core construction
- High Q values and resonant frequency
- Industry standard 0805 (2012) surface mount land pattern

See page 3 for Competition Cross Reference

Electrical Specifications @ 25°C

| Part Number     | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | I <sub>dc</sub> <sup>5</sup><br>(mA MAX) |
|-----------------|---------------------------------|-----------------------|-----------------------|-------------------------|-------------------------------|-----------------------------|------------------------------------------|
| PE-0805FT102KTT | 1.0 @ 7.96MHz                   | ±10% (K)              | ±5% (J)               | 15 @ 7.96MHz            | 63                            | 1.20                        | 245                                      |
| PE-0805FT152KTT | 1.5 @ 7.96MHz                   | ±10% (K)              | ±5% (J)               | 15 @ 7.96MHz            | 60                            | 1.45                        | 225                                      |
| PE-0805FT222KTT | 2.2 @ 7.96MHz                   | ±10% (K)              | ±5% (J)               | 15 @ 7.96MHz            | 58                            | 1.80                        | 200                                      |
| PE-0805FT332KTT | 3.3 @ 7.96MHz                   | ±10% (K)              | ±5% (J)               | 15 @ 7.96MHz            | 50                            | 2.30                        | 175                                      |
| PE-0805FT472KTT | 4.7 @ 7.96MHz                   | ±10% (K)              | ±5% (J)               | 15 @ 7.96MHz            | 43                            | 2.80                        | 140                                      |
| PE-0805FT682KTT | 6.8 @ 7.96MHz                   | ±10% (K)              | ±5% (J)               | 15 @ 7.96MHz            | 36                            | 3.40                        | 115                                      |
| PE-0805FT103KTT | 10 @ 2.52MHz                    | ±10% (K)              | ±5% (J)               | 10 @ 2.52MHz            | 30                            | 4.70                        | 98                                       |
| PE-0805FT153KTT | 15 @ 2.52MHz                    | ±10% (K)              | ±5% (J)               | 10 @ 2.52MHz            | 23                            | 6.50                        | 80                                       |
| PE-0805FT223KTT | 22 @ 2.52MHz                    | ±10% (K)              | ±5% (J)               | 10 @ 2.52MHz            | 20                            | 8.00                        | 68                                       |
| PE-0805FT333KTT | 33 @ 2.52MHz                    | ±10% (K)              | ±5% (J)               | 10 @ 2.52MHz            | 17                            | 10.70                       | 60                                       |
| PE-0805FT473KTT | 47 @ 2.52MHz                    | ±10% (K)              | ±5% (J)               | 10 @ 2.52MHz            | 14                            | 13.80                       | 55                                       |
| PE-0805FT683KTT | 68 @ 2.52MHz                    | ±10% (K)              | ±5% (J)               | 8 @ 2.52MHz             | 11                            | 17.50                       | 49                                       |

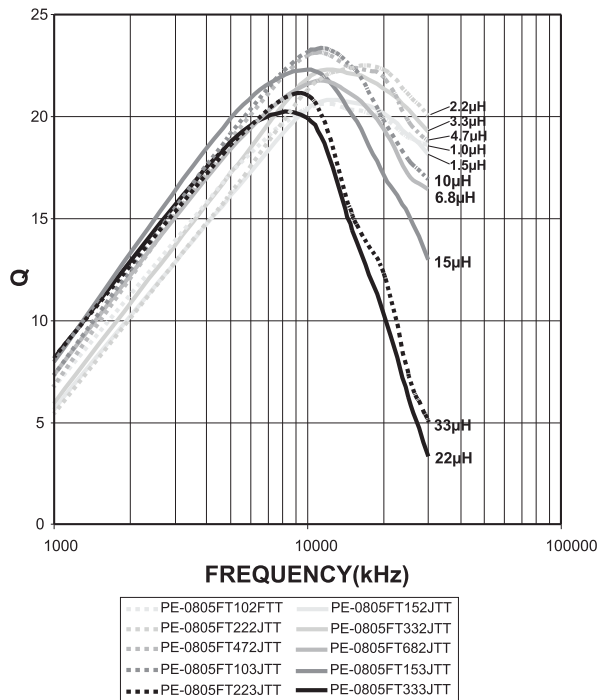
## Notes:

- Inductance measured using a HP4286A RF Impedance Analyzer. (Please note that inductance information is not stamped on part, because of the extremely small size).
- Q measured using a HP4291A RF Impedance Analyzer with a HP16193A Test Fixture.
- SRF measured using a HP8753C Network Analyzer.

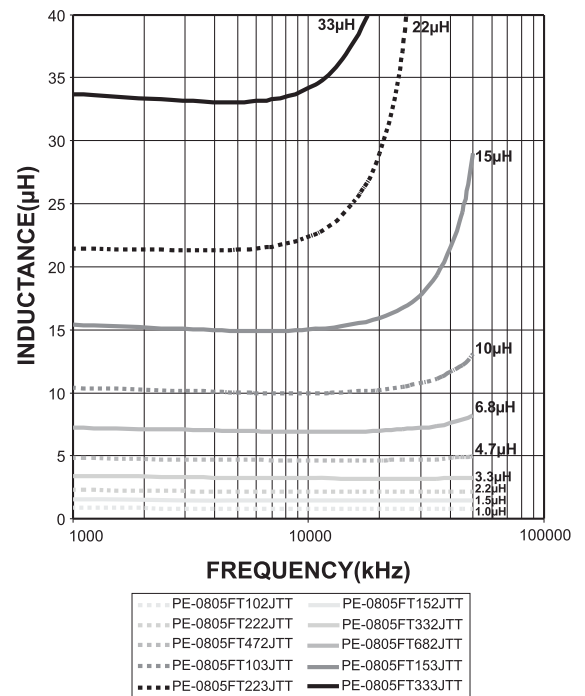
- Rdc measured using a Valhalla Scientific model 4100 ATC Digital Ohmmeter.
- Based on a 15°C maximum temperature rise.

