

Power Inductor AWVT Series

**Automotive
AEC-Q200**

RoHS Compliant
Halogen Free
REACH Compliant



Part Numbering

A	WVT	00	252012	1R0	M	00
Grade	Series Name	Control Code	Dimensions Code (mm)	Inductance (uH)	Tolerance	Internal Code
			201610 2.0x1.6x1.0	R47 0.47	M ±20%	
			252010 2.5x2.0x1.02	1R0 1.0	T ±30%	
			252012 2.5x2.0x1.2	101 100		
			303010 3.0x3.0x1.02			
			303012 3.0x3.0x1.2			
			404012 4.0x4.0x1.2			
			404015 4.0x4.0x1.5			
			404026 4.0x4.0x2.6			
			505020 5.0x5.0x2.0			
			606020 6.0x6.0x2.0			
			808040 8.0x8.0x4.0			

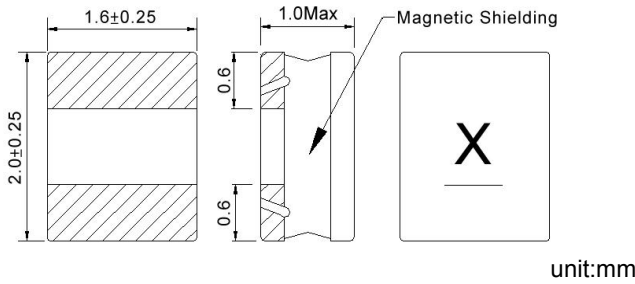
This specification applies to Power Inductors for Automotive Electronics based on AEC-Q200 except for Power train and Safety.

Power Inductor AWT Series

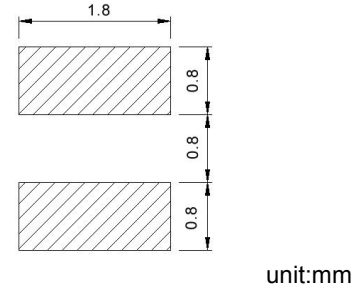
**Automotive
AEC-Q200**

AWVT00201610 Type

■ Dimensions



■ Recommended Land Pattern



■ Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)±30%	Isat(A) Typ.(Max)	Irms(A) Typ.(Max)	Tolerance (±%)	Marking
AWVT00201610R47□00	0.47	1MHz,200mV	0.072	2.40(2.10)	2.40(2.10)	20,30	A

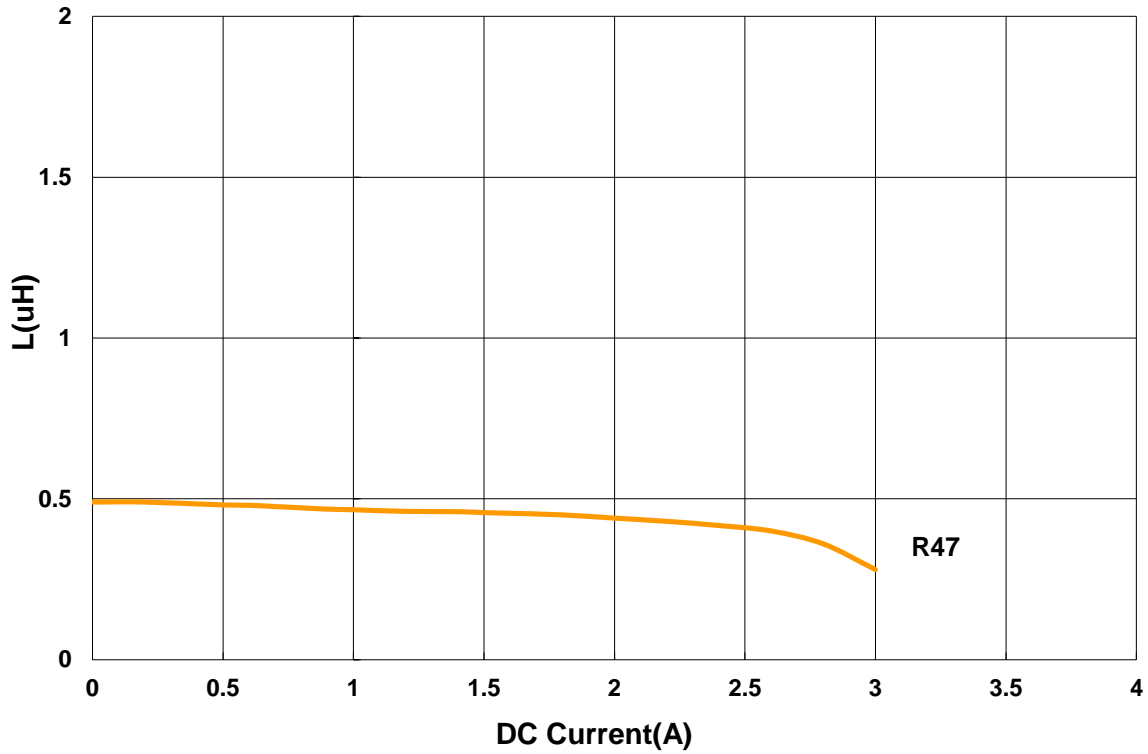
Note: When ordering, please specify tolerance code. Tolerance: M=±20% / T=±30%

- 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

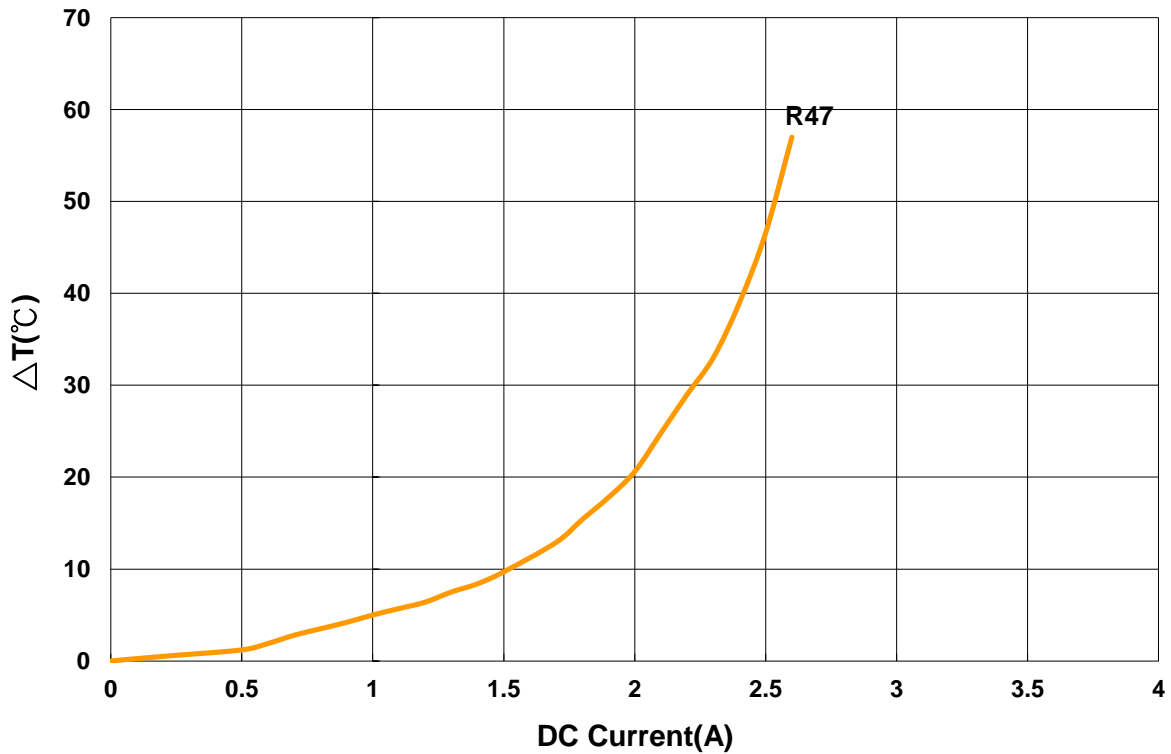
AWVT00201610 Type

■ Characteristics Graph

Inductance vs. DC Current



Temperature Change vs. DC Current

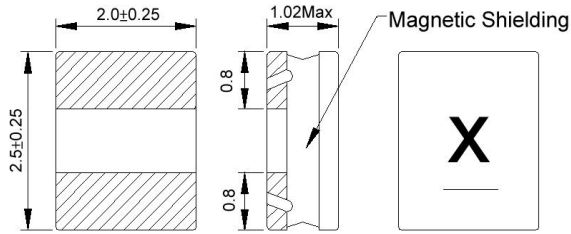


Power Inductor AWVT Series

**Automotive
AEC-Q200**

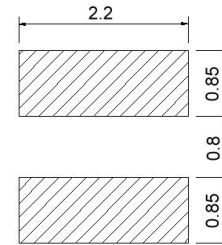
AWVT00252010 Type

■ Dimensions



unit:mm

■ Recommended Land Pattern



unit:mm

■ Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)±30%	Isat(A) Typ.(Max)	Irms(A) Typ.(Max)	Tolerance (±%)	Marking
AWVT00252010R68□00	0.68	1MHz,200mV	0.050	2.40(2.10)	2.20(1.90)	20,30	K
AWVT002520102R2□00	2.2	1MHz,200mV	0.135	1.40(1.20)	1.50(1.30)	20,30	D
AWVT002520103R3□00	3.3	1MHz,200mV	0.220	1.10(1.00)	1.20(1.00)	20,30	E
AWVT002520106R8□00	6.8	1MHz,200mV	0.435	0.78(0.70)	0.84(0.75)	20,30	G

