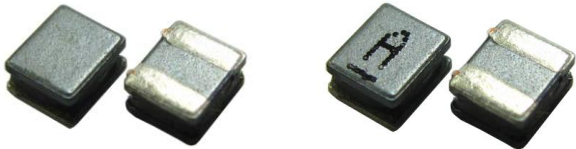


# Power Inductor

AWVH Series - ISO9001 | ISO14001 | IATF16949



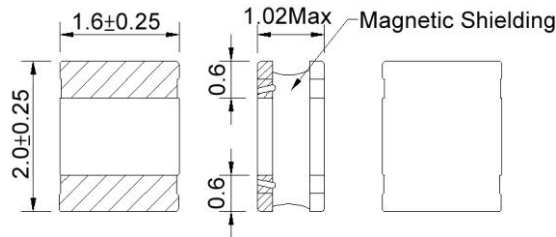
- Power  
Circuit
- Shield
- Magnetic  
Resin LVx
- Ferrite
- High  
Current

## Part Numbering

|       |             |              |                         |                    |           |                 |
|-------|-------------|--------------|-------------------------|--------------------|-----------|-----------------|
| A     | WVH         | 00           | 252012                  | 1R0                | M         | 00              |
| Grade | Series Name | Control Code | Dimensions Code<br>(mm) | Inductance<br>(uH) | Tolerance | Internal Code   |
|       |             |              | 201610 2.0x1.6x1.02     | R47 0.47           | M ±20%    | 00 General      |
|       |             |              | 252010 2.5x2.0x1.0      | 1R0 1.0            | T ±30%    | H1 High Current |
|       |             |              | 252012 2.5x2.0x1.2      | 101 100            |           |                 |
|       |             |              | 404030 4.0x4.0x3.0      |                    |           |                 |

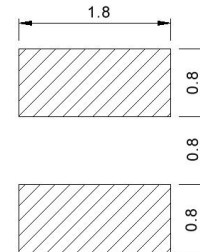
## AWVH00201610-H1 Type

### Dimensions



unit:mm

### Recommended Land Pattern



unit:mm

### Electrical Characteristics

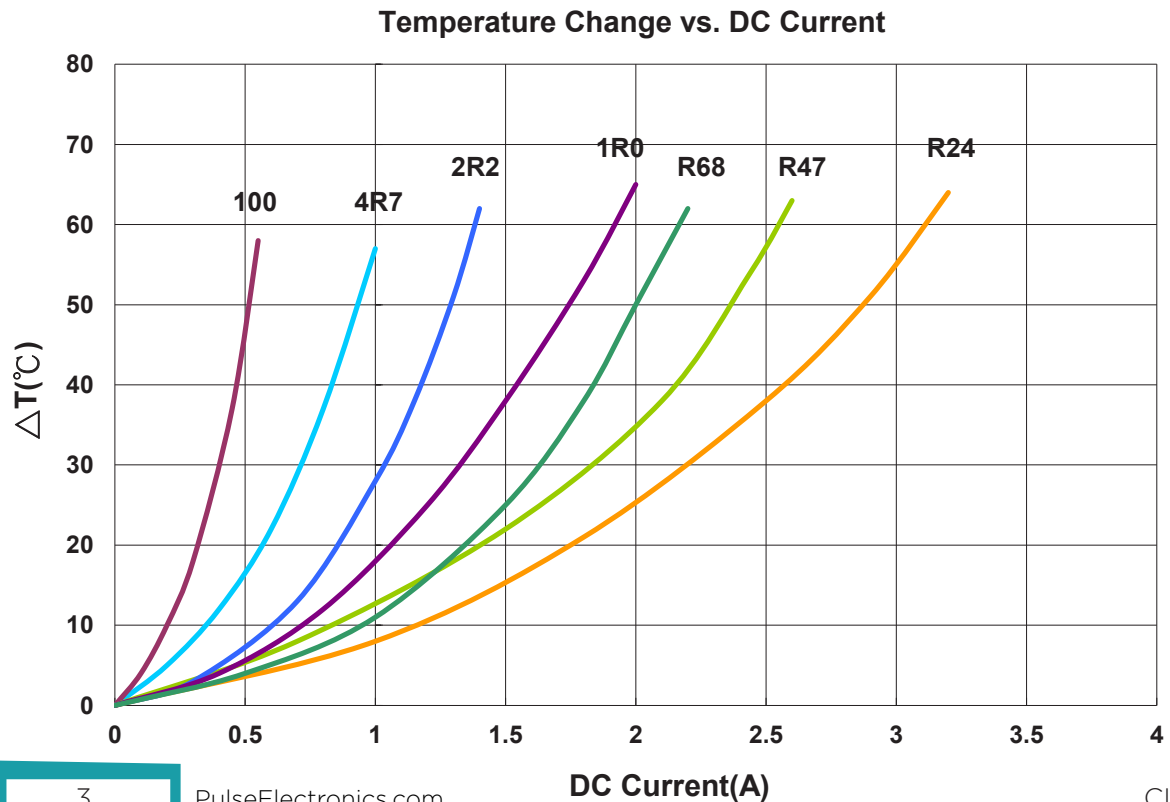
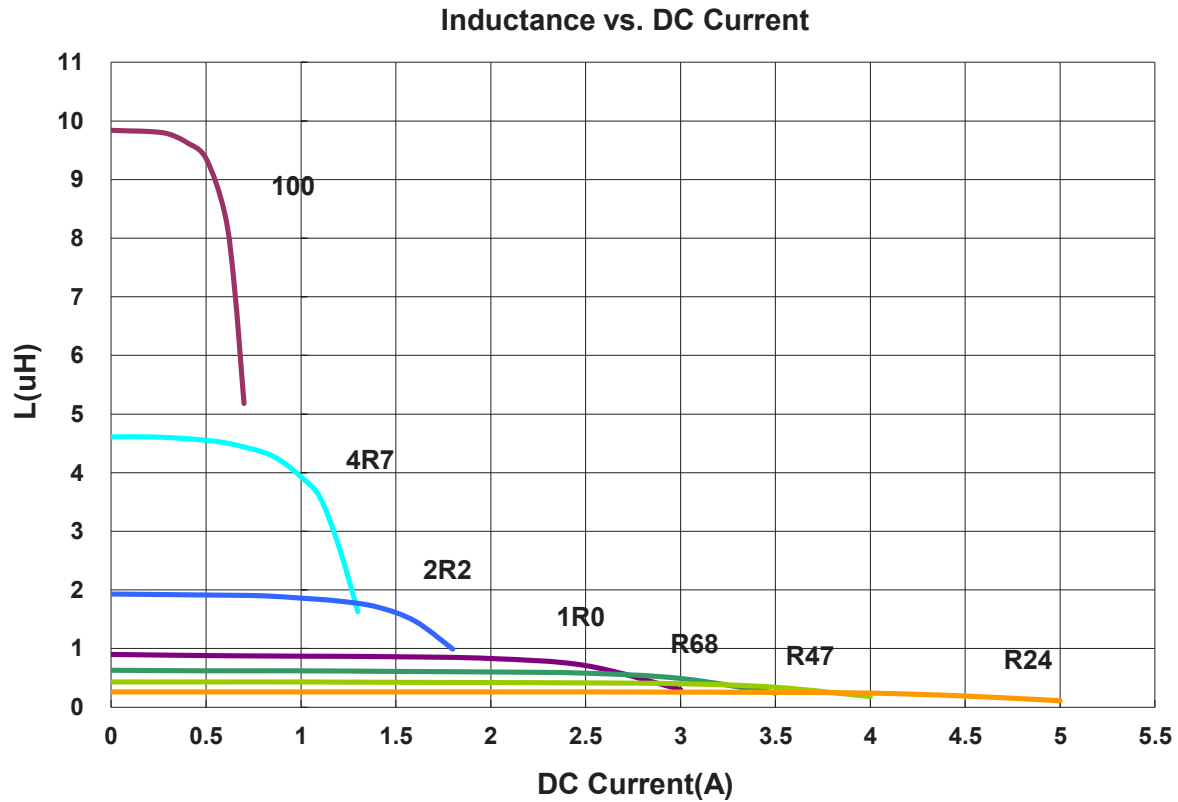
| Part No.           | Inductance<br>(uH) | Test Freq. | RDC<br>(Ω)±30% | Isat(A)<br>Typ.(Max) | Irms(A)<br>Typ.(Max) | Tolerance<br>(±%) |
