

Power Inductor Apcf Series

Automotive
AEC-Q200

RoHS Compliant
 Halogen Free
 REACH Compliant



Power
Circuit

Shield

Wire
Wound

Ferrite

Part Numbering

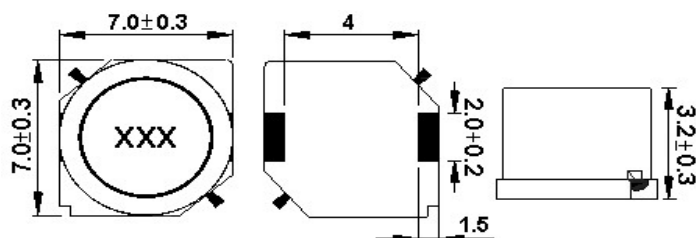
A	PCF	00	070745	1R0	M	00
Grade	Series Name	Control Code	Dimensions Code (mm)	Inductance (uH)	Tolerance	Internal Code
			070732 7x7x3.2	1R0 1	M ±20%	00
			070745 7x7x4.5	100 10	T ±30%	Y0
			101045 10x10x4.5	101 100		
			131365 12.5x12.5x6.5			
			131375 12.5x12.5x7.5			

Power Inductor APCF Series

Automotive
AEC-Q200

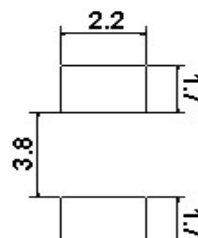
APCF00070732 Type

■ Dimensions



unit:mm

■ Recommended Land Pattern



unit:mm

■ Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)±20%	Isat (A)Max	Irms (A)Typ	Tolerance (±%)	Marking
APCF000707321R5□Y0	1.5	100kHz,0.5V	0.018	3.4	3.4	20,30	1R5
APCF000707322R2□Y0	2.2	100kHz,0.5V	0.021	2.8	2.8	20,30	2R2
APCF000707323R3□Y0	3.3	100kHz,0.5V	0.023	1.9	1.9	20,30	3R3
APCF000707324R7□Y0	4.7	100kHz,0.5V	0.036	1.7	1.7	20,30	4R7
APCF000707326R8□Y0	6.8	100kHz,0.5V	0.041	1.6	1.6	20,30	6R8
APCF00070732100□Y0	10	100kHz,0.5V	0.053	1.4	1.4	20,30	100
APCF00070732150□Y0	15	100kHz,0.5V	0.075	1.1	1.1	20,30	150
APCF00070732220□Y0	22	100kHz,0.5V	0.11	0.96	0.96	20,30	220
APCF00070732330□Y0	33	100kHz,0.5V	0.16	0.75	0.75	20,30	330
APCF00070732470□Y0	47	100kHz,0.5V	0.24	0.67	0.67	20,30	470
APCF00070732680□Y0	68	100kHz,0.5V	0.31	0.59	0.59	20,30	680
APCF00070732101□Y0	100	100kHz,0.5V	0.45	0.45	0.45	10,20	101
APCF00070732151□Y0	150	100kHz,0.5V	0.65	0.37	0.37	10,20	151
APCF00070732221□Y0	220	100kHz,0.5V	1.05	0.29	0.29	10,20	221
APCF00070732331□Y0	330	100kHz,0.5V	1.67	0.22	0.22	10,20	331
APCF00070732471□Y0	470	100kHz,0.5V	2.05	0.2	0.2	10,20	471
APCF00070732681□Y0	680	100kHz,0.5V	3.15	0.16	0.16	10,20	681
APCF00070732102□Y0	1000	100kHz,0.5V	4.78	0.13	0.13	10,20	102

Note: When ordering, please specify tolerance code. Tolerance: K=±10% / M=±20% / T=±30%

1. Operating temperature range — 40℃ ~ 165℃ (Including self - temperature rise)

2. Isat for Inductance drop 15% from its value without current

3. I rms for a 25℃ temprature rise from 25℃ ambient with current

4. Rated DC Current: The less value which is Isat or I rms

5. Measure Equipment:

L: HP4284A PRECISION LCR METER (or equivalent)

RDC: CHROMA MODEL 16502 MILLIOHMMETER (or equivalent)

Isat:WK3255BQ+ WK3265B (or equivalent)