# CONNECTOR PRODUCTS

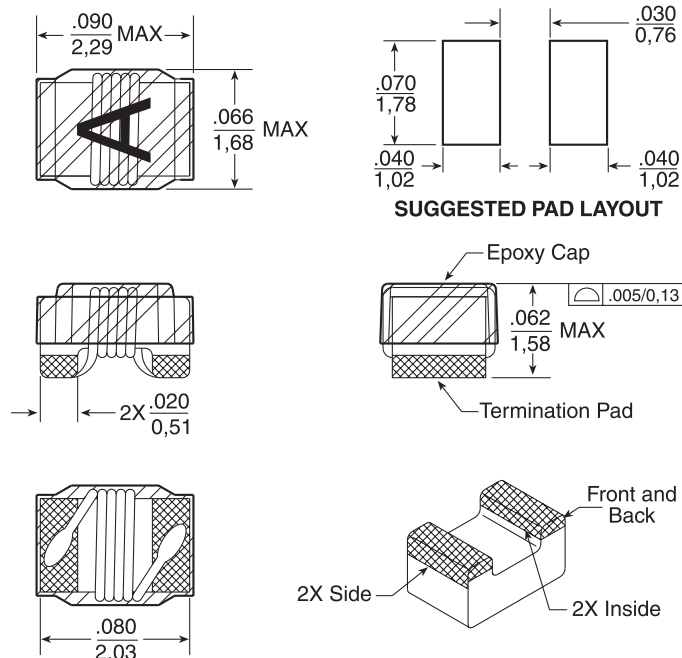
## Typical Q vs Frequency



## Typical Inductance vs Frequency



## Mechanical



Weight .....0.012grams

Tape & Reel .....2000/reel

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified,  
all tolerances are  $\pm \frac{.010}{0.25}$

# WIRE-WOUND RF CHIP INDUCTORS - 1008CD SERIES



- Wirewound ceramic core construction
- High Q values and high self-resonant frequency
- Industry standard 1008 (2520) surface mount land pattern

See page 3 for Competition Cross Reference

| Electrical Specifications @ 25°C |                                 |                       |                       |                         |                               |                             |                                          |
|----------------------------------|---------------------------------|-----------------------|-----------------------|-------------------------|-------------------------------|-----------------------------|------------------------------------------|
| Part Number                      | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | I <sub>dc</sub> <sup>5</sup><br>(mA MAX) |
| PE-1008CD090KTT                  | 9,7 @ 50MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 500MHz             | 4100                          | 0.09                        | 1000                                     |
| PE-1008CD100KTT                  | 10 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 500MHz             | 4100                          | 0.09                        | 1000                                     |
| PE-1008CD120KTT                  | 12 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 500MHz             | 3300                          | 0.09                        | 1000                                     |
| PE-1008CD140KTT                  | 14,3 @ 50MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 500MHz             | 1850                          | 0.10                        | 1000                                     |
| PE-1008CD150KTT                  | 15 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 500MHz             | 1850                          | 0.10                        | 1000                                     |
| PE-1008CD180KTT                  | 17,8 @ 50MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 350MHz             | 2500                          | 0.11                        | 1000                                     |
| PE-1008CD210KTT                  | 20,9 @ 50MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 350MHz             | 1800                          | 0.12                        | 1000                                     |
| PE-1008CD220KTT                  | 22 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 350MHz             | 1800                          | 0.12                        | 1000                                     |
| PE-1008CD260KTT                  | 26,2 @ 50MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 350MHz             | 1500                          | 0.13                        | 1000                                     |
| PE-1008CD270KTT                  | 27 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 350MHz             | 1500                          | 0.11                        | 1000                                     |
| PE-1008CD320KTT                  | 31,8 @ 50MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 350MHz             | 1600                          | 0.16                        | 1000                                     |
| PE-1008CD330KTT                  | 33 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 350MHz             | 1600                          | 0.14                        | 1000                                     |
| PE-1008CD380KTT                  | 38,2 @ 50MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 350MHz             | 1400                          | 0.15                        | 1000                                     |
| PE-1008CD390KTT                  | 39 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 350MHz             | 1400                          | 0.12                        | 1000                                     |
| PE-1008CD450KTT                  | 44,9 @ 50MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 65 @ 350MHz             | 1200                          | 0.16                        | 1000                                     |
| PE-1008CD470KTT                  | 47 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 65 @ 350MHz             | 1200                          | 0.08                        | 1000                                     |
| PE-1008CD540KTT                  | 54 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 65 @ 350MHz             | 1150                          | 0.18                        | 1000                                     |
| PE-1008CD560KTT                  | 56 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 65 @ 350MHz             | 1150                          | 0.12                        | 1000                                     |
| PE-1008CD650KTT                  | 65 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 65 @ 350MHz             | 1100                          | 0.20                        | 1000                                     |
| PE-1008CD680KTT                  | 68 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 65 @ 350MHz             | 1100                          | 0.07                        | 1000                                     |
| PE-1008CD790KTT                  | 79 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 350MHz             | 950                           | 0.22                        | 1000                                     |
| PE-1008CD820KTT                  | 82 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 350MHz             | 950                           | 0.14                        | 1000                                     |
| PE-1008CD960KTT                  | 96,1 @ 25MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 40 @ 350MHz             | 900                           | 0.56                        | 650                                      |
| PE-1008CD101KTT                  | 100 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 350MHz             | 900                           | 0.15                        | 650                                      |
| PE-1008CD121KTT                  | 120 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 350MHz             | 950                           | 0.63                        | 650                                      |
| PE-1008CD141KTT                  | 145,7 @ 25MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 625                           | 0.70                        | 580                                      |
| PE-1008CD151KTT                  | 150 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 625                           | 0.16                        | 580                                      |

(Continued on next page)