|--------------------|--------------------|------------|----------------|----------------------|----------------------|-------------------|
| AWVH00201610R24□H1 | 0.24               | 1MHz,200mV | 0.048          | 3.70(3.30)           | 2.50(2.10)           | 20,30             |
| AWVH00201610R33□H1 | 0.33               | 1MHz,200mV | 0.048          | 3.40(3.00)           | 2.50(2.10)           | 20,30             |
| AWVH00201610R47□H1 | 0.47               | 1MHz,200mV | 0.072          | 2.90(2.60)           | 2.10(1.80)           | 20,30             |
| AWVH00201610R56□H1 | 0.56               | 1MHz,200mV | 0.072          | 2.70(2.40)           | 2.10(1.80)           | 20,30             |
| AWVH00201610R68□H1 | 0.68               | 1MHz,200mV | 0.092          | 2.50(2.20)           | 1.80(1.50)           | 20,30             |
| AWVH002016101R0□H1 | 1.0                | 1MHz,200mV | 0.110          | 2.20(2.00)           | 1.50(1.20)           | 20,30             |
| AWVH002016102R2□H1 | 2.2                | 1MHz,200mV | 0.205          | 1.40(1.20)           | 1.15(0.97)           | 20,30             |
| AWVH002016103R3□H1 | 3.3                | 1MHz,200mV | 0.380          | 1.05(0.94)           | 0.90(0.80)           | 20,30             |
| AWVH002016104R7□H1 | 4.7                | 1MHz,200mV | 0.520          | 0.90(0.80)           | 0.80(0.68)           | 20,30             |
| AWVH00201610100□H1 | 10                 | 1MHz,200mV | 1.100          | 0.62(0.55)           | 0.45(0.38)           | 20,30             |