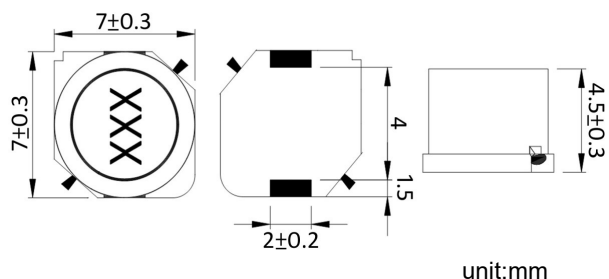
I rms: WK3255BQ+ WK3265B (or equivalent)

Power Inductor APCF Series

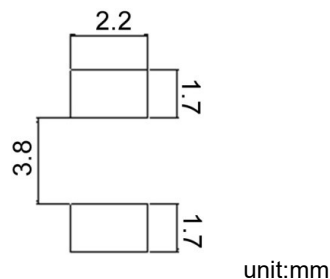
Automotive
AEC-Q200

APCF00070745 Type

■ Dimensions



■ Recommended Land Pattern



■ Electrical Characteristics

Part No.	Inductance (μ H)	Test Freq.	RDC (Ω) $\pm 20\%$	Isat (A)Max	Irms (A)Typ	Tolerance ($\pm\%$)	Marking
APCF000707451R0 $\square$ 00	1.0	100kHz,0.5V	0.011	4.5	4.5	20,30	1R0
APCF000707452R2 $\square$ 00	2.2	100kHz,0.5V	0.015	3.4	3.3	20,30	2R2
APCF000707453R3 $\square$ 00	3.3	100kHz,0.5V	0.02	2.5	2.3	20,30	3R3
APCF000707454R7 $\square$ 00	4.7	100kHz,0.5V	0.03	2	2.1	20,30	4R7
APCF000707456R8 $\square$ 00	6.8	100kHz,0.5V	0.039	1.7	1.74	20,30	6R8
APCF00070745100 $\square$ 00	10	100kHz,0.5V	0.036	1.3	1.78	20,30	100
APCF00070745150 $\square$ 00	15	100kHz,0.5V	0.052	1.1	1.53	20,30	150
APCF00070745220 $\square$ 00	22	100kHz,0.5V	0.061	0.9	1.34	20,30	220
APCF00070745330 $\square$ 00	33	100kHz,0.5V	0.096	0.82	1.09	20,30	330
APCF00070745470 $\square$ 00	47	100kHz,0.5V	0.125	0.75	0.92	20,30	470
APCF00070745680 $\square$ 00	68	100kHz,0.5V	0.175	0.6	0.77	20,30	680
APCF00070745101 $\square$ 00	100	100kHz,0.5V	0.25	0.5	0.65	10,20	101
APCF00070745151 $\square$ 00	150	100kHz,0.5V	0.34	0.4	0.55	10,20	151
APCF00070745221 $\square$ 00	220	100kHz,0.5V	0.52	0.33	0.45	10,20	221
APCF00070745331 $\square$ 00	330	100kHz,0.5V	0.74	0.25	0.37	10,20	331
APCF00070745471 $\square$ 00	470	100kHz,0.5V	1.05	0.22	0.31	10,20	471
APCF00070745681 $\square$ 00	680	100kHz,0.5V	1.48	0.2	0.27	10,20	681
APCF00070745102 $\square$ 00	1000	100kHz,0.5V	2.28	0.14	0.25	10,20	102

Note: When ordering, please specify tolerance code. Tolerance: K= $\pm 10\%$ / M= $\pm 20\%$ / T= $\pm 30\%$

1. Operating temperature range $-40^{\circ}\text{C} \sim 165^{\circ}\text{C}$ (Including self - temperature rise)

2. Isat for Inductance drop 15% from its value without current

3. I rms for a 25°C temprature rise from 25°C ambient with current

4. Rated DC Current: The less value which is Isat or I rms

5. Measure Equipment:

L: HP4284A PRECISION LCR METER (or equivalent)

RDC: CHROMA MODEL 16502 MILLIOHMMETER (or equivalent)