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

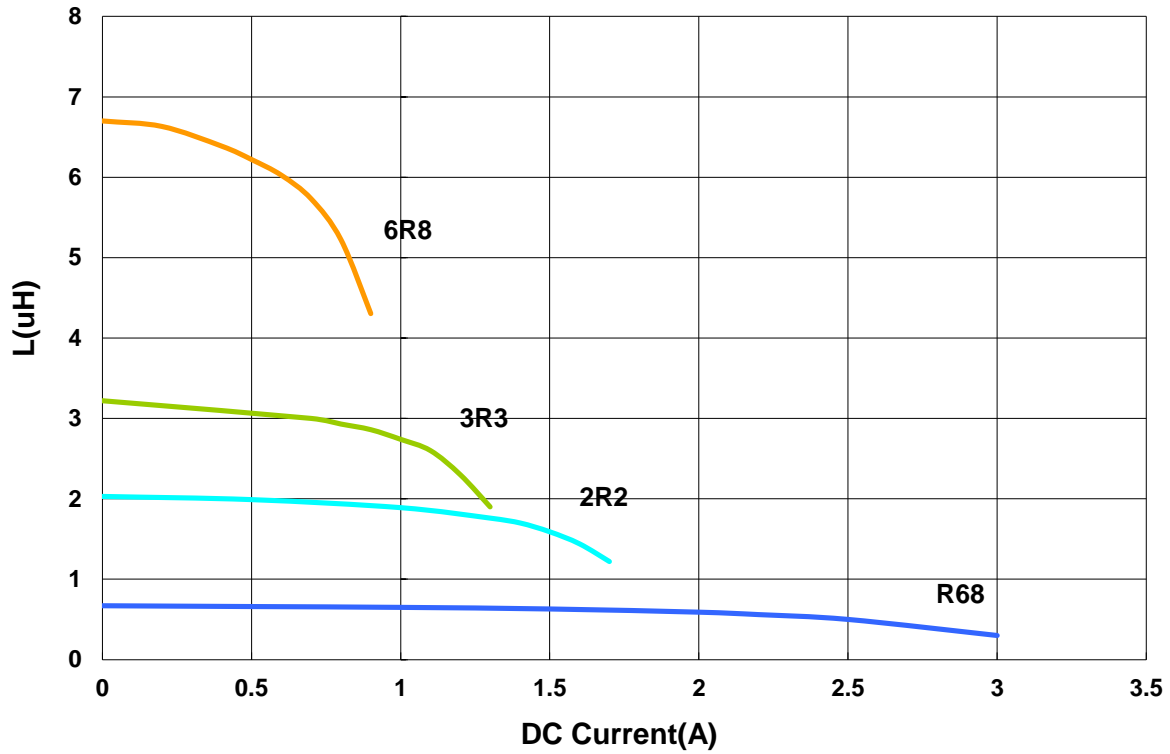
Power Inductor AWVT Series

**Automotive
AEC-Q200**

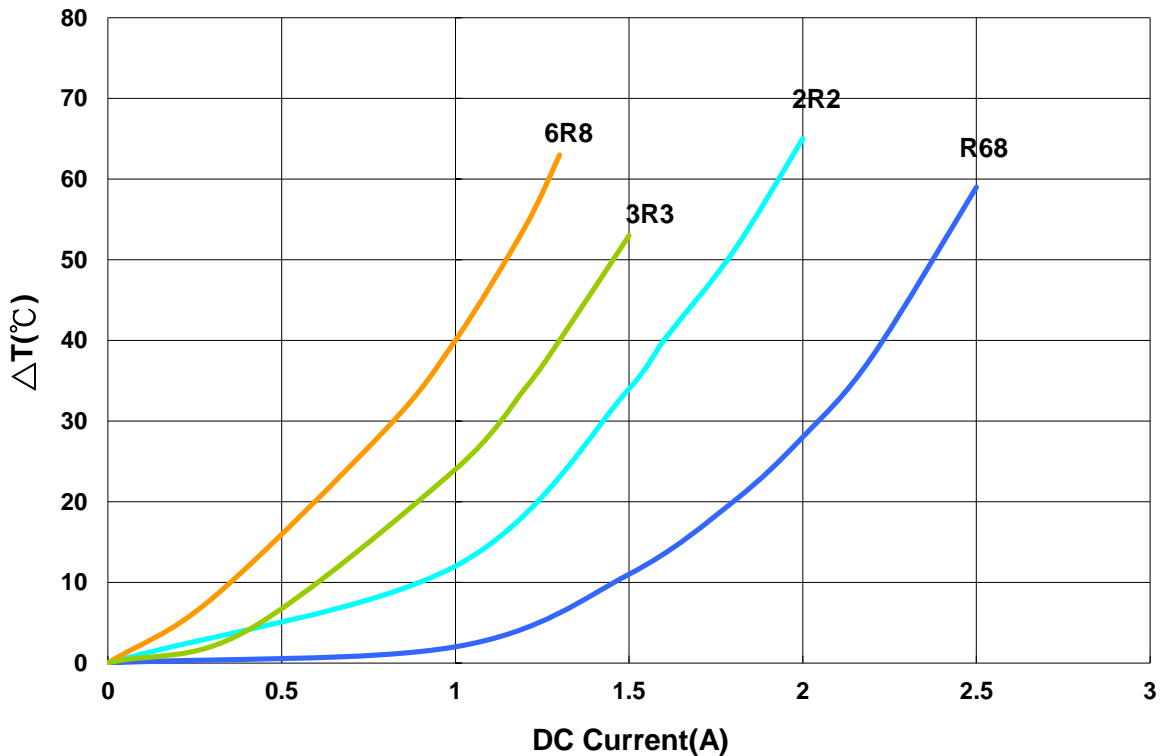
AWVT00252010 Type

Characteristics Graph

Inductance vs. DC Current



Temperature Change vs. DC Current

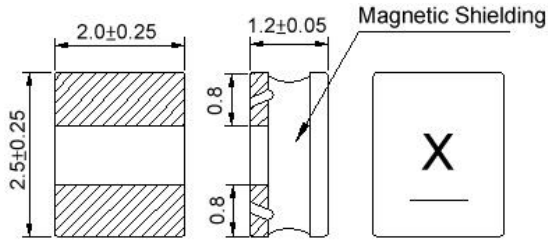


Power Inductor AWVT Series

**Automotive
AEC-Q200**

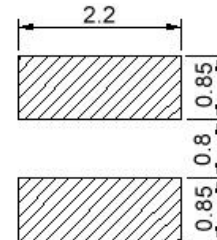
AWVT00252012 Type

■ Dimensions



unit:mm

■ Recommended Land Pattern



unit:mm

■ Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)±30%	Isat(A) Typ.(Max)	Irms(A) Typ.(Max)	Tolerance (±%)	Marking
AWVT00252012R47□00	0.47	1MHz,200mV	0.027	3.70(3.30)	3.10(2.70)	20,30	A

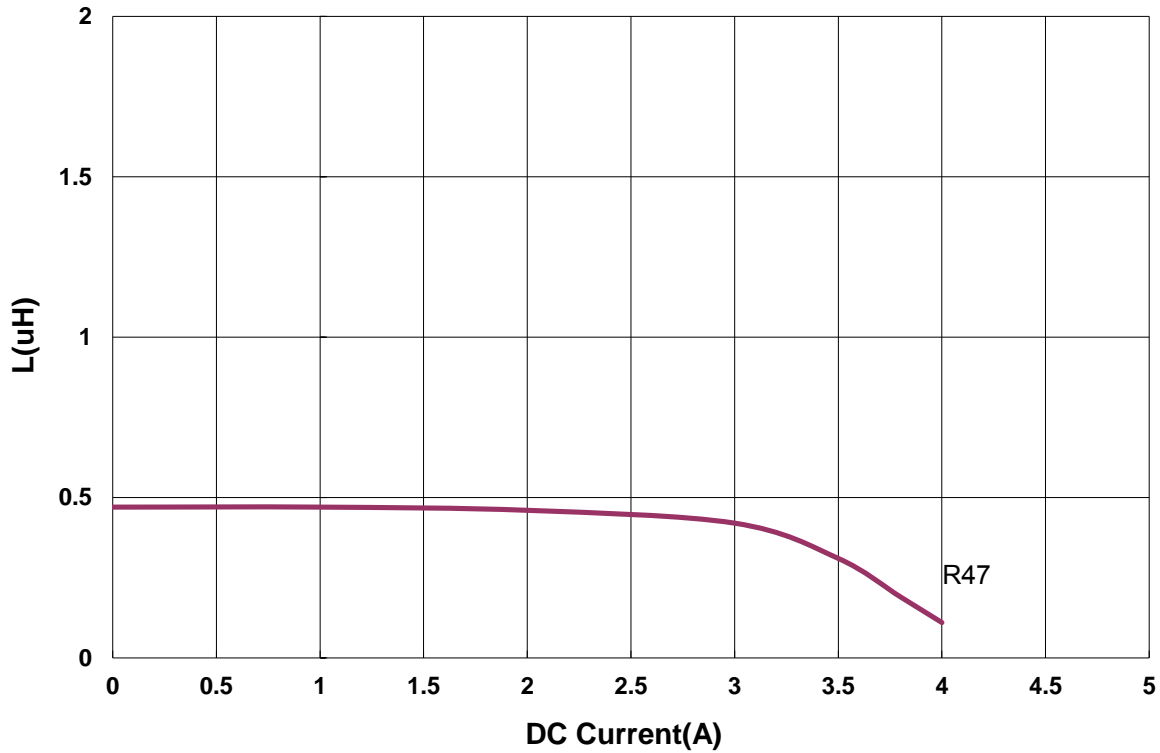
Note: When ordering, please specify tolerance code. Tolerance: M=±20% / T=±30%