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

- Operating temperature range - 40°C ~ 125°C
- Isat for Inductance drop 30% from its value without current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment:  
L: Agilent HP4287A+Agilent HP16197A  
RDC: DIGITAL MILLINHM METER CHROMA 16502, or equivalent  
Isat: Agilent HP4284A  
Irms: Agilent HP4284A

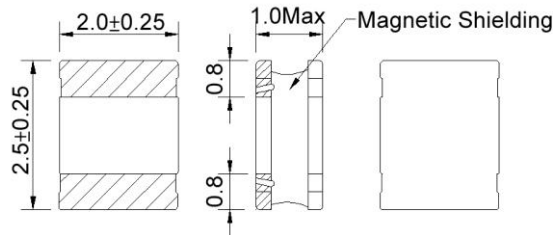
## AWVH00201610-H1 Type

### Characteristics Graph



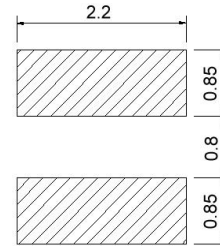
## AWVH00252010-H1 Type

### ■ Dimensions



unit:mm

### ■ Recommended Land Pattern



unit:mm

### ■ Electrical Characteristics

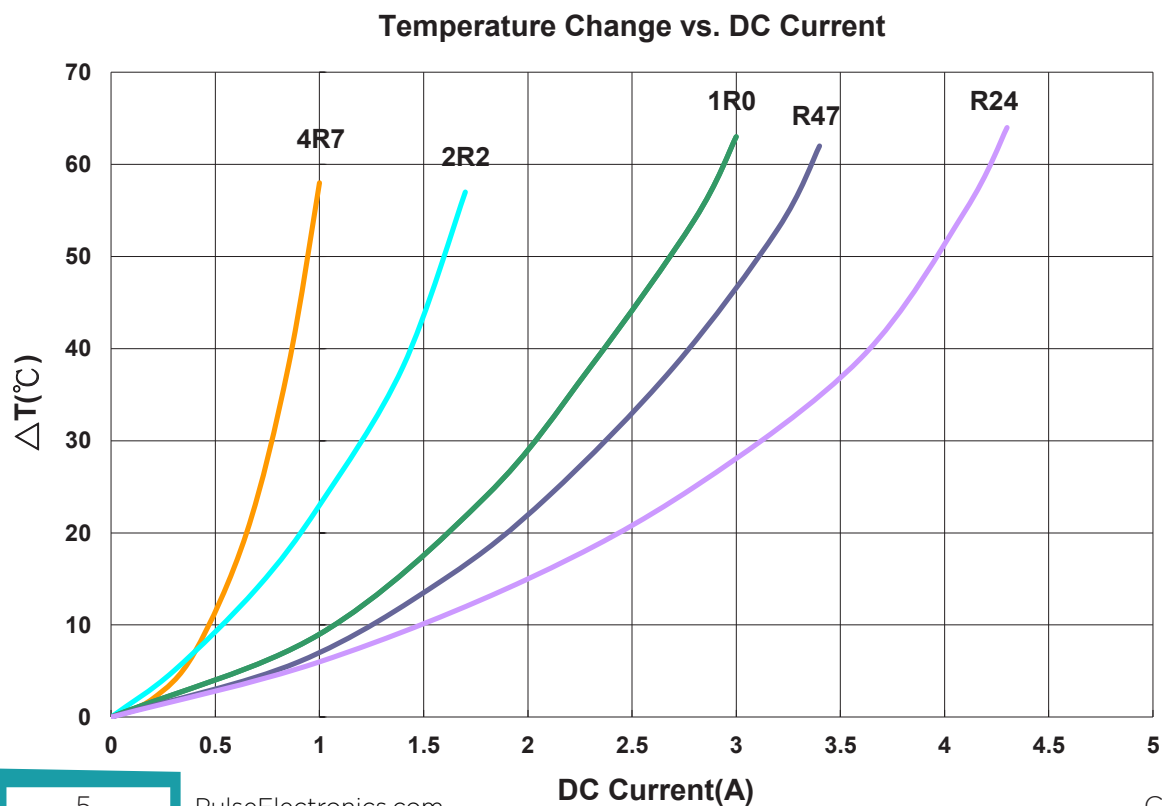
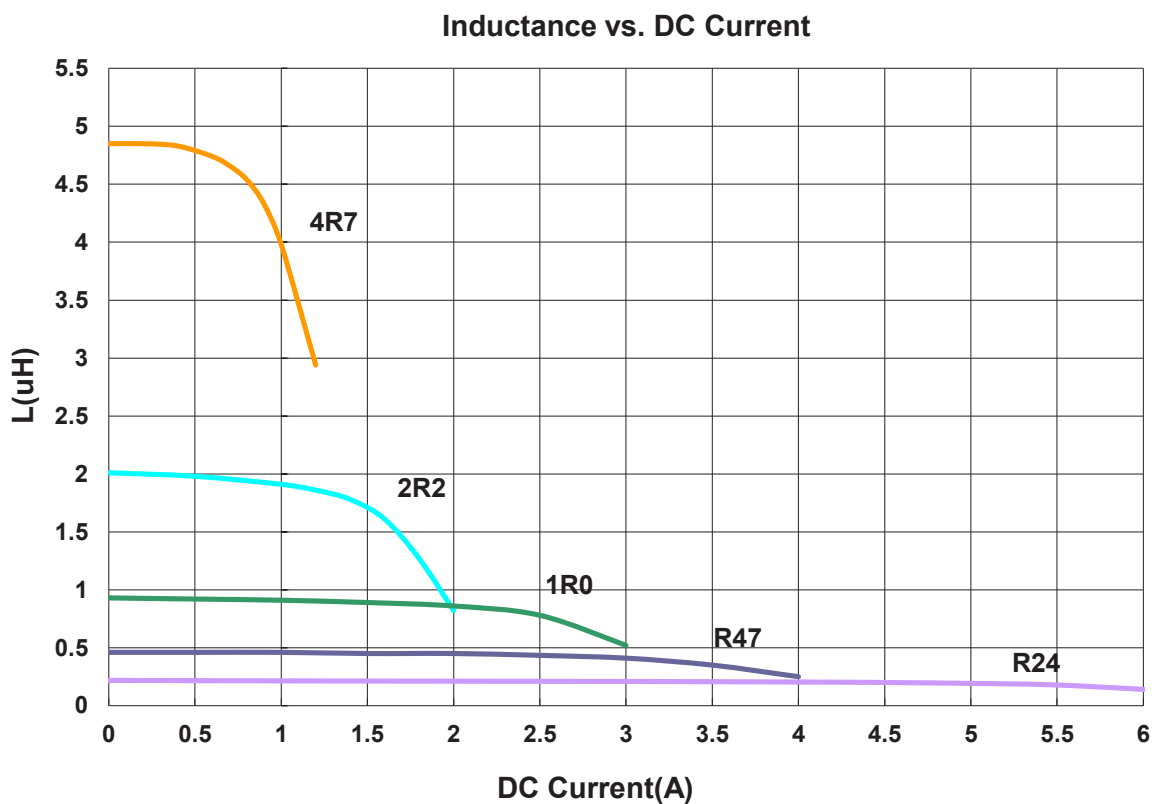
| Part No.           | Inductance<br>(uH) | Test Freq. | RDC<br>(Ω)±30% | Isat(A)<br>Typ.(Max) | Irms(A)<br>Typ.(Max) | Tolerance<br>(±%) |
|--------------------|--------------------|------------|----------------|----------------------|----------------------|-------------------|
| AWVH00252010R24□H1 | 0.24               | 1MHz,200mV | 0.030          | 4.70(4.20)           | 3.60(3.00)           | 20,30             |
| AWVH00252010R47□H1 | 0.47               | 1MHz,200mV | 0.043          | 3.30(2.90)           | 2.70(2.30)           | 20,30             |
| AWVH00252010R68□H1 | 0.7                | 1MHz,200mV | 0.062          | 2.80(2.00)           | 2.30(1.90)           | 20,30             |
| AWVH002520101R0□H1 | 1                  | 1MHz,200mV | 0.080          | 2.30(2.00)           | 1.90(1.60)           | 20,30             |
| AWVH002520102R2□H1 | 2.2                | 1MHz,200mV | 0.135          | 1.60(1.40)           | 1.40(1.10)           | 20,30             |
| AWVH002520104R7□H1 | 4.7                | 1MHz,200mV | 0.330          | 1.00(0.90)           | 0.85(0.72)           | 20,30             |
| AWVH00252010100□H1 | 10                 | 1MHz,200mV | 0.670          | 0.72(0.64)           | 0.58(0.49)           | 20,30             |

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

- Operating temperature range - 40°C ~ 125°C
- Isat for Inductance drop 30% from its value without current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment:  
L: Agilent HP4287A+Agilent HP16197A  
RDC: DIGITAL MILLINHM METER CHROMA 16502, or equivalent  
Isat: Agilent HP4284A  
Irms: Agilent HP4284A