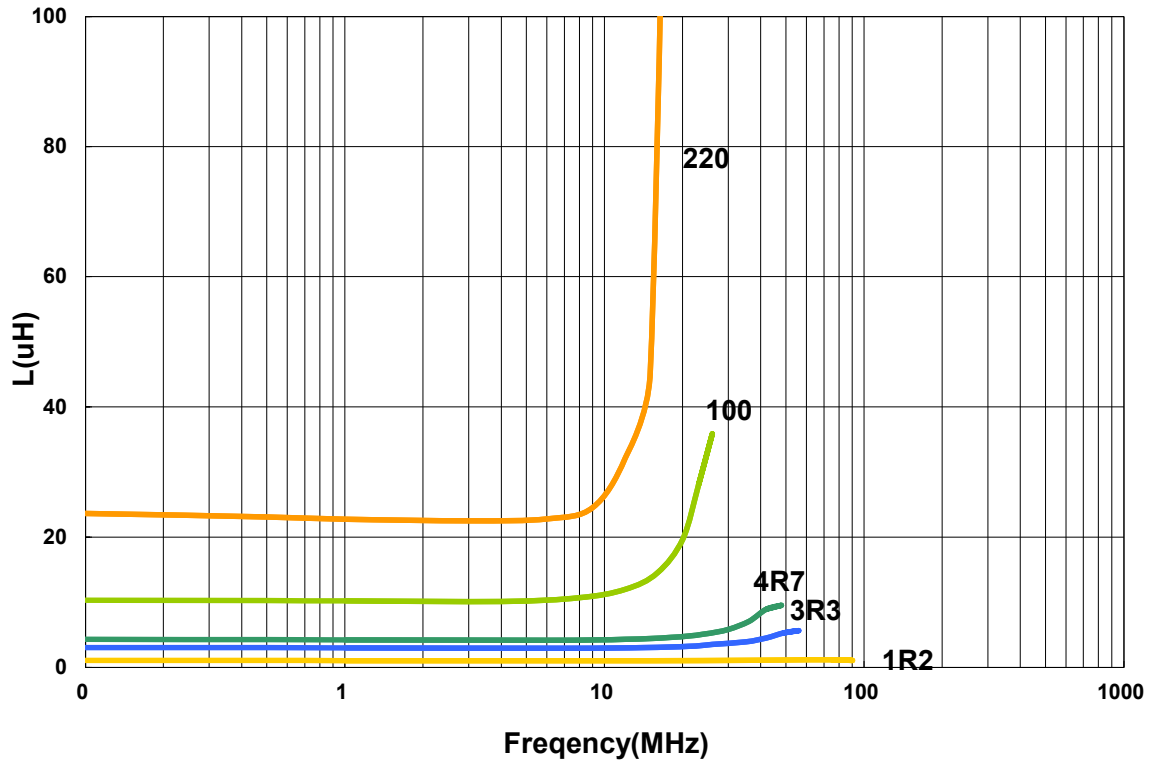
Isat:WK3255BQ+ WK3265B (or equivalent)

I rms: WK3255BQ+ WK3265B (or equivalent)