# WIRE-WOUND RF CHIP INDUCTORS - 1008CD SERIES

| Electrical Specifications @ 25°C |                                 |                       |                       |                         |                               |                             |                                          |
|----------------------------------|---------------------------------|-----------------------|-----------------------|-------------------------|-------------------------------|-----------------------------|------------------------------------------|
| Part Number                      | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | I <sub>dc</sub> <sup>5</sup><br>(mA MAX) |
| PE-1008CD161KTT                  | 160 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 625                           | 0.77                        | 600                                      |
| PE-1008CD171KTT                  | 170.2 @ 25MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 625                           | 0.77                        | 620                                      |
| PE-1008CD181KTT                  | 180 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 650                           | 0.77                        | 620                                      |
| PE-1008CD211KTT                  | 216 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 625                           | 0.84                        | 500                                      |
| PE-1008CD221KTT                  | 220 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 625                           | 0.84                        | 500                                      |
| PE-1008CD261KTT                  | 260.5 @ 25MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 525                           | 0.91                        | 500                                      |
| PE-1008CD271KTT                  | 270 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 350MHz             | 525                           | 0.91                        | 500                                      |
| PE-1008CD311KTT                  | 313.6 @ 25MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 500                           | 1.05                        | 450                                      |
| PE-1008CD331KTT                  | 330 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 500                           | 1.05                        | 450                                      |
| PE-1008CD361KTT                  | 365 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 500                           | 1.12                        | 470                                      |
| PE-1008CD391KTT                  | 390 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 475                           | 1.12                        | 470                                      |
| PE-1008CD451KTT                  | 447 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 450                           | 1.19                        | 420                                      |
| PE-1008CD471KTT                  | 470 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 450                           | 1.19                        | 420                                      |
| PE-1008CD541KTT                  | 535 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 415                           | 1.33                        | 310                                      |
| PE-1008CD561KTT                  | 560 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 415                           | 1.33                        | 310                                      |
| PE-1008CD591KTT                  | 586 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 375                           | 1.40                        | 300                                      |
| PE-1008CD621KTT                  | 620 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 375                           | 1.40                        | 300                                      |
| PE-1008CD641KTT                  | 636 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 375                           | 1.47                        | 230                                      |
| PE-1008CD681KTT                  | 680 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 375                           | 1.47                        | 230                                      |
| PE-1008CD711KTT                  | 708.8 @ 25MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 1100                          | 1.54                        | 200                                      |
| PE-1008CD751KTT                  | 750 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 950                           | 1.61                        | 200                                      |
| PE-1008CD771KTT                  | 768 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 950                           | 1.61                        | 180                                      |
| PE-1008CD821KTT                  | 820 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 900                           | 1.61                        | 180                                      |
| PE-1008CD851KTT                  | 849.8 @ 25MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 35 @ 50MHz              | 900                           | 1.68                        | 150                                      |
| PE-1008CD911KTT                  | 909.5 @ 25MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 35 @ 50MHz              | 290                           | 1.75                        | 150                                      |
| PE-1008CD102KTT                  | 1000 @ 25MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 35 @ 50MHz              | 260                           | 1.90                        | 120                                      |
| PE-1008CD112KTT                  | 1184 @ 7.9MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 35 @ 50MHz              | 250                           | 2.00                        | 310                                      |
| PE-1008CD122KTT                  | 1200 @ 7.9MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 35 @ 50MHz              | 250                           | 2.00                        | 310                                      |
| PE-1008CD142KTT                  | 1470 @ 7.9MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 28 @ 50MHz              | 200                           | 2.30                        | 330                                      |
| PE-1008CD152KTT                  | 1500 @ 7.9MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 28 @ 50MHz              | 200                           | 2.30                        | 330                                      |
| PE-1008CD182KTT                  | 1792.9 @ 7.9MHz                 | ±10% (K)              | ±5% (J), ±2% (G)      | 28 @ 50MHz              | 160                           | 2.60                        | 300                                      |
| PE-1008CD212KTT                  | 2154.5 @ 7.9MHz                 | ±10% (K)              | ±5% (J), ±2% (G)      | 28 @ 50MHz              | 80                            | 2.80                        | 280                                      |
| PE-1008CD222KTT                  | 2200 @ 7.9MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 28 @ 50MHz              | 80                            | 2.80                        | 280                                      |
| PE-1008CD262KTT                  | 2646.8 @ 7.9MHz                 | ±10% (K)              | ±5% (J), ±2% (G)      | 22 @ 50MHz              | 90                            | 3.20                        | 290                                      |
| PE-1008CD272KTT                  | 2700 @ 7.9MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 22 @ 50MHz              | 90                            | 3.20                        | 290                                      |

(Continued on next page)

# WIRE-WOUND RF CHIP INDUCTORS - 1008CD SERIES

Electrical Specifications @ 25°C

| Part Number     | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | Idc <sup>5</sup><br>(mA MAX) |
|-----------------|---------------------------------|-----------------------|-----------------------|-------------------------|-------------------------------|-----------------------------|------------------------------|
| PE-1008CD322KTT | 3207.6 @ 7.9MHz                 | ±10% (K)              | ±5% (J), ±2% (G)      | 22 @ 25MHz              | 40                            | 3.40                        | 290                          |
| PE-1008CD332KTT | 3300 @ 7.9MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 22 @ 25MHz              | 40                            | 3.40                        | 290                          |
| PE-1008CD372KTT | 3758.2 @ 7.9MHz                 | ±10% (K)              | ±5% (J), ±2% (G)      | 20 @ 25MHz              | 35                            | 3.60                        | 260                          |
| PE-1008CD392KTT | 3900 @ 7.9MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 20 @ 25MHz              | 35                            | 3.60                        | 260                          |
| PE-1008CD452KTT | 4526.2 @ 7.9MHz                 | ±10% (K)              | ±5% (J), ±2% (G)      | 20 @ 25MHz              | 25                            | 4.00                        | 260                          |
| PE-1008CD472KTT | 4700 @ 7.9MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 20 @ 25MHz              | 25                            | 4.00                        | 260                          |
| PE-1008CD562KTT | 5600 @ 7.9MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 20 @ 25MHz              | 60                            | 5.40                        | 240                          |
| PE-1008CD682KTT | 6800 @ 7.9MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 18 @ 7.9MHz             | 40                            | 4.90                        | 200                          |
| PE-1008CD822KTT | 8200 @ 7.9MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 18 @ 7.9MHz             | 25                            | 6.00                        | 160                          |

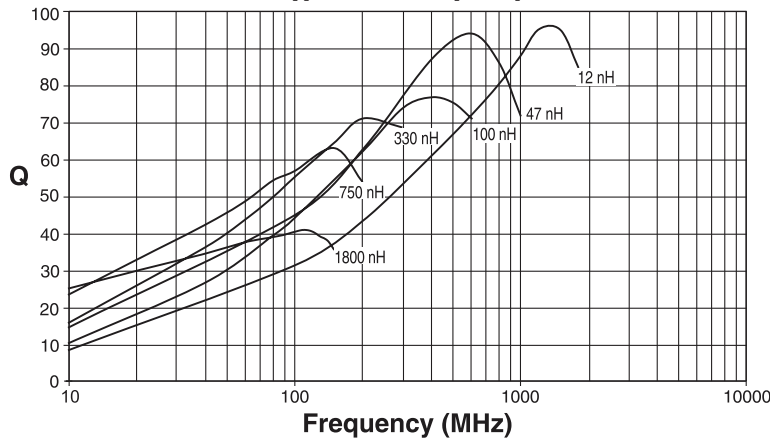
\*\*\* For other inductance values in 1008 size, please refer to 1008CM (page 21-22) and 1008CQ (page 23) \*\*\*