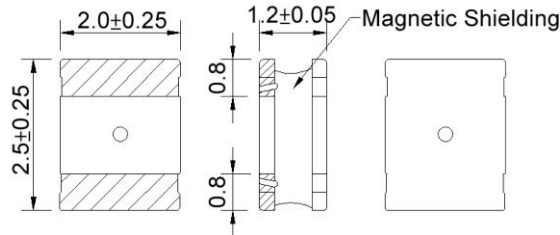
## AWVH00252010-H1 Type

### Characteristics Graph



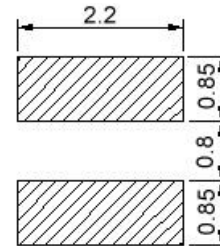
## AWVH00252012-H1 Type

### ■ Dimensions



unit:mm

### ■ Recommended Land Pattern



unit:mm

### ■ Electrical Characteristics

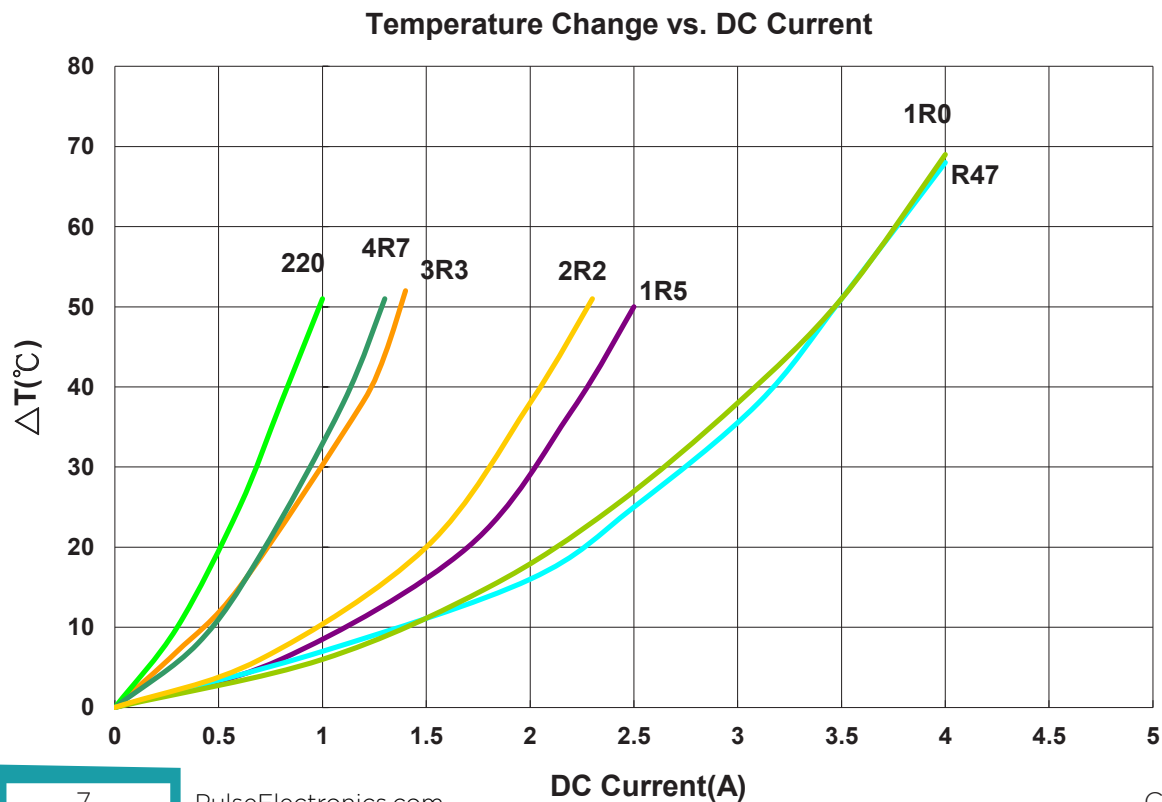
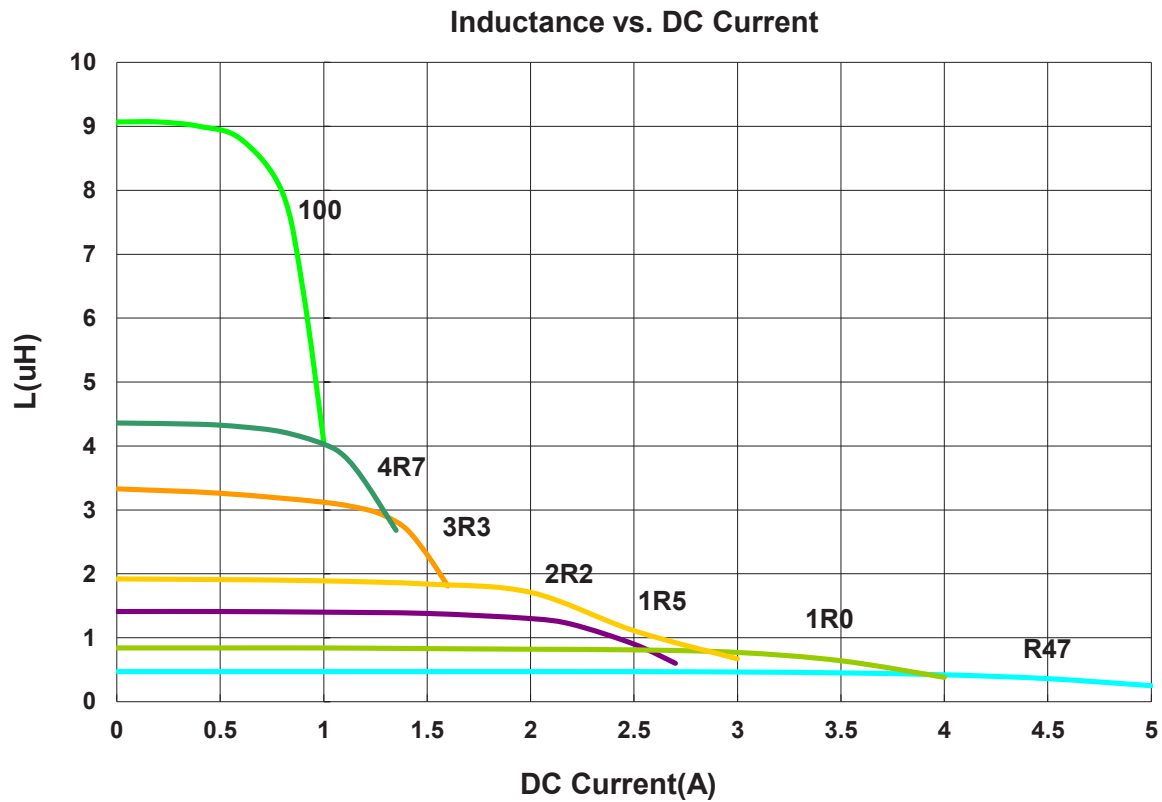
| Part No.           | Inductance<br>(uH) | Test Freq. | RDC<br>(Ω)±30% | Isat(A)<br>Typ.(Max) | Irms(A)<br>Typ.(Max) | Tolerance<br>(±%) |
|--------------------|--------------------|------------|----------------|----------------------|----------------------|-------------------|
| AWVH00252012R47□H1 | 0.47               | 1MHz,200mV | 0.031          | 4.10(3.60)           | 3.10(2.60)           | 20,30             |
| AWVH00252012R68□H1 | 0.68               | 1MHz,200mV | 0.031          | 3.10(2.70)           | 3.10(2.60)           | 20,30             |
| AWVH002520121R0□H1 | 1.0                | 1MHz,200mV | 0.049          | 3.20(2.80)           | 3.00(2.50)           | 20,30             |
| AWVH002520121R5□H1 | 1.5                | 1MHz,200mV | 0.088          | 2.30(2.00)           | 2.20(1.80)           | 20,30             |
| AWVH002520122R2□H1 | 2.2                | 1MHz,200mV | 0.099          | 2.20(1.90)           | 2.00(1.7.0)          | 20,30             |
| AWVH002520123R3□H1 | 3.3                | 1MHz,200mV | 0.190          | 1.40(1.20)           | 1.20(1.00)           | 20,30             |
| AWVH002520124R7□H1 | 4.7                | 1MHz,200mV | 0.235          | 1.30(1.10)           | 1.10(0.93)           | 20,30             |
| AWVH00252012100□H1 | 10                 | 1MHz,200mV | 0.510          | 0.92(0.82)           | 0.80(0.68)           | 20,30             |