- 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

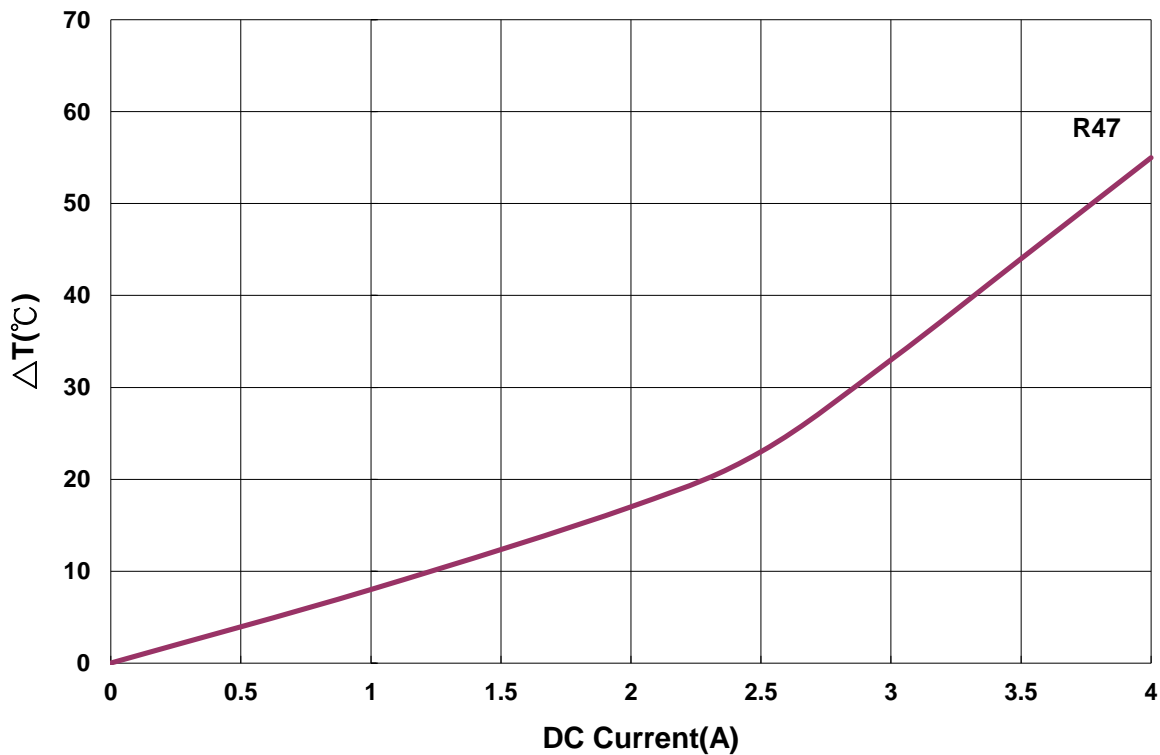
AWVT00252012 Type

■ Characteristics Graph

Inductance vs. DC Current



Temperature Change vs. DC Current

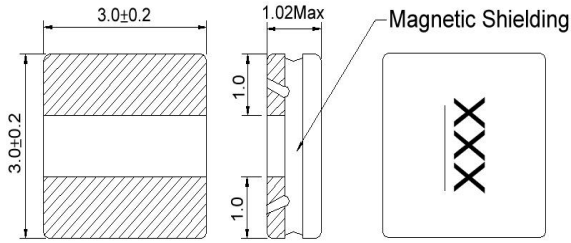


Power Inductor AWVT Series

**Automotive
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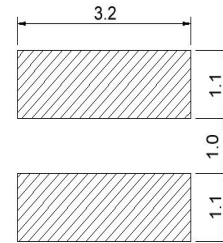
AWVT00303010 Type

■ Dimensions



unit:mm

■ Recommended Land Pattern



unit:mm

■ Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)±30%	Isat(A) Typ.(Max)	Irms(A) Typ.(Max)	Tolerance (±%)	Marking
AWVT003030101R0□00	1.0	1MHz,200mV	0.063	2.40(2.10)	2.30(2.00)	20,30	1R0
AWVT003030103R3□00	3.3	1MHz,200mV	0.165	1.20(1.00)	1.10(0.99)	20,30	3R3

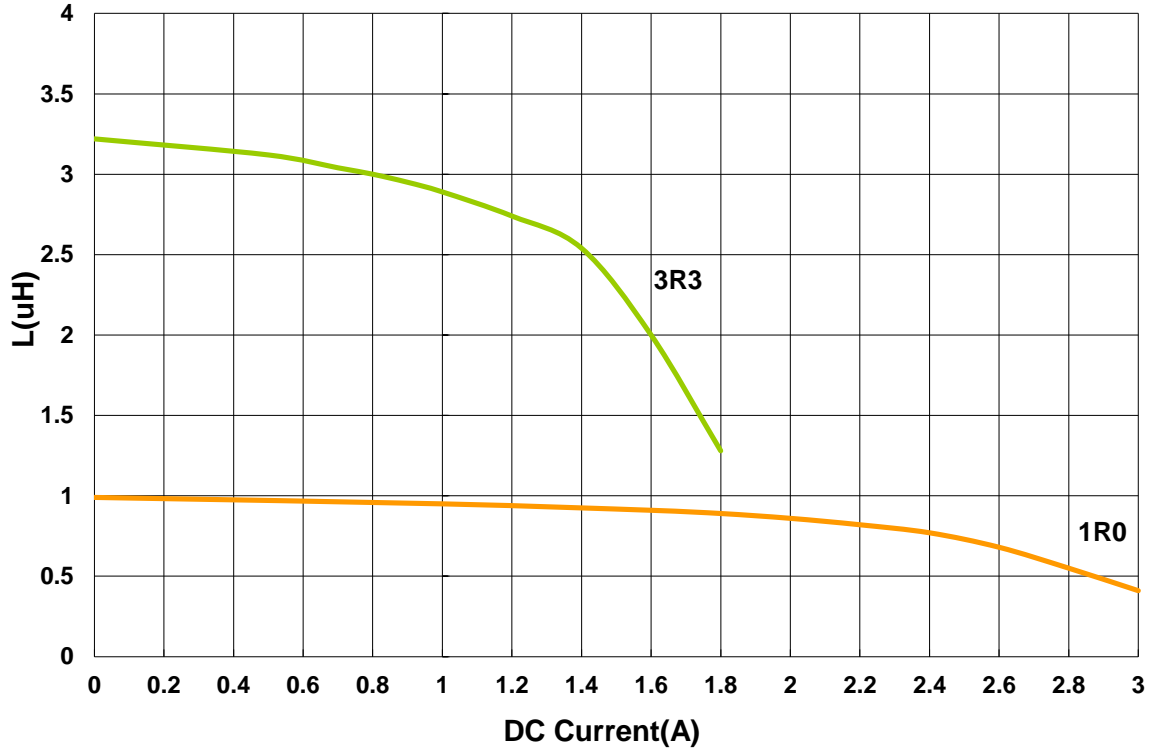
Note: When ordering, please specify tolerance code. Tolerance: M=±20% / T=±30%

1. Operating temperature range - 40°C ~ 125°C
2. Isat for Inductance drop 30% from its value without current.
3. I rms 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
 - I rms: Agilent HP4284A

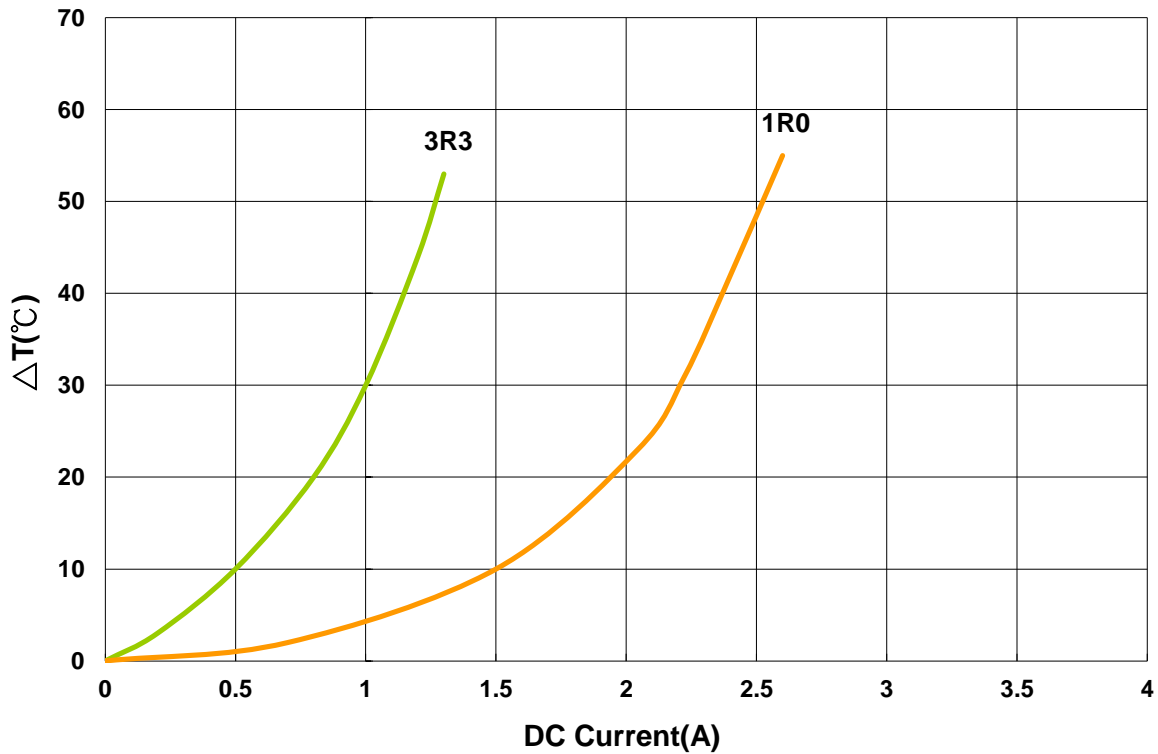
AWVT00303010 Type

■ Characteristics Graph

Inductance vs. DC Current



Temperature Change vs. DC Current

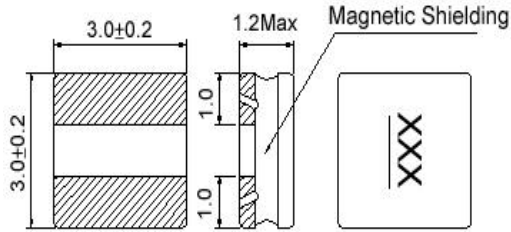


Power Inductor AWT Series

**Automotive
AEC-Q200**

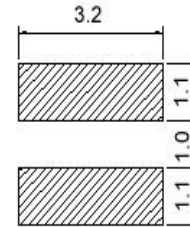
AWVT00303012 Type

■ Dimensions



unit:mm

■ Recommended Land Pattern



unit:mm

■ Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)±30%	Isat(A) Typ.(Max)	Irms(A) Typ.(Max)	Tolerance (±%)	Marking
AWVT00303012R47□00	0.47	1MHz,200mV	0.032	4.3(3.87)	4.0(3.60)	20,30	R47
AWVT003030121R0□00	1	1MHz,200mV	0.06	3.1(2.79)	3.0(2.70)	20,30	1R0
AWVT003030121R5□00	1.5	1MHz,200mV	0.072	2.7(2.43)	2.6(2.34)	20,30	1R5