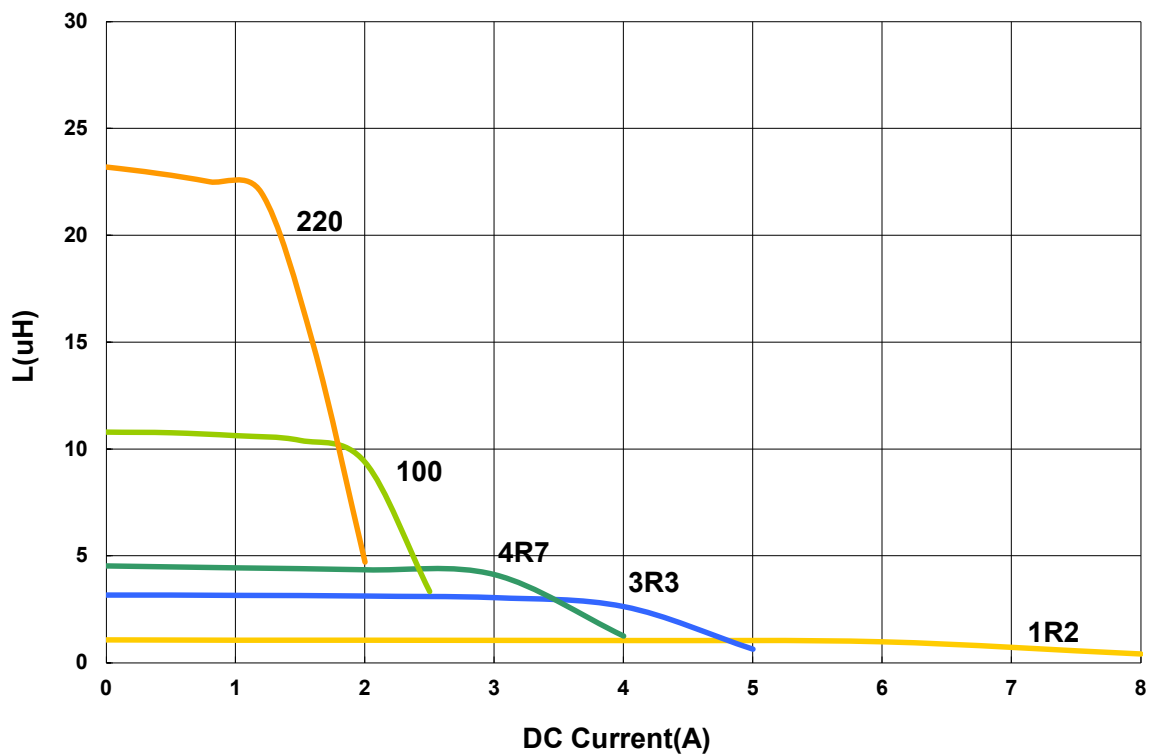
APCF00070745 Type

■ Characteristics Graph

Inductance vs. Frequency Characteristics



Inductance vs. DC Current



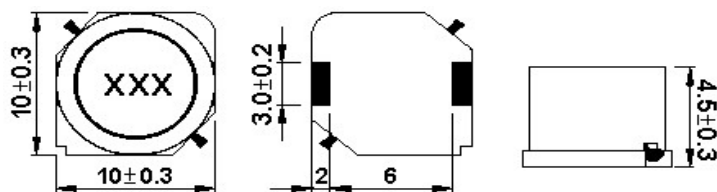
Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin approval. Please contact our sales department before ordering.

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Automotive
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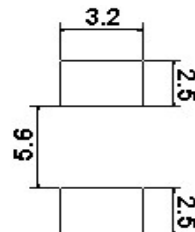
APCF00101045 Type

■ Dimensions



unit:mm

■ Recommended Land Pattern



unit:mm

■ Electrical Characteristics

Part No.	Inductance (μ H)	Test Freq.	RDC (Ω) $\pm 20\%$	Isat (A)Typ	Irms (A)Typ	Tolerance ($\pm\%$)	Marking
APCF001010451R5 $\square$ Y0	1.5	100kHz,0.25V	0.0118	7.5	6	30	1R5
APCF001010453R3 $\square$ Y0	3.3	100kHz,0.25V	0.0161	4.9	3.7	30	3R3
APCF001010454R7 $\square$ Y0	4.7	100kHz,0.25V	0.0198	4.2	3.5	20,30	4R7
APCF001010455R6 $\square$ Y0	5.6	100kHz,0.25V	0.022	3.8	3.2	30	5R6
APCF00101045100 $\square$ Y0	10	100kHz,0.25V	0.0364	3	2.5	20,30	100
APCF00101045150 $\square$ Y0	15	100kHz,0.25V	0.0472	2.4	2.2	20,30	150
APCF00101045220 $\square$ Y0	22	100kHz,0.25V	0.0591	2.1	1.9	20,30	220
APCF00101045330 $\square$ Y0	33	100kHz,0.25V	0.0815	1.6	1.7	20,30	330
APCF00101045470 $\square$ Y0	47	100kHz,0.25V	0.1	1.4	1.5	20,30	470
APCF00101045680 $\square$ Y0	68	100kHz,0.25V	0.14	1.2	1.3	20,30	680
APCF00101045101 $\square$ Y0	100	100kHz,0.25V	0.2	1	1.1	20,30	101
APCF00101045151 $\square$ Y0	150	100kHz,0.25V	0.35	0.79	0.81	20,30	151
APCF00101045221 $\square$ Y0	220	100kHz,0.25V	0.47	0.65	0.7	20,30	221
APCF00101045331 $\square$ Y0	330	100kHz,0.25V	0.68	0.54	0.58	20,30	331
APCF00101045471 $\square$ Y0	470	100kHz,0.25V	1.03	0.47	0.47	20,30	471
APCF00101045681 $\square$ Y0	680	100kHz,0.25V	1.6	0.38	0.38	20,30	681
APCF00101045102 $\square$ Y0	1000	100kHz,0.25V	2.8	0.32	0.29	20,30	102
APCF00101045152 $\square$ Y0	1500	100kHz,0.25V	3.4	0.22	0.26	20,30	152