## Notes:

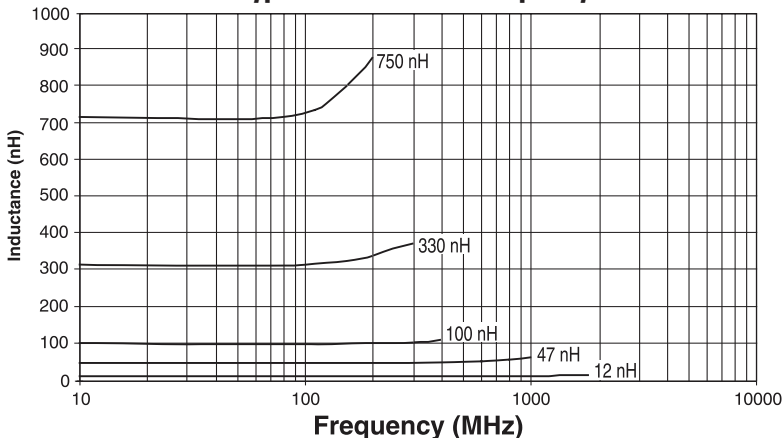
1. Inductance measured using a HP4286A RF Impedance Analyzer. (Please note that inductance information is not stamped on part, because of the extremely small size).
2. Q measured using a HP4291A RF Impedance Analyzer with a HP16193A Test Fixture.
3. SRF measured using a HP8753C Network Analyzer.
4. Rdc measured using a Valhalla Scientific model 4100 ATC Digital Ohmmeter.

5. Based on a 15°C maximum temperature rise.
6. Component Weight: 0.032 grams typical.
7. These components are 0.055" in height.

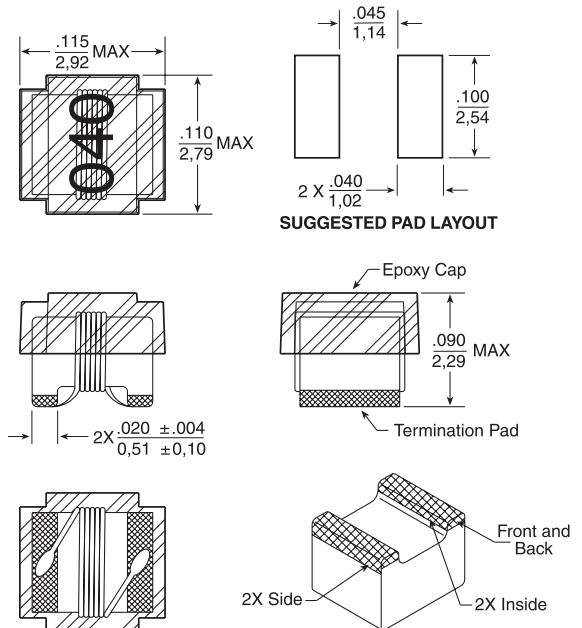
Typical Q vs Frequency



Typical Inductance vs Frequency



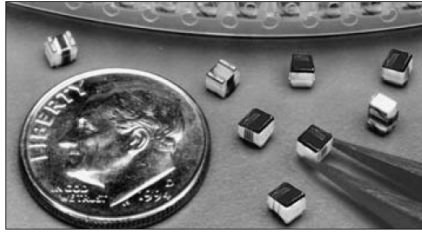
## Mechanical



Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$

# WIRE-WOUND RF CHIP INDUCTORS - 1008CM SERIES



- ☑ Wirewound ceramic core construction
- ☑ High Q values and high self-resonant frequency
- ☑ Industry standard 1008 (2520) surface mount land pattern

See page 3 for Competition Cross Reference

| Electrical Specifications @ 25°C |                                 |                       |                       |                         |                               |                             |                                          |
|----------------------------------|---------------------------------|-----------------------|-----------------------|-------------------------|-------------------------------|-----------------------------|------------------------------------------|
| Part Number                      | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | I <sub>dc</sub> <sup>5</sup><br>(mA MAX) |
| PE-1008CM100KTT                  | 10 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 500MHz             | 4100                          | 0.09                        | 1000                                     |
| PE-1008CM120KTT                  | 12 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 65 @ 500MHz             | 4100                          | 0.09                        | 1000                                     |
| PE-1008CM150KTT                  | 15 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 500MHz             | 3300                          | 0.09                        | 1000                                     |
| PE-1008CM180KTT                  | 18 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 500MHz             | 1850                          | 0.10                        | 1000                                     |
| PE-1008CM220KTT                  | 22 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 500MHz             | 1850                          | 0.10                        | 1000                                     |
| PE-1008CM270KTT                  | 27 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 350MHz             | 2500                          | 0.11                        | 1000                                     |
| PE-1008CM330KTT                  | 33 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 350MHz             | 1800                          | 0.18                        | 800                                      |
| PE-1008CM390KTT                  | 39 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 70 @ 350MHz             | 1400                          | 0.12                        | 1000                                     |
| PE-1008CM470KTT                  | 47 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 70 @ 350MHz             | 1200                          | 0.08                        | 1000                                     |
| PE-1008CM560KTT                  | 56 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 350MHz             | 1150                          | 0.12                        | 1000                                     |
| PE-1008CM680KTT                  | 68 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 70 @ 350MHz             | 1100                          | 0.07                        | 1000                                     |
| PE-1008CM820KTT                  | 82 @ 50MHz                      | ±10% (K)              | ±5% (J), ±2% (G)      | 65 @ 350MHz             | 950                           | 0.14                        | 950                                      |
| PE-1008CM101KTT                  | 100 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 65 @ 350MHz             | 900                           | 0.15                        | 650                                      |
| PE-1008CM121KTT                  | 120 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 350MHz             | 825                           | 0.22                        | 650                                      |
| PE-1008CM151KTT                  | 150 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 100MHz             | 625                           | 0.16                        | 580                                      |
| PE-1008CM161KTT                  | 160 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 100MHz             | 625                           | 0.25                        | 600                                      |
| PE-1008CM181KTT                  | 180 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 100MHz             | 650                           | 0.25                        | 600                                      |
| PE-1008CM201KTT                  | 200 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 100MHz             | 630                           | 0.24                        | 580                                      |
| PE-1008CM221KTT                  | 220 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 100MHz             | 625                           | 0.28                        | 500                                      |
| PE-1008CM271KTT                  | 270 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 525                           | 0.50                        | 500                                      |
| PE-1008CM331KTT                  | 330 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 100MHz             | 500                           | 0.80                        | 450                                      |
| PE-1008CM371KTT                  | 370 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 100MHz             | 490                           | 0.80                        | 430                                      |
| PE-1008CM391KTT                  | 390 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 100MHz             | 475                           | 0.75                        | 425                                      |
| PE-1008CM401KTT                  | 400 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 100MHz             | 470                           | 0.75                        | 420                                      |
| PE-1008CM471KTT                  | 470 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 100MHz             | 450                           | 0.70                        | 350                                      |
| PE-1008CM561KTT                  | 560 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 100MHz             | 425                           | 0.80                        | 350                                      |
| PE-1008CM621KTT                  | 620 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 375                           | 1.90                        | 200                                      |