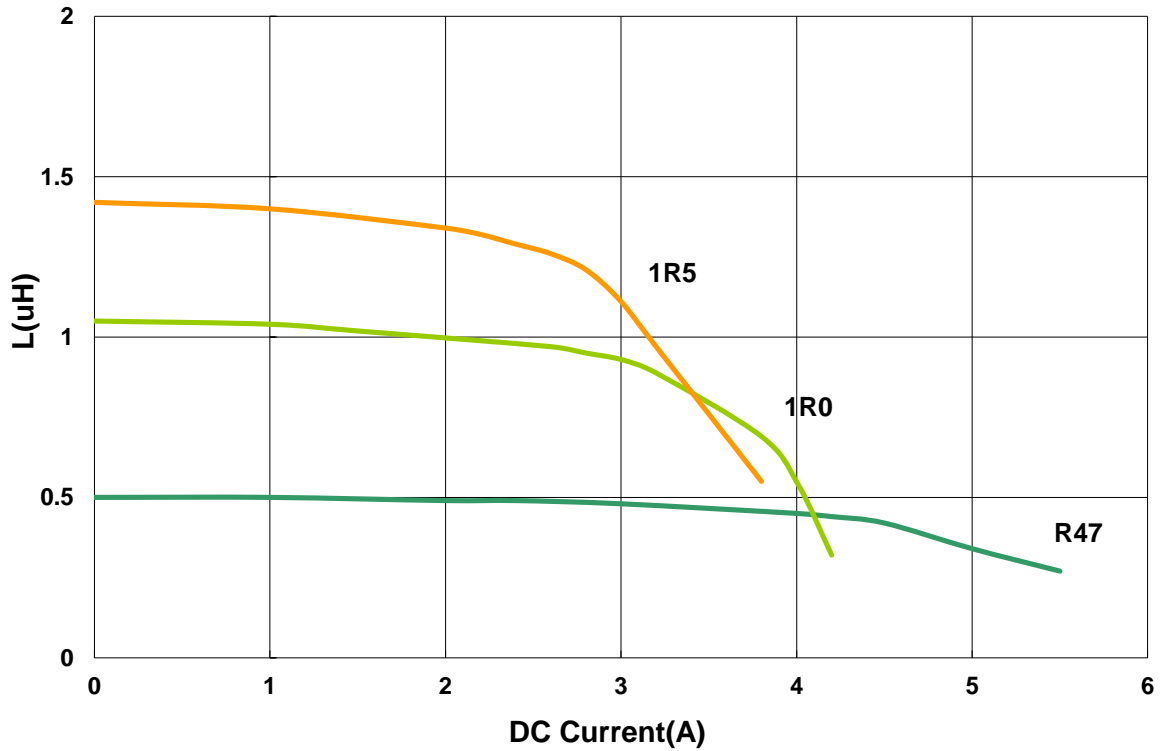
Note: When ordering, please specify tolerance code. Tolerance: M=±20% / T=±30%

1. Operating temperature range - 40°C ~ 125°C
2. Isat for Inductance drop 30% from its value without current.
3. I rms 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
 - I rms: Agilent HP4284A

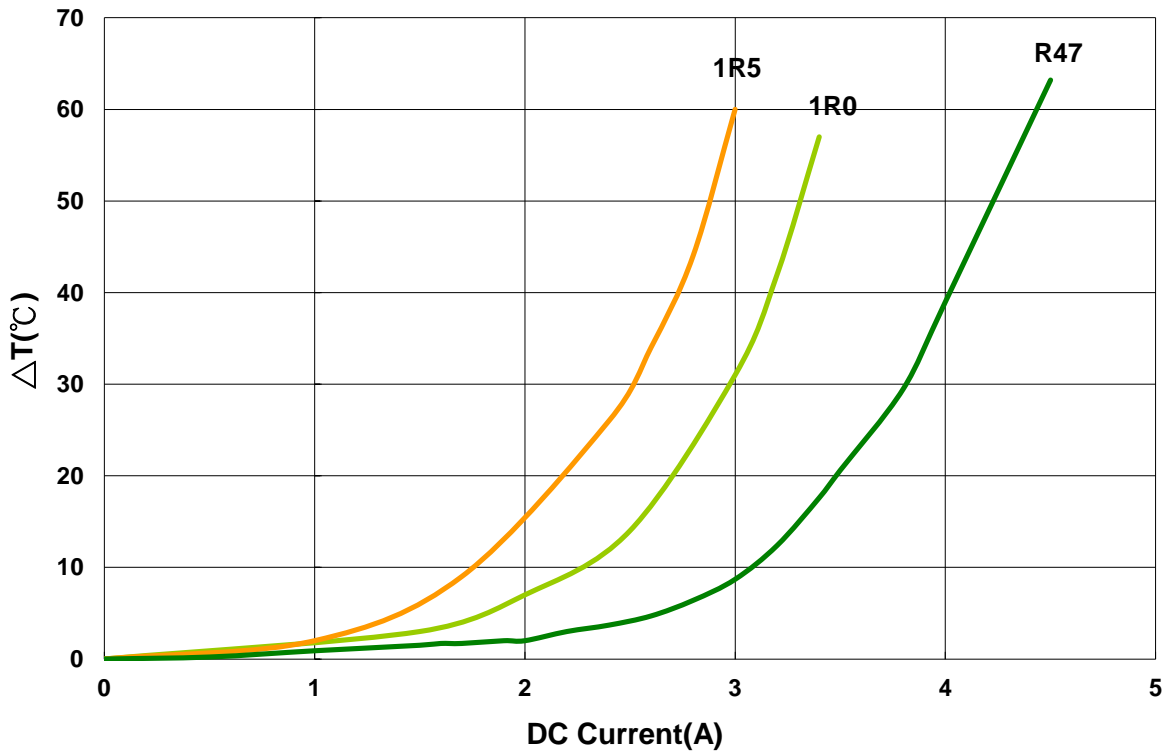
AWVT00303012 Type

■ Characteristics Graph

Inductance vs. DC Current



Temperature Change vs. DC Current

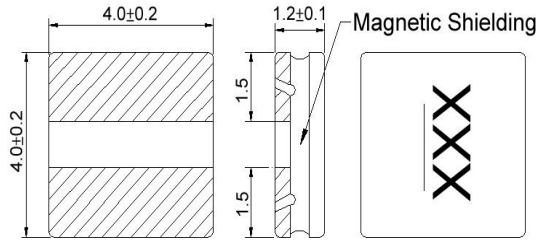


Power Inductor AWT Series

**Automotive
AEC-Q200**

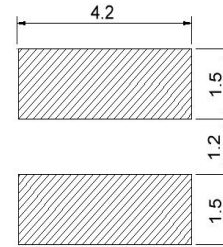
AWVT00404012 Type

Dimensions



unit:mm

Recommended Land Pattern



unit:mm

Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)±30%	Isat(A) Typ.(Max)	Irms(A) Typ.(Max)	Tolerance (±%)	Marking
AWVT00404012R50□00	0.5	1MHz,200mV	0.030	3.90(3.50)	3.5(3.10)	20,30	R50
AWVT004040121R0□00	1.0	1MHz,200mV	0.040	2.90(2.60)	3.0(2.70)	20,30	1R0
AWVT004040121R5□00	1.5	1MHz,200mV	0.051	2.30(2.00)	2.5(2.20)	20,30	1R5
AWVT004040122R2□00	2.2	1MHz,200mV	0.060	1.90(1.70)	2.3(2.00)	20,30	2R2
AWVT004040124R7□00	4.7	1MHz,200mV	0.094	1.30(1.10)	1.8(1.60)	20,30	4R7
AWVT004040126R8□00	6.8	1MHz,200mV	0.135	1.00(0.95)	1.5(1.30)	20,30	6R8
AWVT00404012150□00	15	1MHz,200mV	0.260	0.78(0.70)	1.0(0.90)	20,30	150
AWVT00404012220□00	22	1MHz,200mV	0.390	0.62(0.55)	0.8(0.72)	20,30	220

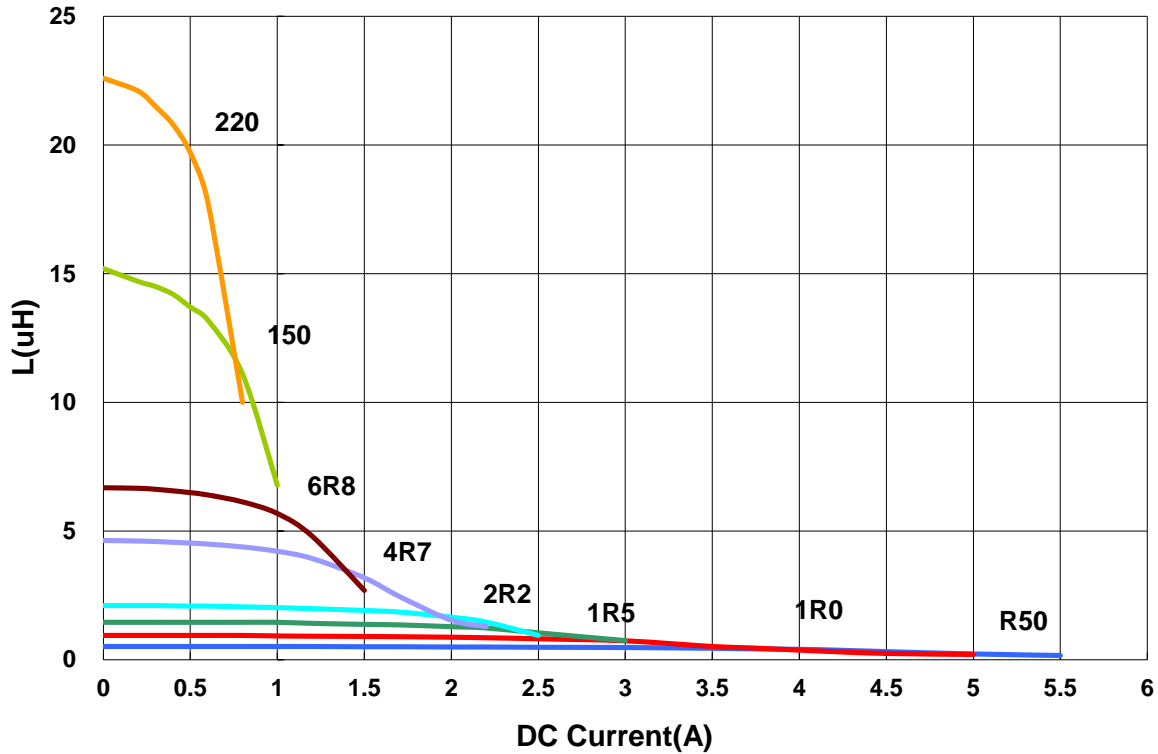
Note: When ordering, please specify tolerance code. Tolerance: M=±20% / T=±30%