Note: When ordering, please specify tolerance code. Tolerance: M= $\pm 20\%$ / T= $\pm 30\%$

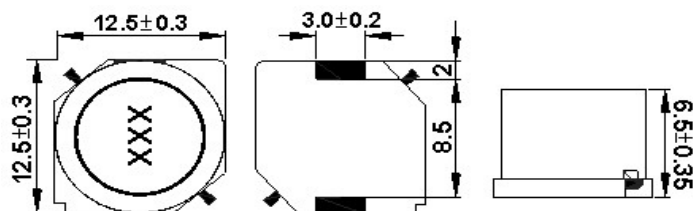
- Operating temperature range $-40^{\circ}\text{C} \sim 165^{\circ}\text{C}$ (Including self - temperature rise)
- Isat for Inductance drop 10% from its value without current
- Irms for a 40°C temprature rise from 25°C ambient with current
- Rated DC Current: The less value which is Isat or Irms
- Measure Equipment:
L: HP4284A PRECISION LCR METER (or equivalent)
RDC: CHROMA MODEL 16502 MILLIOHMMETER (or equivalent)
Isat: WK3255BQ+ WK3265B (or equivalent)
Irms: WK3255BQ+ WK3265B (or equivalent)

Power Inductor APCF Series

Automotive
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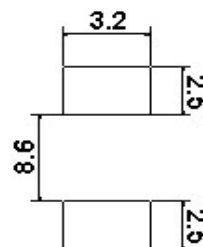
APCF00131365 Type

■ Dimensions



unit:mm

■ Recommended Land Pattern



unit:mm

■ Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)±20%	Isat (A)Max	Irms (A)Typ	Tolerance (±%)	Marking
APCF001313652R0□Y0	2.0	100kHz,0.5V	0.0117	10	6.2	30	2R0
APCF001313654R2□Y0	4.2	100kHz,0.5V	0.015	7.3	5.5	30	4R2
APCF001313657R0□Y0	7.0	100kHz,0.5V	0.0177	5.7	5	30	7R0
APCF00131365100□Y0	10.0	100kHz,0.5V	0.0202	5	4.8	20,30	100
APCF00131365150□Y0	15	100kHz,0.5V	0.0237	4.2	4.4	20,30	150
APCF00131365220□Y0	22	100kHz,0.5V	0.0316	3.5	3.8	20,30	220
APCF00131365330□Y0	33	100kHz,0.5V	0.0406	2.8	3.4	20,30	330
APCF00131365470□Y0	47	100kHz,0.5V	0.0578	2.4	2.8	20,30	470
APCF00131365680□Y0	68	100kHz,0.5V	0.0787	2	2.4	20,30	680
APCF00131365101□Y0	100	100kHz,0.5V	0.123	1.6	1.9	20,30	101
APCF00131365221□Y0	220	100kHz,0.5V	0.273	1	1.2	20,30	221
APCF00131365102□Y0	1000	100kHz,0.5V	1.1	0.3	0.35	20,30	102

Note: When ordering, please specify tolerance code. Tolerance: M=±20% / T=±30%

1. Operating temperature range -40°C ~ 165°C (Including self - temperature rise)
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3. I rms for a 40°C temprature rise from 25°C ambient with current
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5. Measure Equipment:

L: HP4284A PRECISION LCR METER (or equivalent)

RDC: CHROMA MODEL 16502 MILLIOHMMETER (or equivalent)

Isat:WK3255BQ+ WK3265B (or equivalent)

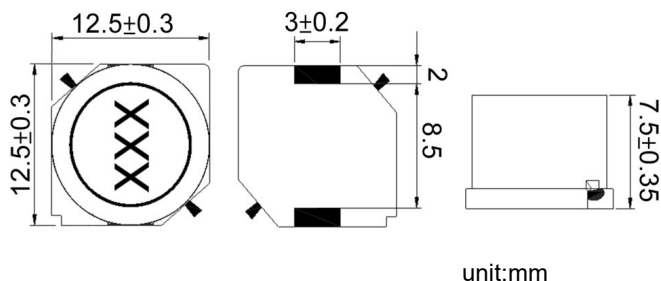
I rms: WK3255BQ+ WK3265B (or equivalent)