(Continued on next page)

# WIRE-WOUND RF CHIP INDUCTORS - 1008CM SERIES

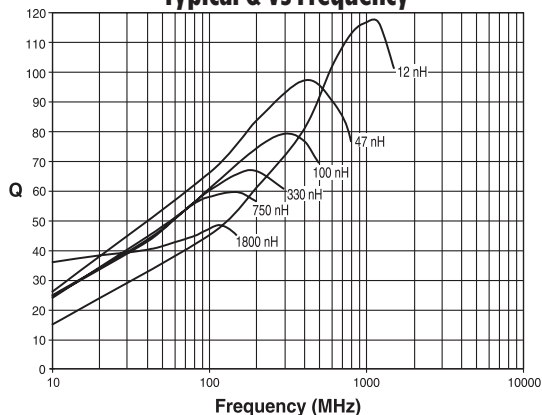
Electrical Specifications @ 25°C

| Part Number     | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | Idc <sup>5</sup><br>(mA MAX) |
|-----------------|---------------------------------|-----------------------|-----------------------|-------------------------|-------------------------------|-----------------------------|------------------------------|
| PE-1008CM681KTT | 680 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 375                           | 2.30                        | 200                          |
| PE-1008CM751KTT | 750 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 350                           | 1.60                        | 200                          |
| PE-1008CM821KTT | 820 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 40 @ 100MHz             | 325                           | 3.30                        | 200                          |
| PE-1008CM911KTT | 910 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 40 @ 50MHz              | 300                           | 2.10                        | 200                          |
| PE-1008CM102KTT | 1000 @ 25MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 40 @ 50MHz              | 300                           | 1.80                        | 200                          |
| PE-1008CM122KTT | 1200 @ 10MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 40 @ 50MHz              | 250                           | 3.00                        | 200                          |
| PE-1008CM152KTT | 1500 @ 10MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 40 @ 50MHz              | 200                           | 4.00                        | 150                          |
| PE-1008CM182KTT | 1800 @ 10MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 40 @ 50MHz              | 150                           | 5.09                        | 150                          |
| PE-1008CM222KTT | 2200 @ 10MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 30 @ 25MHz              | 80                            | 5.85                        | 150                          |
| PE-1008CM272KTT | 2700 @ 10MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 30 @ 25MHz              | 90                            | 7.70                        | 150                          |
| PE-1008CM332KTT | 3300 @ 10MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 25 @ 15MHz              | 40                            | 7.80                        | 150                          |
| PE-1008CM392KTT | 3900 @ 10MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 20 @ 15MHz              | 35                            | 8.30                        | 135                          |
| PE-1008CM472KTT | 4700 @ 10MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 16 @ 15MHz              | 25                            | 6.00                        | 150                          |

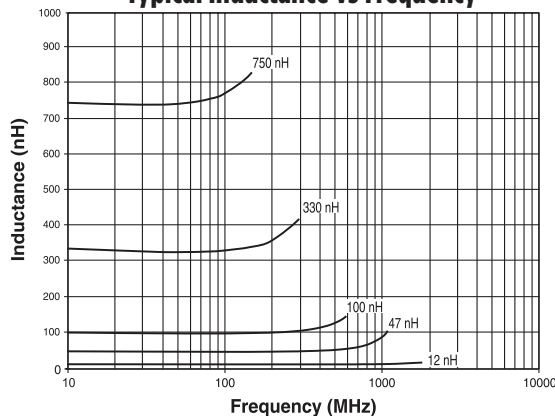
## Notes:

- Inductance measured using a HP4286A RF Impedance Analyzer. (Please note that inductance information is not stamped on part, because of the extremely small size).
- Q measured using a HP4291A RF Impedance Analyzer with a HP16193A Test Fixture.
- SRF measured using a HP8753C Network Analyzer.
- Rdc measured using a Valhalla Scientific model 4100 ATC Digital Ohmmeter.
- Based on a 15°C maximum temperature rise.
- Component Weight: 0.032 grams typical.

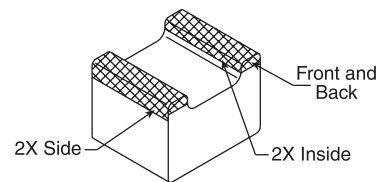
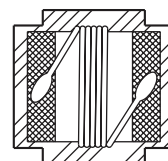
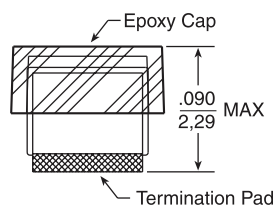
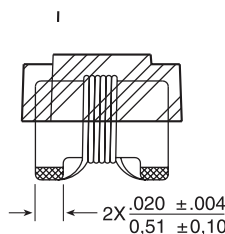
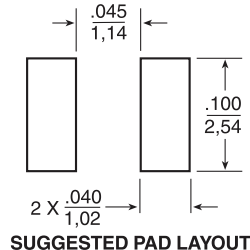
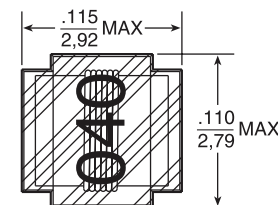
Typical Q vs Frequency