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

1. Operating temperature range - 40°C ~ 125°C
2. Isat for Inductance drop 30% from its value without current
3. Irms for a 40°C temperature rise from 25°C ambient with current
4. Measure Equipment:  
L: Agilent HP4287A+Agilent HP16197A  
RDC: DIGITAL MILLINHM METER CHROMA 16502, or equivalent  
Isat: Agilent HP4284A  
Irms: Agilent HP4284A

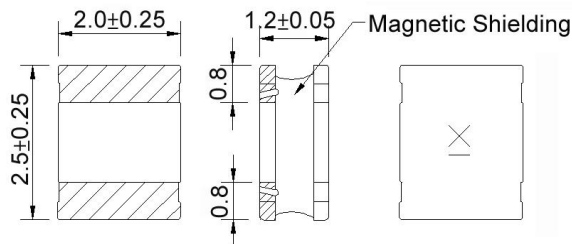
## AWVH00252012-H1 Type

### Characteristics Graph



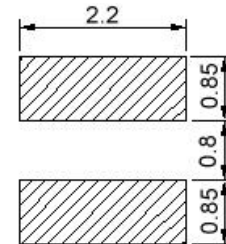
## AWVH00252012 Type

### ■ Dimensions



unit:mm

### ■ Recommended Land Pattern



unit:mm

### ■ Electrical Characteristics

| Part No.           | Inductance<br>(uH) | Test Freq. | RDC<br>(Ω)±30% | Isat(A)<br>Typ.(Max) | Irms(A)<br>Typ.(Max) | Tolerance<br>(±%) | Marking |
|--------------------|--------------------|------------|----------------|----------------------|----------------------|-------------------|---------|
| AWVH00252012R24□00 | 0.24               | 1MHz,200mV | 0.021          | 4.70(4.20)           | 3.80(3.20)           | 20,30             | E       |
| AWVH00252012R33□00 | 0.33               | 1MHz,200mV | 0.027          | 4.20(3.70)           | 3.00(2.50)           | 20,30             | G       |
| AWVH00252012R47□00 | 0.47               | 1MHz,200mV | 0.027          | 3.60(3.30)           | 3.00(2.50)           | 20,30             | J       |
| AWVH00252012R50□00 | 0.50               | 1MHz,200mV | 0.027          | 3.60(3.30)           | 3.00(2.50)           | 20,30             | D       |
| AWVH00252012R68□00 | 0.68               | 1MHz,200mV | 0.036          | 2.90(2.60)           | 2.80(2.30)           | 20,30             | H       |
| AWVH002520121R0□00 | 1.0                | 1MHz,200mV | 0.037          | 2.70(2.40)           | 2.60(2.20)           | 20,30             | A       |
| AWVH002520121R5□00 | 1.5                | 1MHz,200mV | 0.075          | 2.20(1.90)           | 1.90(1.60)           | 20,30             | I       |
| AWVH002520122R2□00 | 2.2                | 1MHz,200mV | 0.080          | 1.90(1.80)           | 1.80(1.50)           | 20,30             | B       |
| AWVH002520124R7□00 | 4.7                | 1MHz,200mV | 0.195          | 1.20(1.00)           | 1.10(0.93)           | 20,30             | C       |
| AWVH00252012100□00 | 10                 | 1MHz,200mV | 0.400          | 0.90(0.78)           | 0.80(0.68)           | 20,30             | F       |
| AWVH00252012330□00 | 33                 | 1MHz,200mV | 1.550          | 0.43(0.38)           | 0.38(0.34)           | 20,30             | L       |
| AWVH00252012470□00 | 47                 | 1MHz,200mV | 1.700          | 0.39(0.35)           | 0.34(0.30)           | 20,30             | K       |