Power Inductor APCF Series

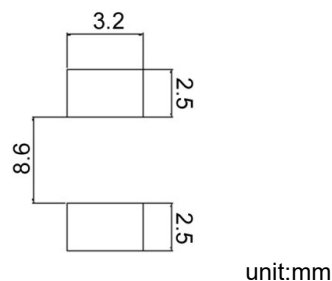
Automotive
AEC-Q200

APCF00131375 Type

■ Dimensions



■ Recommended Land Pattern



■ Electrical Characteristics

Part No.	Inductance (μ H)	Test Freq.	RDC (Ω) $\pm 20\%$	Isat (A)Max	Irms (A)Typ	Tolerance ($\pm\%$)	Marking
APCF001313751R2 $\square$ 00	1.2	100kHz,0.5V	0.0069	13	8.2	30	1R2
APCF001313752R7 $\square$ 00	2.7	100kHz,0.5V	0.0094	10	7	30	2R7
APCF001313753R9 $\square$ 00	3.9	100kHz,0.5V	0.0104	9	6.7	30	3R9
APCF001313755R6 $\square$ 00	5.6	100kHz,0.5V	0.0116	7.8	6.3	30	5R6
APCF001313756R8 $\square$ 00	6.8	100kHz,0.5V	0.0131	7.2	5.9	30	6R8
APCF00131375100 $\square$ 00	10	100kHz,0.5V	0.0156	5.5	5.4	20,30	100
APCF00131375150 $\square$ 00	15	100kHz,0.5V	0.0184	4.7	5	20,30	150
APCF00131375220 $\square$ 00	22	100kHz,0.5V	0.0263	4	4	20,30	220
APCF00131375330 $\square$ 00	33	100kHz,0.5V	0.0395	3.2	3.4	20,30	330
APCF00131375470 $\square$ 00	47	100kHz,0.5V	0.0528	2.7	3	20,30	470
APCF00131375680 $\square$ 00	68	100kHz,0.5V	0.0778	2	2.4	20,30	680
APCF00131375101 $\square$ 00	100	100kHz,0.5V	0.125	1.9	1.9	20,30	101
APCF00131375151 $\square$ 00	150	100kHz,0.5V	0.175	1.5	1.6	20,30	151
APCF00131375221 $\square$ 00	220	100kHz,0.5V	0.258	1.3	1.3	20,30	221

Note: When ordering, please specify tolerance code. Tolerance: M= $\pm 20\%$ / T= $\pm 30\%$

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- Measure Equipment:

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RDC: CHROMA MODEL 16502 MILLIOHMETER (or equivalent)