Typical Inductance vs Frequency



## Mechanical



Dimensions: Inches  
mm

Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$

# WIRE-WOUND RF CHIP INDUCTORS - 1008CQ SERIES



- Wirewound ceramic core construction
- High Q values and Idc values
- High self-resonant frequency
- Industry standard 1008 (2520) surface mount land pattern

See page 3 for Competition Cross Reference

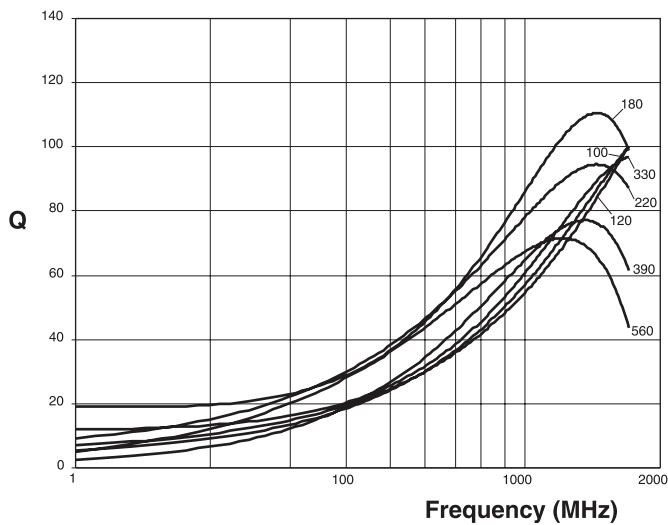
| Electrical Specifications @ 25°C |                                 |                       |                       |                         |                                   |                             |                              |
|----------------------------------|---------------------------------|-----------------------|-----------------------|-------------------------|-----------------------------------|-----------------------------|------------------------------|
| Part Number                      | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF Min <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | Idc <sup>5</sup><br>(mA MAX) |
| PE-1008CQ4N1KTT                  | 4.1 @ 50MHz                     | ±10% (K)              | ±5% (J)               | 75 @ 1500MHz            | 6000                              | 0.05                        | 1600                         |
| PE-1008CQ100KTT                  | 10 @ 50MHz                      | ±10% (K)              | ±5% (J)               | 60 @ 500MHz             | 3600                              | 0.06                        | 1600                         |
| PE-1008CQ120KTT                  | 12 @ 50MHz                      | ±10% (K)              | ±5% (J)               | 70 @ 500MHz             | 2800                              | 0.06                        | 1500                         |
| PE-1008CQ180KTT                  | 18 @ 50MHz                      | ±10% (K)              | ±5% (J)               | 62 @ 350MHz             | 2700                              | 0.07                        | 1400                         |
| PE-1008CQ220KTT                  | 22 @ 50MHz                      | ±10% (K)              | ±5% (J)               | 62 @ 350MHz             | 2050                              | 0.07                        | 1400                         |
| PE-1008CQ330KTT                  | 33 @ 50MHz                      | ±10% (K)              | ±5% (J)               | 75 @ 350MHz             | 1700                              | 0.09                        | 1300                         |
| PE-1008CQ390KTT                  | 39 @ 50MHz                      | ±10% (K)              | ±5% (J)               | 75 @ 350MHz             | 1300                              | 0.09                        | 1300                         |
| PE-1008CQ470KTT                  | 47 @ 50MHz                      | ±10% (K)              | ±5% (J)               | 75 @ 350MHz             | 1450                              | 0.12                        | 1200                         |
| PE-1008CQ560KTT                  | 56 @ 50MHz                      | ±10% (K)              | ±5% (J)               | 75 @ 350MHz             | 1230                              | 0.12                        | 1200                         |
| PE-1008CQ680KTT                  | 68 @ 50MHz                      | ±10% (K)              | ±5% (J)               | 80 @ 350MHz             | 1150                              | 0.13                        | 1100                         |
| PE-1008CQ820KTT                  | 82 @ 50MHz                      | ±10% (K)              | ±5% (J)               | 80 @ 350MHz             | 1060                              | 0.16                        | 1100                         |
| PE-1008CQ101KTT                  | 100 @ 50MHz                     | ±10% (K)              | ±5% (J)               | 62 @ 350MHz             | 820                               | 0.16                        | 1000                         |
| PE-1008CQ121KTT                  | 120 @ 50MHz                     | ±10% (K)              | ±5% (J)               | 62 @ 350MHz             | 800                               | 0.17                        | 1000                         |
| PE-1008CQ151KTT                  | 150 @ 50MHz                     | ±10% (K)              | ±5% (J)               | 60 @ 350MHz             | 750                               | 0.21                        | 950                          |
| PE-1008CQ181KTT                  | 180 @ 50MHz                     | ±10% (K)              | ±5% (J)               | 40 @ 350MHz             | 720                               | 0.23                        | 920                          |
| PE-1008CQ221KTT                  | 220 @ 50MHz                     | ±10% (K)              | ±5% (J)               | 35 @ 350MHz             | 680                               | 0.29                        | 900                          |
| PE-1008CQ271KTT                  | 270 @ 50MHz                     | ±10% (K)              | ±5% (J)               | 35 @ 350MHz             | 600                               | 0.55                        | 600                          |
| PE-1008CQ331KTT                  | 330 @ 50MHz                     | ±10% (K)              | ±5% (J)               | 35 @ 100MHz             | 550                               | 0.60                        | 550                          |
| PE-1008CQ391KTT                  | 390 @ 50MHz                     | ±10% (K)              | ±5% (J)               | 35 @ 350MHz             | 500                               | 0.82                        | 470                          |

## Notes:

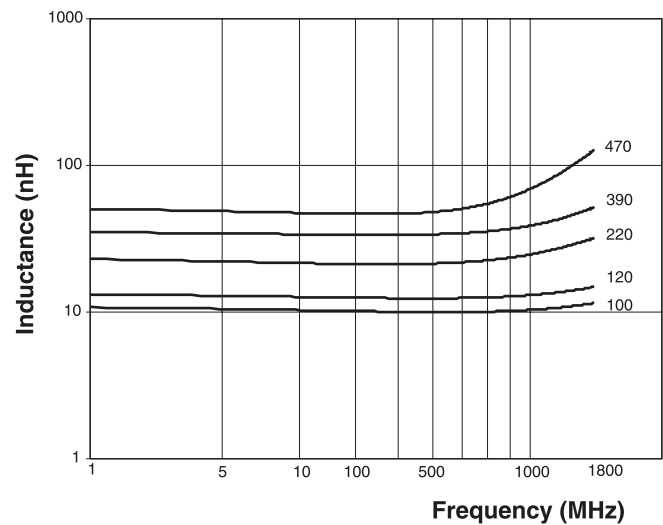
1. Inductance measured using a HP4286A RF Impedance Analyzer. (Please note that inductance information is not stamped on part, because of the extremely small size).
2. Q measured using a HP4291A RF Impedance Analyzer with a HP16193A Test Fixture.
3. SRF measured using a HP8753C Network Analyzer.
4. Rdc measured using a Valhalla Scientific model 4100 ATC Digital Ohmmeter.
5. Based on a 15°C maximum temperature rise.
6. Component Weight: 0.032 grams typical.