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

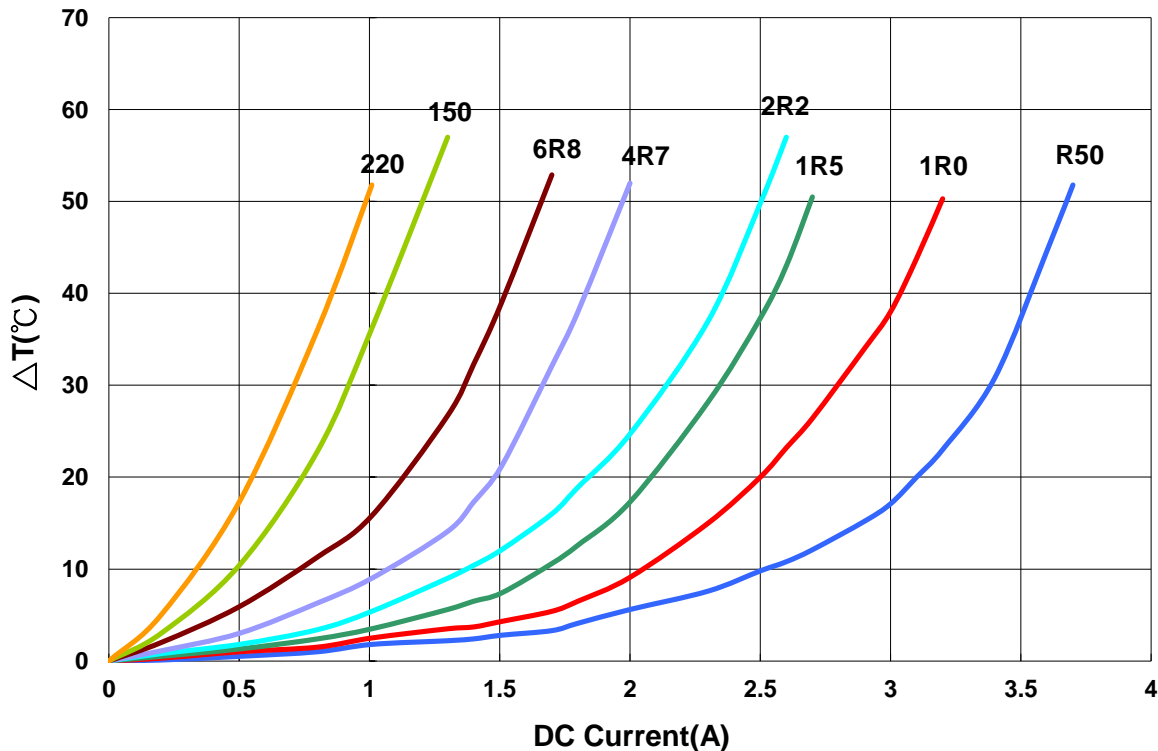
AWVT00404012 Type

■ Characteristics Graph

Inductance vs. DC Current



Temperature Change vs. DC Current

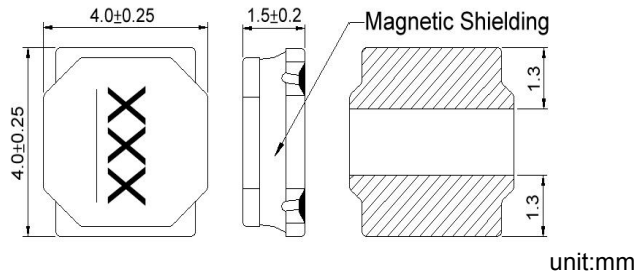


Power Inductor AWVT Series

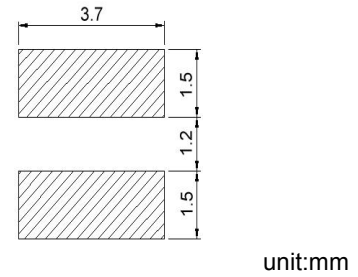
**Automotive
AEC-Q200**

AWVT00404015 Type

■ Dimensions



■ Recommended Land Pattern



■ Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)±30%	Isat(A) Typ.(Max)	Irms(A) Typ.(Max)	Tolerance (±%)	Marking
AWVT004040151R0□00	1.0	1MHz,200mV	0.034	3.6(3.20)	3.7(3.30)	20,30	1R0
AWVT004040153R3□00	3.3	1MHz,200mV	0.080	2.0(1.80)	2.2(1.90)	20,30	3R3

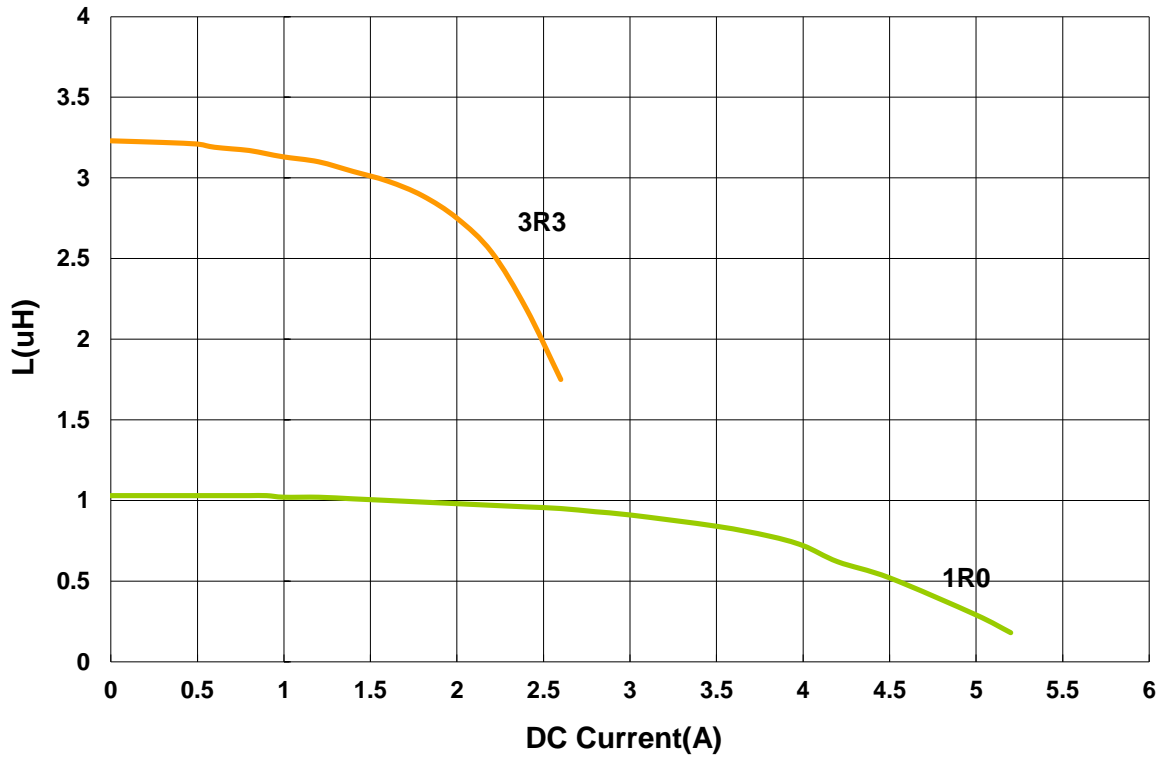
Note: When ordering, please specify tolerance code. Tolerance: M=±20% / T=±30%