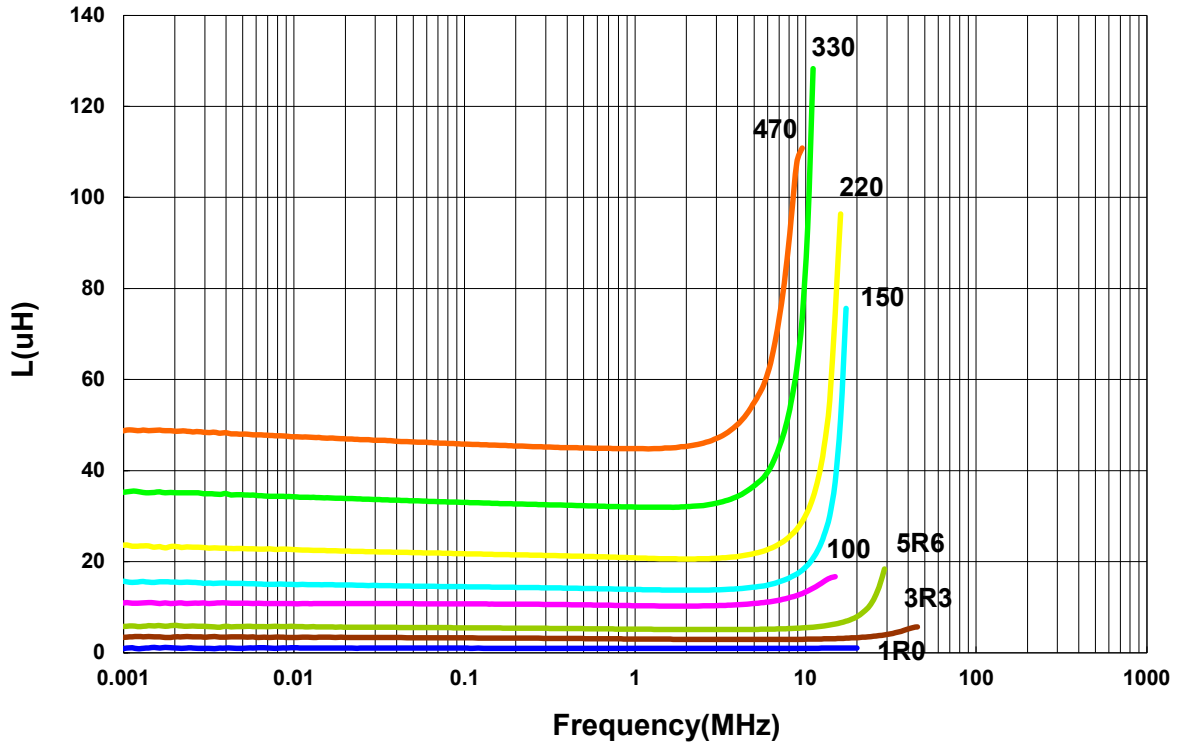
Isat:WK3255BQ+ WK3265B (or equivalent)

Irms: WK3255BQ+ WK3265B (or equivalent)