# WIRE-WOUND RF CHIP INDUCTORS - 1008CQ SERIES

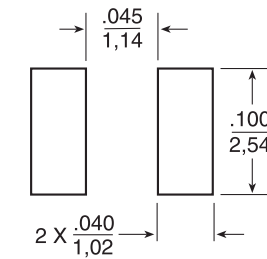
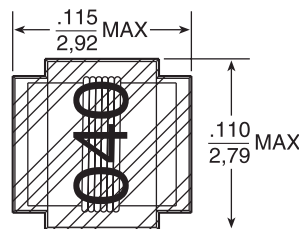
Typical Q vs Frequency



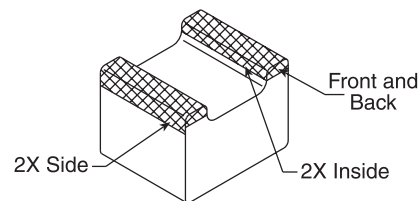
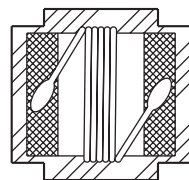
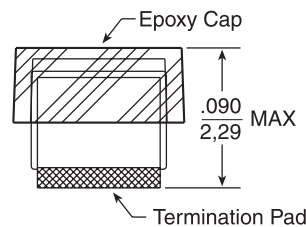
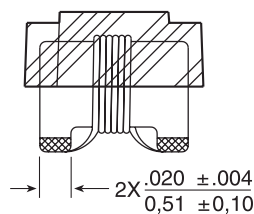
Typical Inductance vs Frequency



## Mechanical



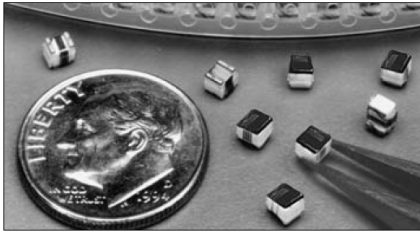
SUGGESTED PAD LAYOUT



Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$

# WIRE-WOUND RF CHIP INDUCTORS - 1206CD SERIES



- Wirewound ceramic core construction
  - High Q values and self-resonant frequency
  - Industry standard 1206 (3216) SMT land pattern
- See page 3 for Competition Cross Reference

| Electrical Specifications @ 25°C |                                 |                       |                       |                         |                                   |                             |                                          |
|----------------------------------|---------------------------------|-----------------------|-----------------------|-------------------------|-----------------------------------|-----------------------------|------------------------------------------|
| Part Number                      | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF Min <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | I <sub>dc</sub> <sup>5</sup><br>(mA MAX) |
| PE-1206CD030KTT                  | 3.3 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 30 @ 300MHz             | 6200                              | 0.05                        | 1000                                     |
| PE-1206CD060KTT                  | 6.8 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 30 @ 300MHz             | 5500                              | 0.07                        | 1000                                     |
| PE-1206CD100KTT                  | 10 @ 100MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 40 @ 300MHz             | 4000                              | 0.08                        | 1000                                     |
| PE-1206CD120KTT                  | 12 @ 100MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 40 @ 300MHz             | 3200                              | 0.08                        | 1000                                     |
| PE-1206CD150KTT                  | 15 @ 100MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 40 @ 300MHz             | 3200                              | 0.10                        | 1000                                     |
| PE-1206CD180KTT                  | 18 @ 100MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 300MHz             | 2800                              | 0.10                        | 1000                                     |
| PE-1206CD220KTT                  | 22 @ 100MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 300MHz             | 2200                              | 0.10                        | 1000                                     |
| PE-1206CD270KTT                  | 27 @ 100MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 300MHz             | 1800                              | 0.11                        | 1000                                     |
| PE-1206CD330KTT                  | 33 @ 100MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 300MHz             | 1800                              | 0.11                        | 1000                                     |
| PE-1206CD390KTT                  | 39 @ 100MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 300MHz             | 1800                              | 0.12                        | 1000                                     |
| PE-1206CD470KTT                  | 47 @ 100MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 300MHz             | 1500                              | 0.13                        | 1000                                     |
| PE-1206CD560KTT                  | 56 @ 100MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 300MHz             | 1450                              | 0.14                        | 1000                                     |
| PE-1206CD680KTT                  | 68 @ 100MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 300MHz             | 1200                              | 0.26                        | 900                                      |
| PE-1206CD820KTT                  | 82 @ 100MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 300MHz             | 1200                              | 0.21                        | 900                                      |
| PE-1206CD101KTT                  | 100 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 300MHz             | 1100                              | 0.26                        | 850                                      |
| PE-1206CD121KTT                  | 120 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 350MHz             | 1100                              | 0.26                        | 800                                      |
| PE-1206CD151KTT                  | 150 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 350MHz             | 950                               | 0.31                        | 750                                      |
| PE-1206CD181KTT                  | 180 @ 50MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 100MHz             | 900                               | 0.43                        | 700                                      |
| PE-1206CD221KTT                  | 220 @ 50MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 350MHz             | 760                               | 0.50                        | 670                                      |
| PE-1206CD271KTT                  | 270 @ 50MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 300MHz             | 730                               | 0.56                        | 630                                      |
| PE-1206CD331KTT                  | 330 @ 50MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 150MHz             | 650                               | 0.62                        | 590                                      |
| PE-1206CD391KTT                  | 390 @ 50MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 150MHz             | 600                               | 0.75                        | 530                                      |
| PE-1206CD471KTT                  | 470 @ 50MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 150MHz             | 550                               | 1.30                        | 490                                      |
| PE-1206CD561KTT                  | 560 @ 35MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 150MHz             | 470                               | 1.34                        | 460                                      |
| PE-1206CD681KTT                  | 680 @ 35MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 150MHz             | 450                               | 1.58                        | 430                                      |
| PE-1206CD751KTT                  | 750 @ 35MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 150MHz             | 440                               | 2.25                        | 400                                      |
| PE-1206CD821KTT                  | 820 @ 35MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 150MHz             | 420                               | 1.82                        | 400                                      |
| PE-1206CD911KTT                  | 910 @ 35MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 150MHz             | 410                               | 2.95                        | 400                                      |