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

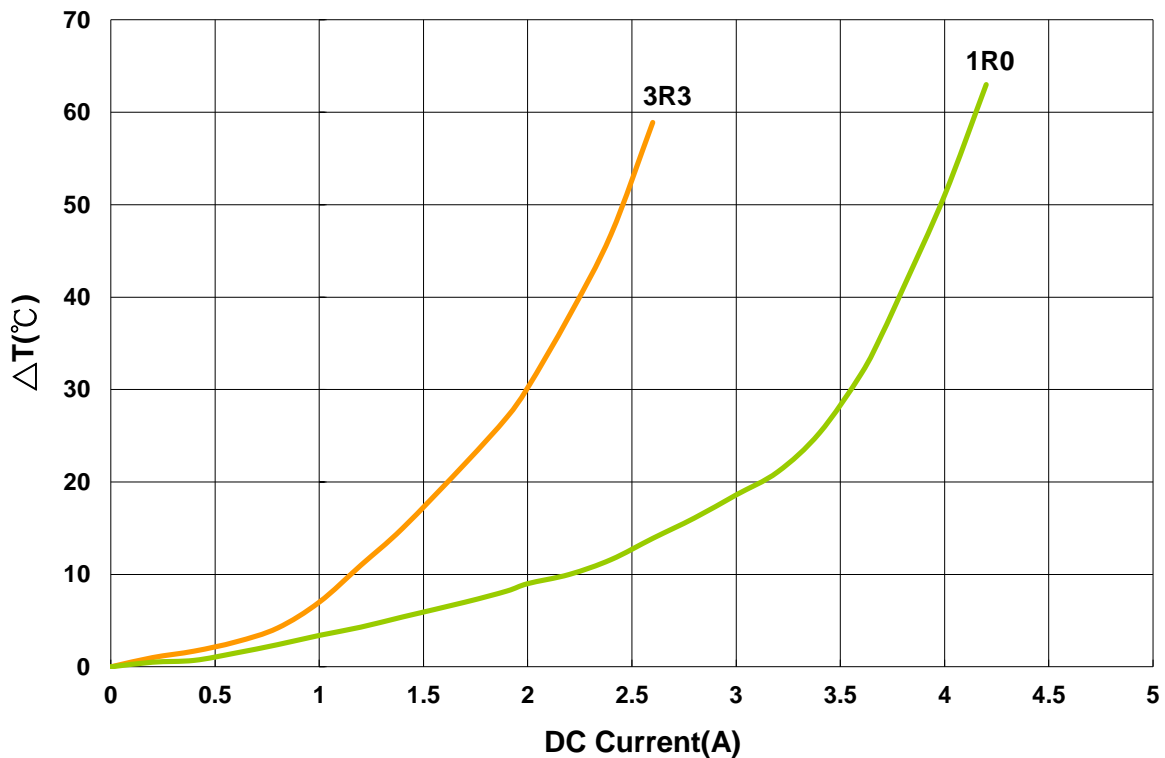
AWVT00404015 Type

■ Characteristics Graph

Inductance vs. DC Current



Temperature Change vs. DC Current

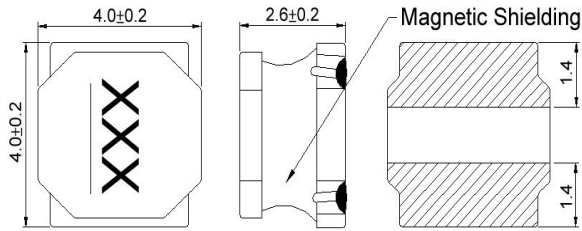


Power Inductor AWVT Series

**Automotive
AEC-Q200**

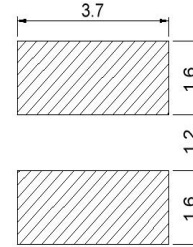
AWVT00404026 Type

■ Dimensions



unit:mm

■ Recommended Land Pattern



unit:mm

■ Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)±30%	Isat(A) Typ.(Max)	Irms(A) Typ.(Max)	Tolerance (±%)	Marking
AWVT00404026R47□00	0.47	100kHz,1V	0.024	7.20(6.4)	4.80(4.3)	20,30	R47
AWVT00404026R50□00	0.50	100kHz,1V	0.024	7.20(6.4)	4.80(4.3)	20,30	R50

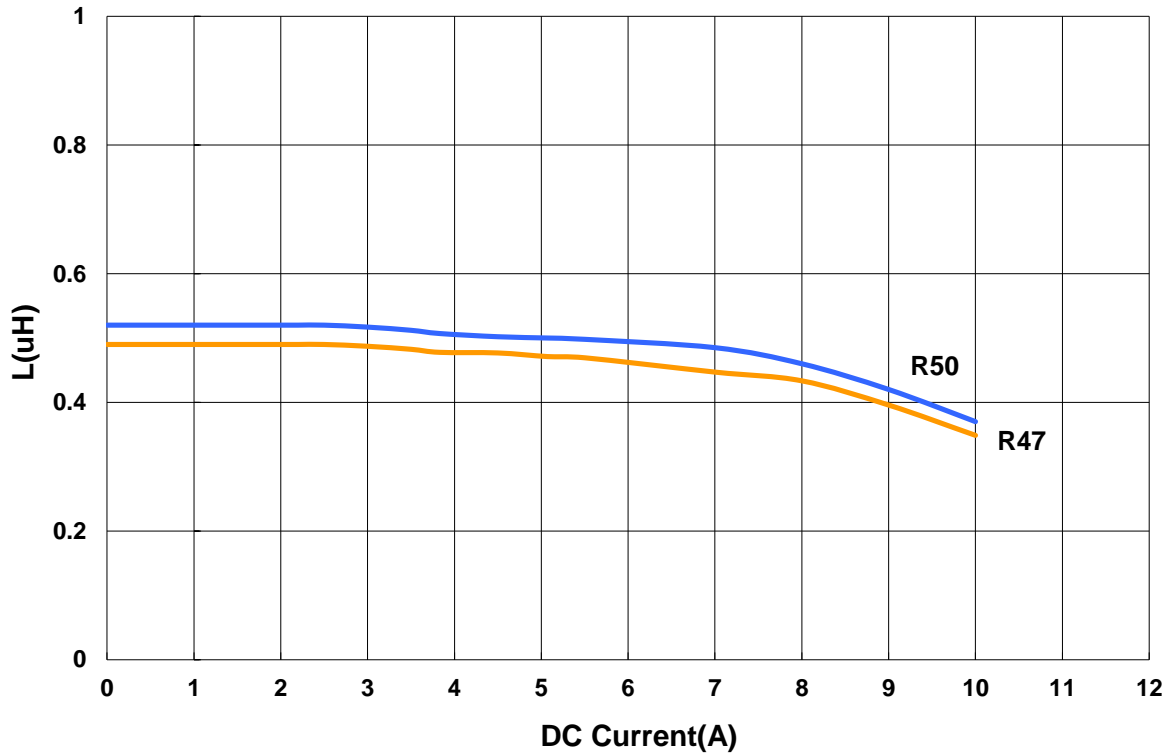
Note: When ordering, please specify tolerance code. Tolerance: M=±20% / T=±30%

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

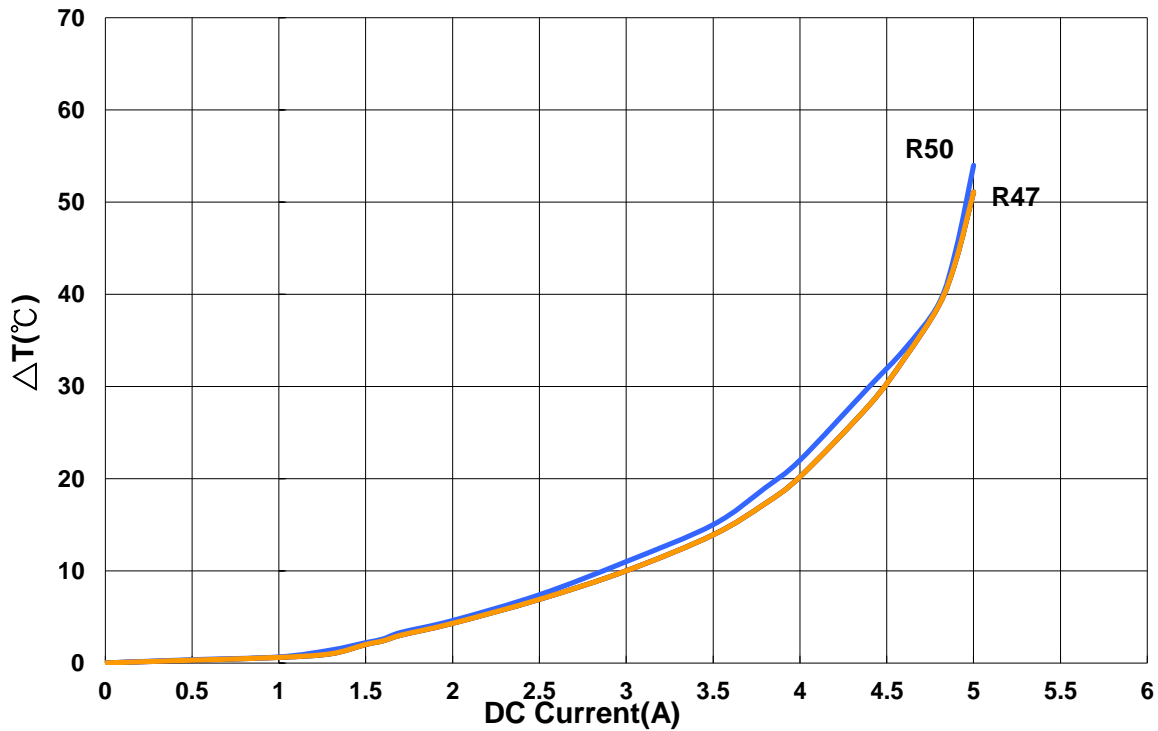
AWVT00404026 Type

■ Characteristics Graph

Inductance vs. DC Current



Temperature Change vs. DC Current

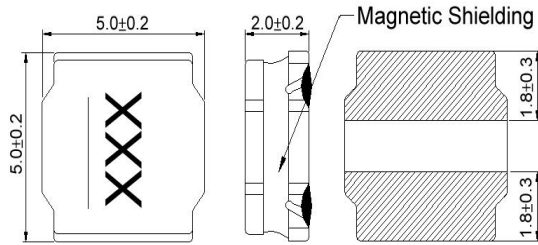


Power Inductor AWVT Series

**Automotive
AEC-Q200**

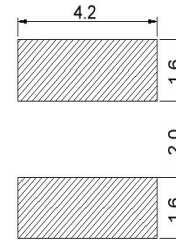
AWVT00505020 Type

■ Dimensions



unit:mm

■ Recommended Land Pattern



unit:mm

■ Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)±30%	Isat(A) Typ.(Max)	Irms(A) Typ.(Max)	Tolerance (±%)	Marking
AWVT00505020R47□00	0.47	100kHz,1V	0.0135	8.0(7.2)	5.5(5.0)	20,30	R47
AWVT005050203R3□00	3.3	100kHz,1V	0.050	3.4(3.00)	2.7(2.40)	20,30	3R3