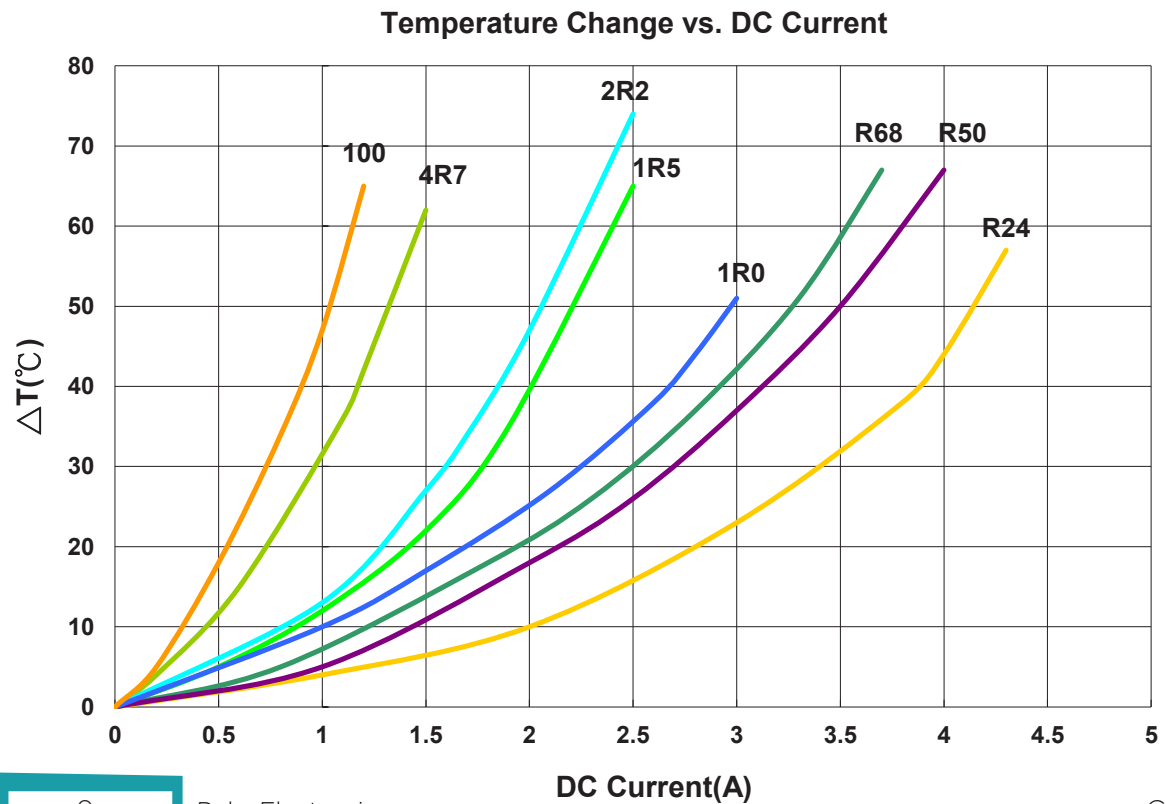
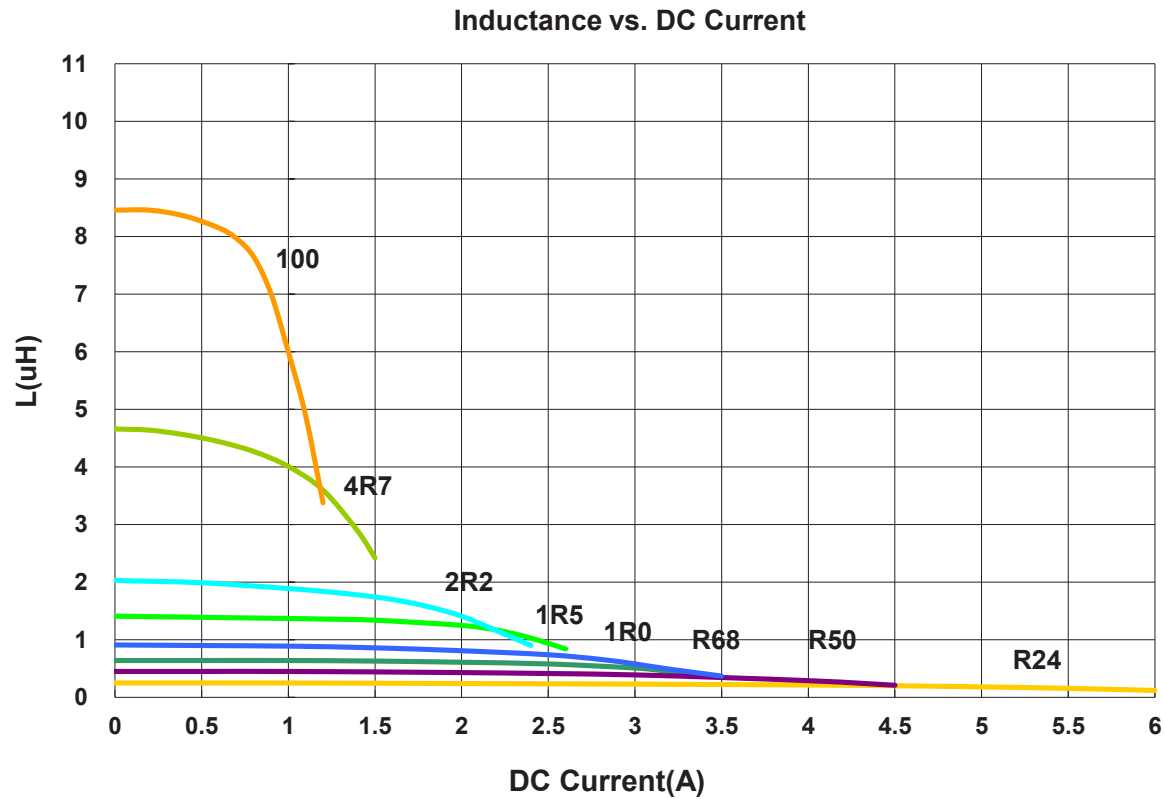
**Note: When ordering, please specify tolerance code. Tolerance: M=±20% / T=±30%**

1. Operating temperature range - 40°C ~ 125°C
2. Isat for Inductance drop 30% from its value without current
3. Irms for a 40°C temperature rise from 25°C ambient with current
4. Measure Equipment:  
L: Agilent HP4287A+Agilent HP16197A  
RDC: DIGITAL MILLINHM METER CHROMA 16502, or equivalent  
Isat: Agilent HP4284A  
Irms: Agilent HP4284A