(Continued on next page)

# WIRE-WOUND RF CHIP INDUCTORS - 1206CD SERIES

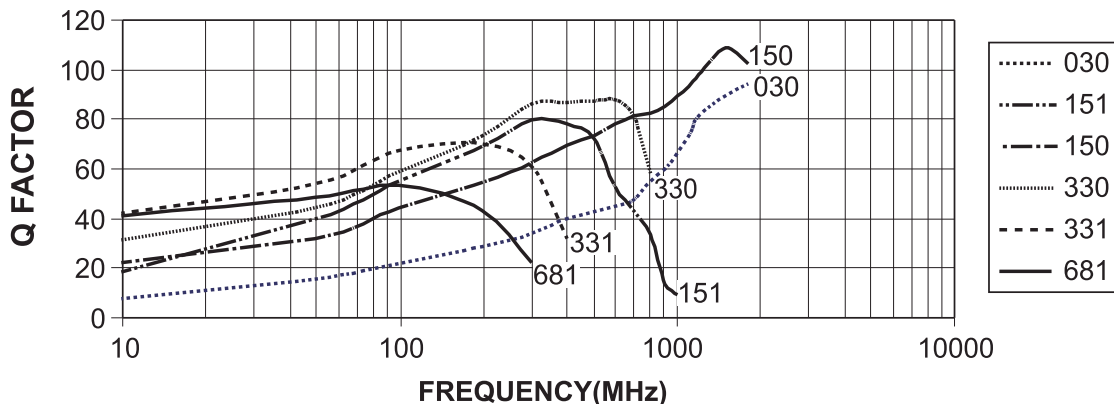
| Electrical Specifications @ 25°C |                                 |                       |                       |                         |                                   |                             |                                          |
|----------------------------------|---------------------------------|-----------------------|-----------------------|-------------------------|-----------------------------------|-----------------------------|------------------------------------------|
| Part Number                      | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF Min <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | I <sub>dc</sub> <sup>5</sup><br>(mA MAX) |
| PE-1206CD102KTT                  | 1000 @ 35MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 150MHz             | 400                               | 2.80                        | 320                                      |
| PE-1206CD122KTT                  | 1200 @ 35MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 150MHz             | 380                               | 3.20                        | 300                                      |

## Notes:

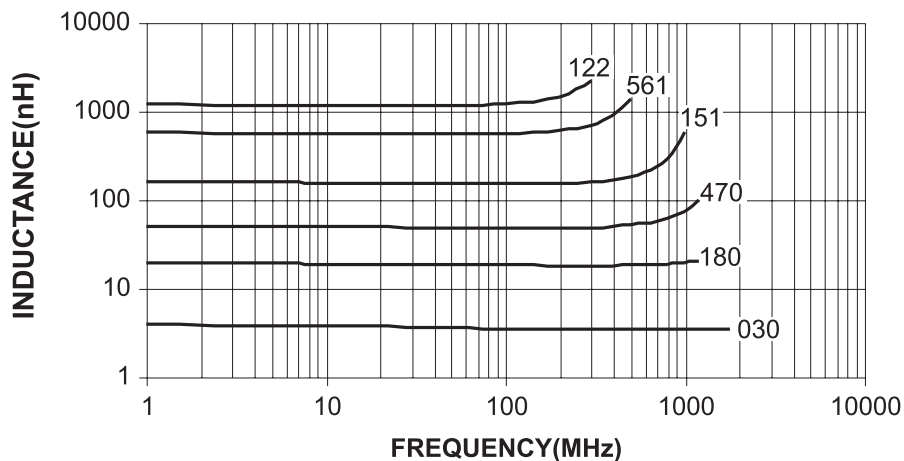
1. Inductance measured using a HP4286A RF Impedance Analyzer. (Please note that inductance information is not stamped on part, because of the extremely small size).
2. Q measured using a HP4291A RF Impedance Analyzer with a HP16193A Test Fixture.
3. SRF measured using a HP8753C Network Analyzer.
4. Rdc measured using a Valhalla Scientific model 4100 ATC Digital Ohmmeter.

5. Based on a 15°C maximum temperature rise.
6. Component Weight: 0.035 grams typical.
7. These components are 0.060" in height.

## Typical Q vs Frequency

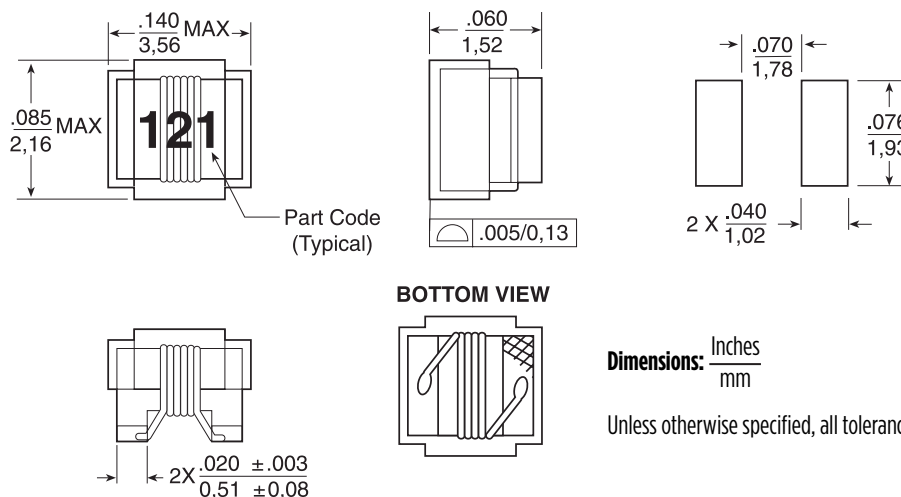


## Typical Inductance vs Frequency



# WIRE-WOUND RF CHIP INDUCTORS - 1206CD SERIES

## Mechanical



## For More Information

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