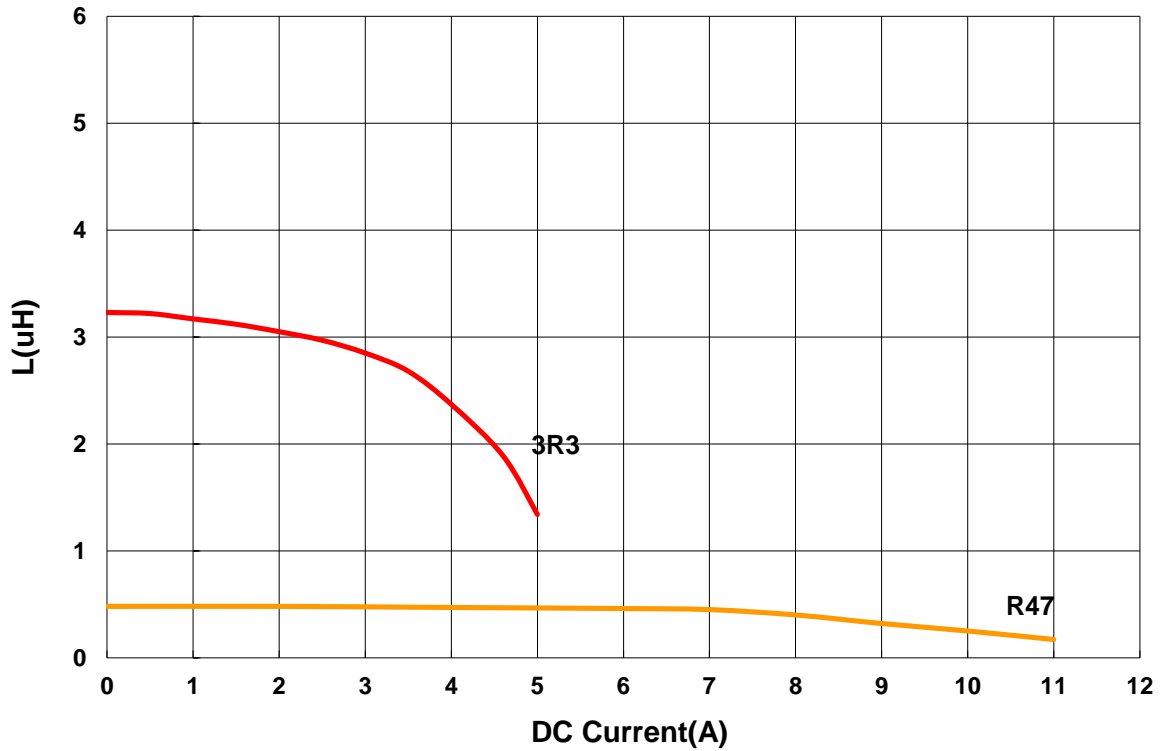
Note: When ordering, please specify tolerance code. Tolerance: M=±20% / T=±30%

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

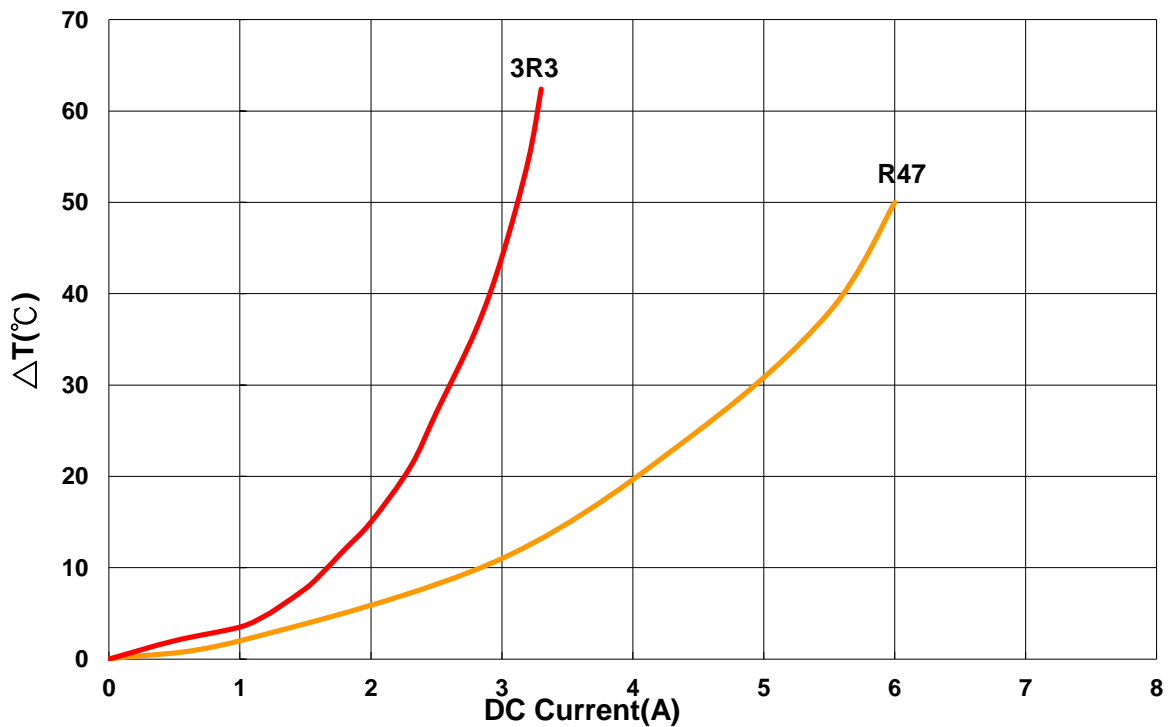
AWVT00505020 Type

■ Characteristics Graph

Inductance vs. DC Current



Temperature Change vs. DC Current

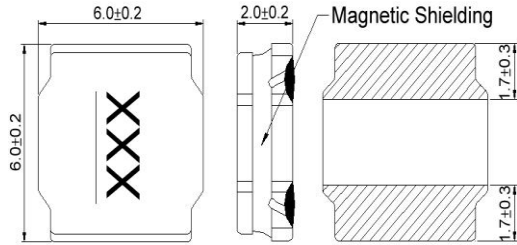


Power Inductor AWT Series

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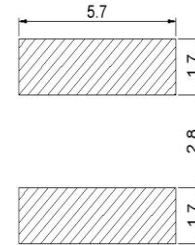
AWVT00606020 Type

Dimensions



unit:mm

Recommended Land Pattern



unit:mm

Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)±30%	Isat(A) Typ.(Max)	Irms(A) Typ.(Max)	Tolerance (±%)	Marking
AWVT006060201R0□00	1.0	100kHz,1V	0.019	6.4(5.70)	4.2(3.70)	20,30	1R0
AWVT006060201R5□00	1.5	100kHz,1V	0.026	5.4(4.80)	3.7(3.30)	20,30	1R5
AWVT006060202R2□00	2.2	100kHz,1V	0.034	4.5(4.00)	3.3(2.90)	20,30	2R2
AWVT006060203R3□00	3.3	100kHz,1V	0.045	3.6(3.20)	2.8(2.50)	20,30	3R3
AWVT006060206R8□00	6.8	100kHz,1V	0.085	2.6(2.30)	1.9(1.70)	20,30	6R8

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. I rms for a 40°C temperature rise from 25°C ambient with current
4. Measure Equipment:
 - L: Agilent HP4284A+Agilent HP42841A
 - RDC: DIGITAL MILLINHM METER CHROMA 16502, or equivalent
 - Isat: Agilent HP4284A
 - I rms: Agilent HP4284A