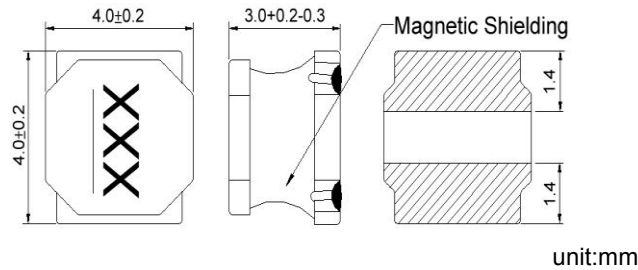
## AWVH00252012 Type

### Characteristics Graph

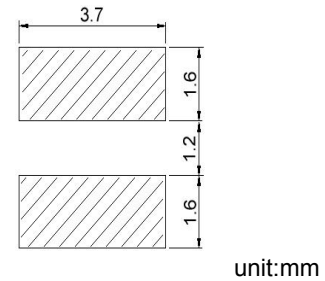


## AWVH00404030 Type

### Dimensions



### Recommended Land Pattern



### Electrical Characteristics

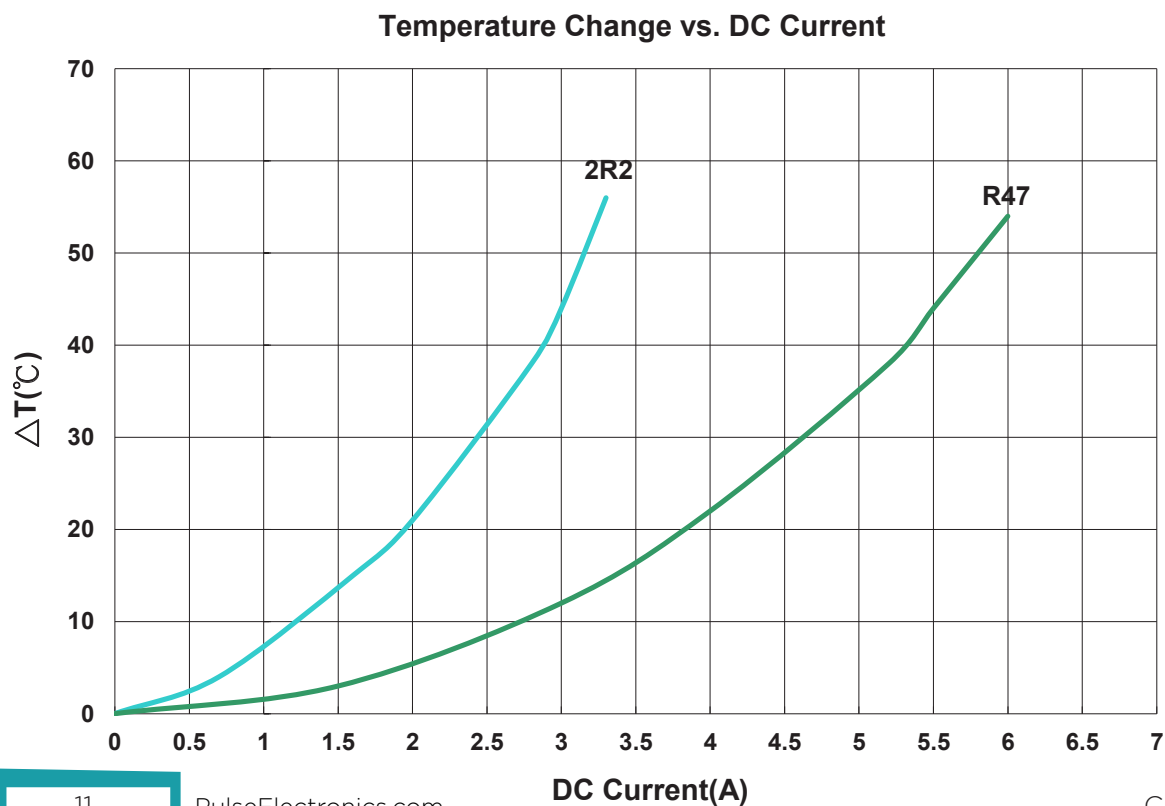
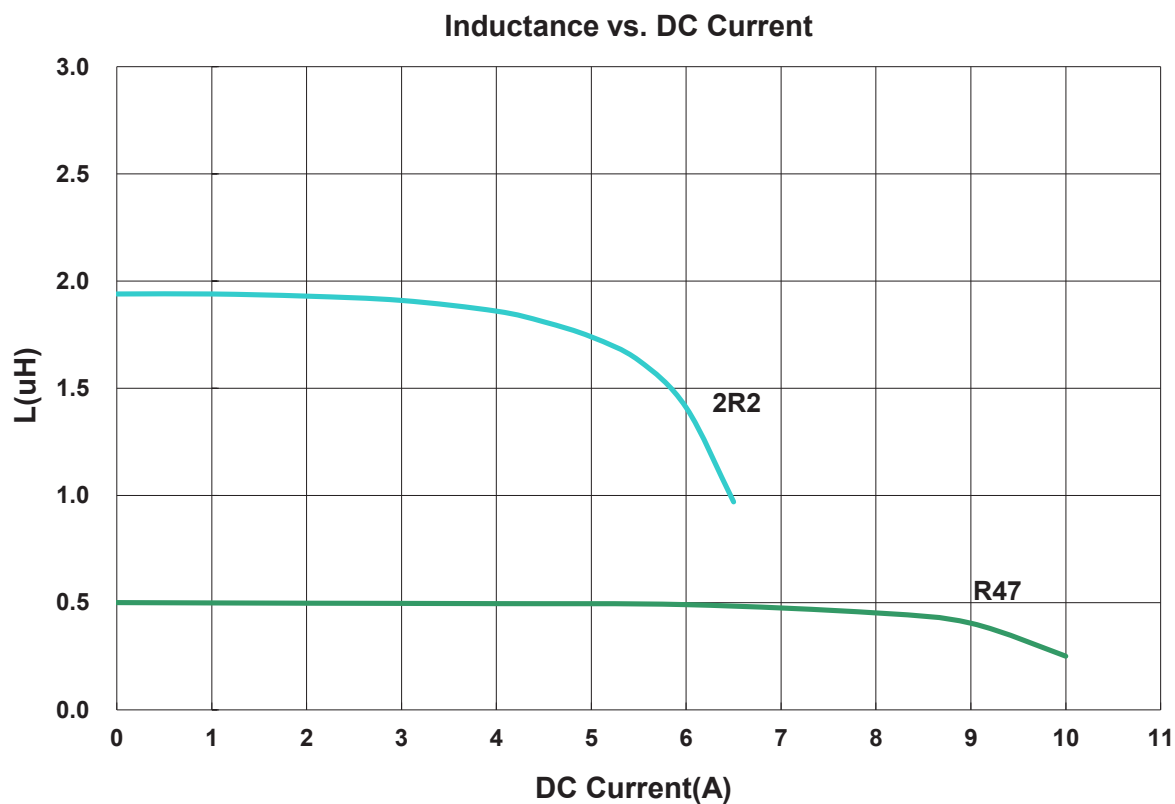
| Part No.           | Inductance<br>(uH) | Test Freq. | RDC<br>(Ω)±30% | Isat(A)<br>Typ.(Max) | Irms(A)<br>Typ.(Max) | Tolerance<br>(±%) | Marking |
|--------------------|--------------------|------------|----------------|----------------------|----------------------|-------------------|---------|
| AWVH00404030R47□00 | 0.47               | 100kHz, 1V | 0.014          | 9.0(8.0)             | 5.2(4.6)             | 30                | R47     |
| AWVH004040302R2□00 | 2.2                | 100kHz, 1V | 0.042          | 4.4(3.9)             | 2.8(2.5)             | 20,30             | 2R2     |

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

- Operating temperature range - 40°C ~ 125°C
- Isat for Inductance drop 30% from its value without current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment:  
L: Agilent HP4284A+Agilent HP42841A  
RDC: DIGITAL MILLINHM METER CHROMA 16502, or equivalent  
Isat: Agilent HP4284A  
Irms: Agilent HP4284A