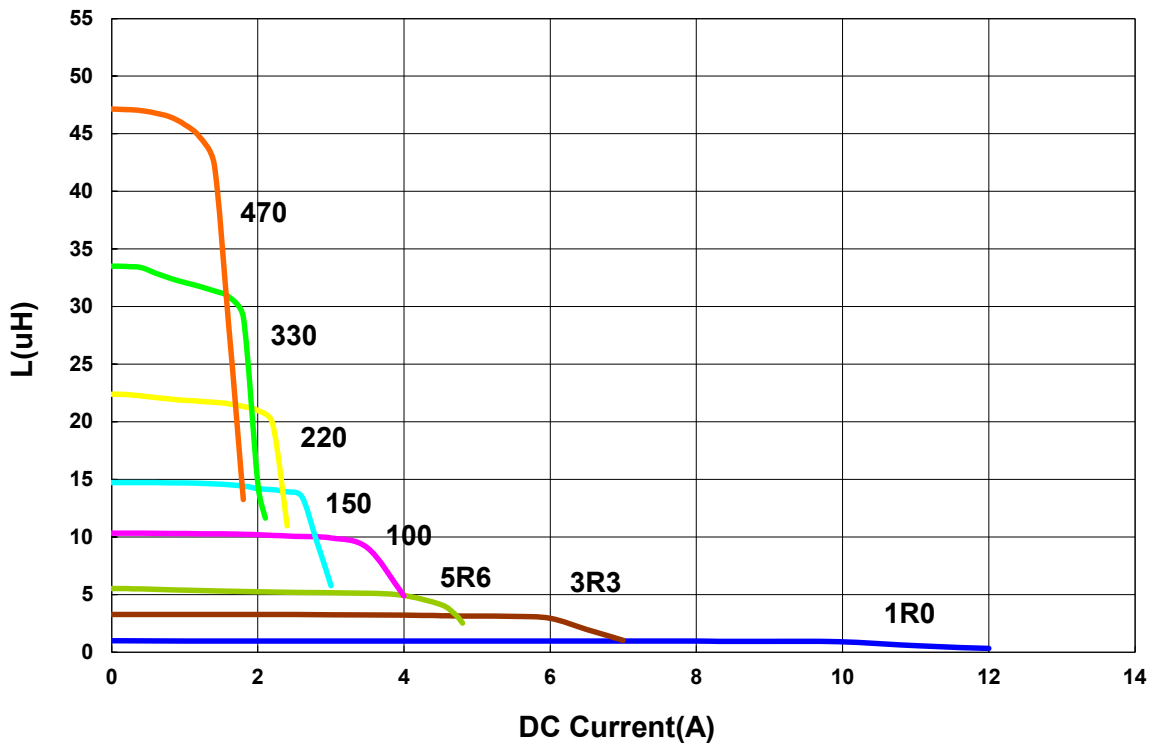
APCF00131375 Type

■ **Characteristics Graph**

Inductance vs. Frequency Characteristics



Inductance vs. DC Current



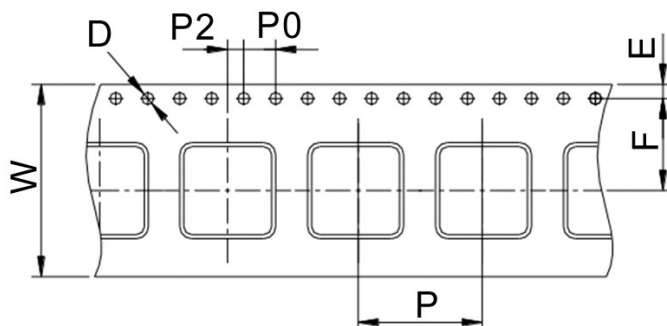
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Power Inductor APCF Series

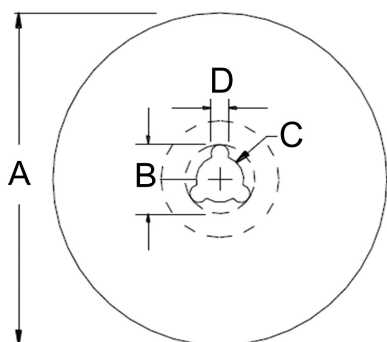
Automotive
AEC-Q200

■ Packaging

Tape Dimensions



Reel Dimensions



Dimensions in mm

TYPE	Tape Dimensions							Reel Dimensions				Quantity PCS / REEL
	W	D	E	F	P	P0	P2	A	B	C	D	
APCF00070732	16	1.5	1.75	7.5	12	4	2	330	20	13	2	1000
APCF00070745	16	1.5	1.75	7.5	12	4	2	330	20	13	2	1000
APCF00101045	24	1.5	1.75	11.5	16	4	2	330	20	13	2	500
APCF00131365	24	1.5	1.75	11.5	16	4	2	330	20	13	2	500
APCF00131375	24	1.5	1.75	11.5	16	4	2	330	20	13	2	500

Mouser Electronics

Authorized Distributor

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<u>APCF00070745100M00</u>	<u>APCF00070745100T00</u>	<u>APCF00070745101K00</u>	<u>APCF00070745101M00</u>
<u>APCF00070745102K00</u>	<u>APCF00070745102M00</u>	<u>APCF00070745150M00</u>	<u>APCF00070745150T00</u>
<u>APCF00070745151K00</u>	<u>APCF00070745151M00</u>	<u>APCF000707451R0M00</u>	<u>APCF000707451R0T00</u>
<u>APCF00070745220M00</u>	<u>APCF00070745220T00</u>	<u>APCF00070745221K00</u>	<u>APCF00070745221M00</u>
<u>APCF000707452R2M00</u>	<u>APCF000707452R2T00</u>	<u>APCF00070745330M00</u>	<u>APCF00070745330T00</u>
<u>APCF00070745331K00</u>	<u>APCF00070745331M00</u>	<u>APCF000707453R3M00</u>	<u>APCF000707453R3T00</u>
<u>APCF00070745470M00</u>	<u>APCF00070745470T00</u>	<u>APCF00070745471K00</u>	<u>APCF00070745471M00</u>
<u>APCF000707454R7M00</u>	<u>APCF000707454R7T00</u>	<u>APCF00070745680M00</u>	<u>APCF00070745680T00</u>
<u>APCF00070745681K00</u>	<u>APCF00070745681M00</u>	<u>APCF000707456R8M00</u>	<u>APCF000707456R8T00</u>
<u>APCF00131375100M00</u>	<u>APCF00131375101M00</u>	<u>APCF00131375150M00</u>	<u>APCF00131375151M00</u>
<u>APCF001313751R2T00</u>	<u>APCF00131375220M00</u>	<u>APCF00131375221M00</u>	<u>APCF001313752R7T00</u>
<u>APCF00131375330M00</u>	<u>APCF001313753R9T00</u>	<u>APCF00131375470M00</u>	<u>APCF001313755R6T00</u>
<u>APCF00131375680M00</u>	<u>APCF001313756R8T00</u>		