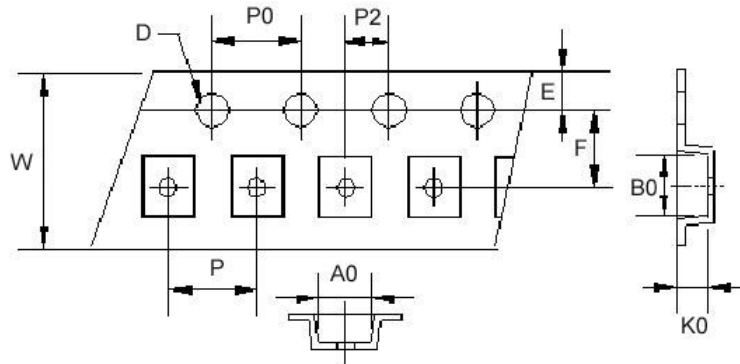
## AWVH00404030 Type

### Characteristics Graph



## ■ Packaging

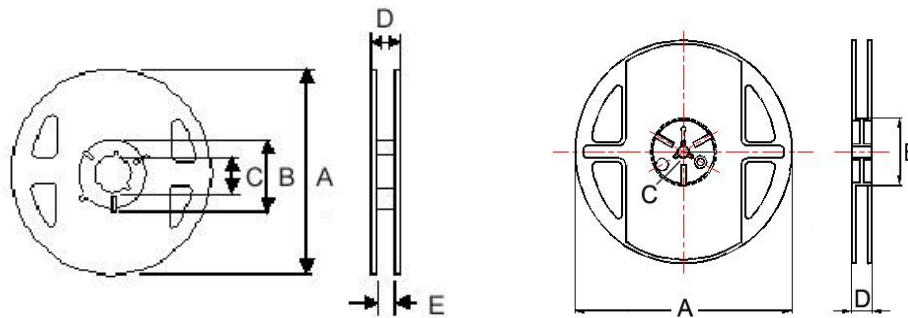
### Tape Dimensions



### Reel Dimensions

Figure 1

Figure 2



| TYPE         | Fig | Tape Dimensions |      |      |      |      |     |    |   |    |    | Reel Dimensions |    |    |      |     | Quantity   |
|--------------|-----|-----------------|------|------|------|------|-----|----|---|----|----|-----------------|----|----|------|-----|------------|
|              |     | A0              | B0   | K0   | D    | E    | F   | W  | P | P0 | P2 | A               | B  | C  | D    | E   | PCS / Reel |
| AWVH00201610 | 1   | 1.9             | 2.2  | 1.15 | 1.55 | 1.75 | 3.5 | 8  | 4 | 4  | 2  | 180             | 60 | 13 | 14.4 | 8.4 | 2000       |
| AWVH00252010 | 1   | 2.4             | 2.7  | 1.15 | 1.55 | 1.75 | 3.5 | 8  | 4 | 4  | 2  | 180             | 60 | 13 | 14.4 | 8.4 | 2000       |
| AWVH00252012 | 1   | 2.40            | 2.70 | 1.35 | 1.55 | 1.75 | 3.5 | 8  | 4 | 4  | 2  | 180             | 60 | 13 | 14.4 | 8.4 | 2000       |
| AWVH00404030 | 2   | 4.25            | 4.25 | 3.2  | 1.55 | 1.75 | 5.5 | 12 | 8 | 4  | 2  | 178             | 60 | 13 | 13.2 | -   | 500        |

### For More Information:

Americas - [prodinfo\\_power\\_americas@yageo.com](mailto:prodinfo_power_americas@yageo.com) | Europe - [prodinfo\\_power\\_emea@yageo.com](mailto:prodinfo_power_emea@yageo.com) | Asia - [prodinfo\\_power\\_asia@yageo.com](mailto:prodinfo_power_asia@yageo.com)

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| <a href="#"><u>AWVH002016102R2MH1</u></a> | <a href="#"><u>AWVH002016102R2TH1</u></a> | <a href="#"><u>AWVH002016103R3MH1</u></a> | <a href="#"><u>AWVH002016103R3TH1</u></a> |
| <a href="#"><u>AWVH002016104R7MH1</u></a> | <a href="#"><u>AWVH002016104R7TH1</u></a> | <a href="#"><u>AWVH00201610R24MH1</u></a> | <a href="#"><u>AWVH00201610R24TH1</u></a> |
| <a href="#"><u>AWVH00201610R33MH1</u></a> | <a href="#"><u>AWVH00201610R33TH1</u></a> | <a href="#"><u>AWVH00201610R47MH1</u></a> | <a href="#"><u>AWVH00201610R47TH1</u></a> |
| <a href="#"><u>AWVH00201610R56MH1</u></a> | <a href="#"><u>AWVH00201610R56TH1</u></a> | <a href="#"><u>AWVH00201610R68MH1</u></a> | <a href="#"><u>AWVH00201610R68TH1</u></a> |
| <a href="#"><u>AWVH00252010100MH1</u></a> | <a href="#"><u>AWVH00252010100TH1</u></a> | <a href="#"><u>AWVH002520101R0MH1</u></a> | <a href="#"><u>AWVH002520101R0TH1</u></a> |
| <a href="#"><u>AWVH002520102R2MH1</u></a> | <a href="#"><u>AWVH002520102R2TH1</u></a> | <a href="#"><u>AWVH002520104R7MH1</u></a> | <a href="#"><u>AWVH002520104R7TH1</u></a> |
| <a href="#"><u>AWVH00252010R24MH1</u></a> | <a href="#"><u>AWVH00252010R24TH1</u></a> | <a href="#"><u>AWVH00252010R47MH1</u></a> | <a href="#"><u>AWVH00252010R47TH1</u></a> |
| <a href="#"><u>AWVH00252010R68MH1</u></a> | <a href="#"><u>AWVH00252010R68TH1</u></a> | <a href="#"><u>AWVH00252012100M00</u></a> | <a href="#"><u>AWVH00252012100MH1</u></a> |
| <a href="#"><u>AWVH00252012100T00</u></a> | <a href="#"><u>AWVH00252012100TH1</u></a> | <a href="#"><u>AWVH002520121R0M00</u></a> | <a href="#"><u>AWVH002520121R0MH1</u></a> |
| <a href="#"><u>AWVH002520121R0T00</u></a> | <a href="#"><u>AWVH002520121R0TH1</u></a> | <a href="#"><u>AWVH002520121R5M00</u></a> | <a href="#"><u>AWVH002520121R5MH1</u></a> |
| <a href="#"><u>AWVH002520121R5T00</u></a> | <a href="#"><u>AWVH002520121R5TH1</u></a> | <a href="#"><u>AWVH002520122R2M00</u></a> | <a href="#"><u>AWVH002520122R2MH1</u></a> |
| <a href="#"><u>AWVH002520122R2T00</u></a> | <a href="#"><u>AWVH002520122R2TH1</u></a> | <a href="#"><u>AWVH00252012330M00</u></a> | <a href="#"><u>AWVH00252012330T00</u></a> |
| <a href="#"><u>AWVH002520123R3MH1</u></a> | <a href="#"><u>AWVH002520123R3TH1</u></a> | <a href="#"><u>AWVH00252012470M00</u></a> | <a href="#"><u>AWVH00252012470T00</u></a> |
| <a href="#"><u>AWVH002520124R7M00</u></a> | <a href="#"><u>AWVH002520124R7MH1</u></a> | <a href="#"><u>AWVH002520124R7T00</u></a> | <a href="#"><u>AWVH002520124R7TH1</u></a> |
| <a href="#"><u>AWVH00252012R24M00</u></a> | <a href="#"><u>AWVH00252012R24T00</u></a> | <a href="#"><u>AWVH00252012R33M00</u></a> | <a href="#"><u>AWVH00252012R33T00</u></a> |
| <a href="#"><u>AWVH00252012R47M00</u></a> | <a href="#"><u>AWVH00252012R47MH1</u></a> | <a href="#"><u>AWVH00252012R47T00</u></a> | <a href="#"><u>AWVH00252012R47TH1</u></a> |
| <a href="#"><u>AWVH00252012R50M00</u></a> | <a href="#"><u>AWVH00252012R50T00</u></a> | <a href="#"><u>AWVH00252012R68M00</u></a> | <a href="#"><u>AWVH00252012R68MH1</u></a> |
| <a href="#"><u>AWVH00252012R68T00</u></a> | <a href="#"><u>AWVH00252012R68TH1</u></a> | <a href="#"><u>AWVH004040302R2M00</u></a> | <a href="#"><u>AWVH004040302R2T00</u></a> |
| <a href="#"><u>AWVH00404030R47T00</u></a> |                                           |                                           |                                           |