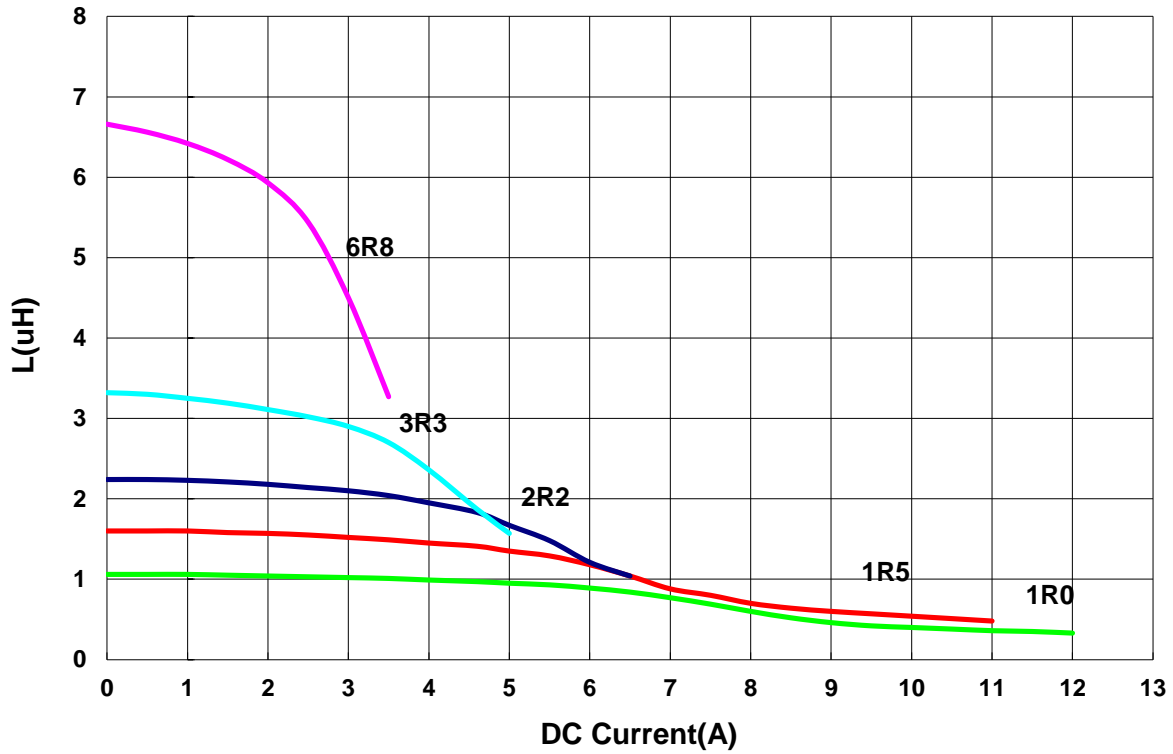
Power Inductor AWT Series

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AEC-Q200**

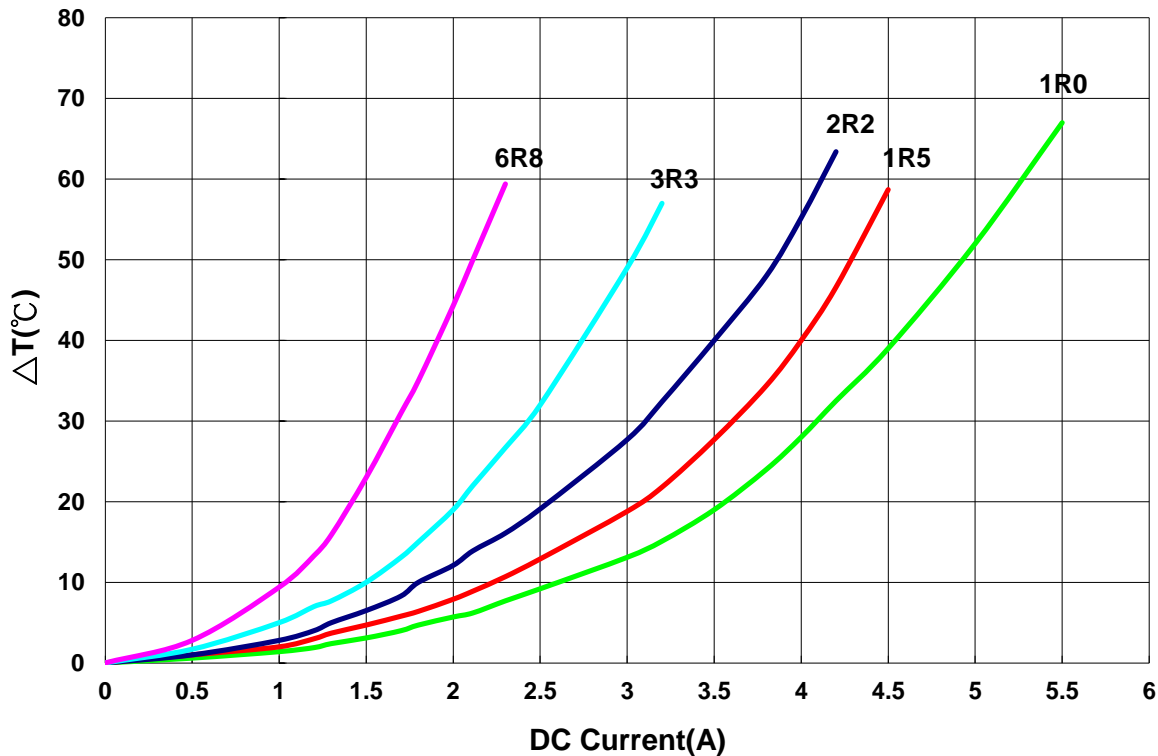
AWVT00606020 Type

Characteristics Graph

Inductance vs. DC Current



Temperature Change vs. DC Current

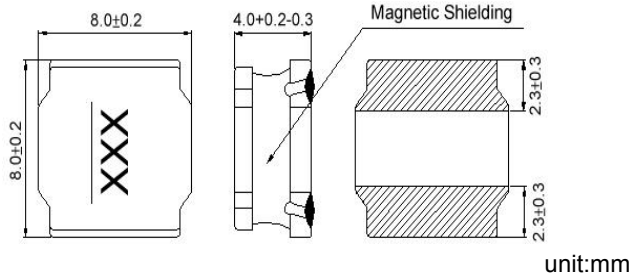


Power Inductor AWT Series

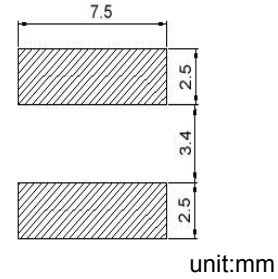
**Automotive
AEC-Q200**

AWVT00808040 Type

■ Dimensions



■ Recommended Land Pattern



■ Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)±30%	Isat(A) Typ.(Max)	Irms(A) Typ.(Max)	Tolerance (±%)	Marking
AWVT008080401R0□00	1.0	100kHz,1V	0.0075	13.5(12.00)	8.1(7.10)	20,30	1R0
AWVT008080401R5□00	1.5	100kHz,1V	0.0097	10.5(9.30)	7.7(6.80)	20,30	1R5
AWVT008080402R2□00	2.2	100kHz,1V	0.0120	9.7(8.60)	7.2(6.30)	20,30	2R2
AWVT008080403R3□00	3.3	100kHz,1V	0.0170	8.0(7.10)	5.9(5.20)	20,30	3R3
AWVT008080406R8□00	6.8	100kHz,1V	0.0290	5.8(5.10)	4.9(4.30)	20,30	6R8

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 HP4284A+Agilent HP42841A
 - RDC: DIGITAL MILLINHM METER CHROMA 16502, or equivalent
 - Isat: Agilent HP4284A
 - Irms: Agilent HP4284A

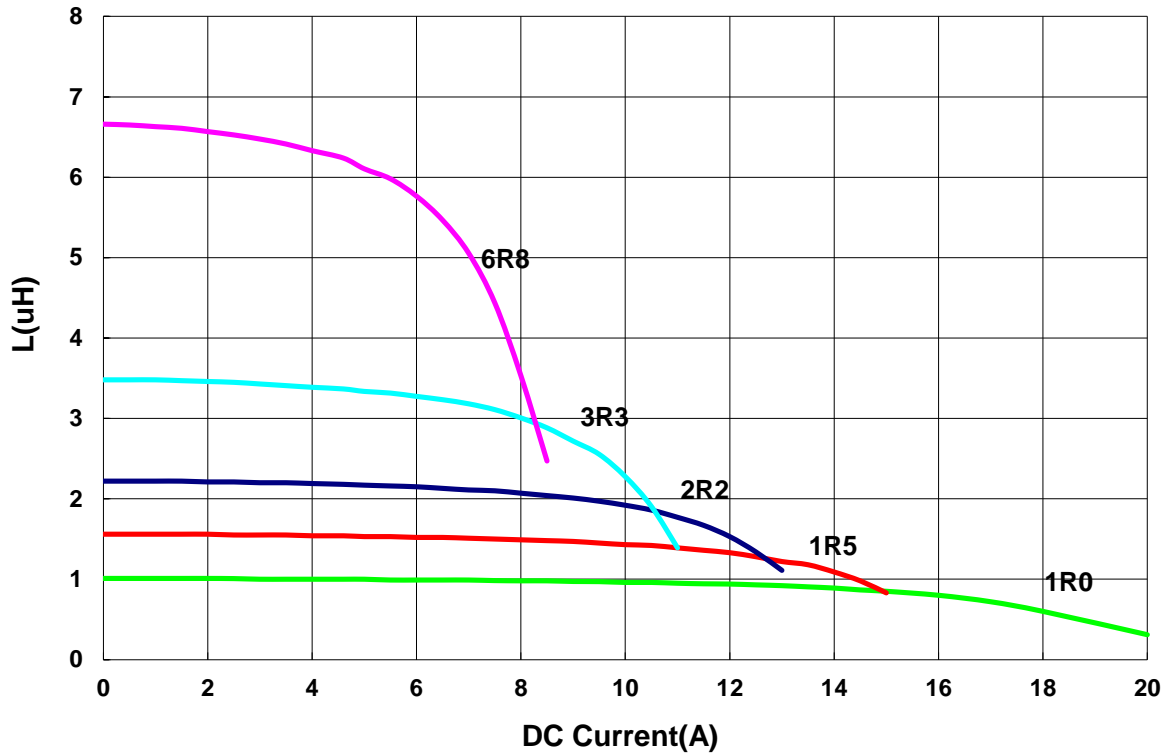
Power Inductor AWVT Series

**Automotive
AEC-Q200**

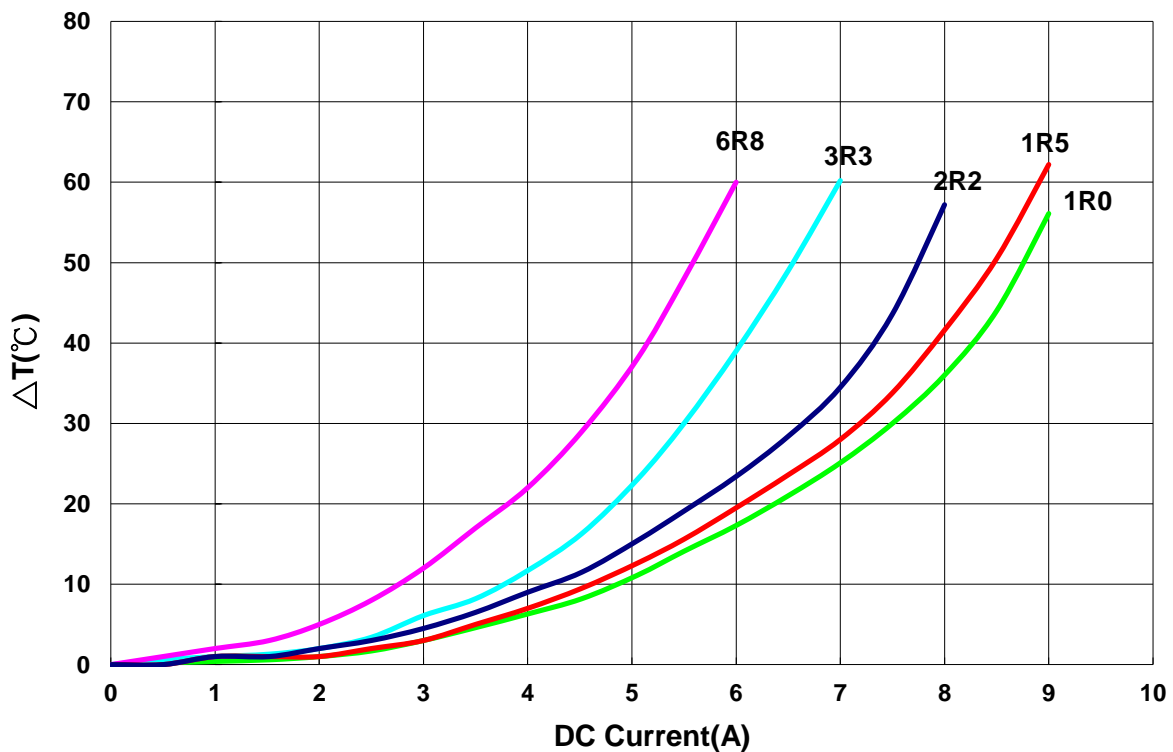
AWVT00808040 Type

Characteristics Graph

Inductance vs. DC Current



Temperature Change vs. DC Current

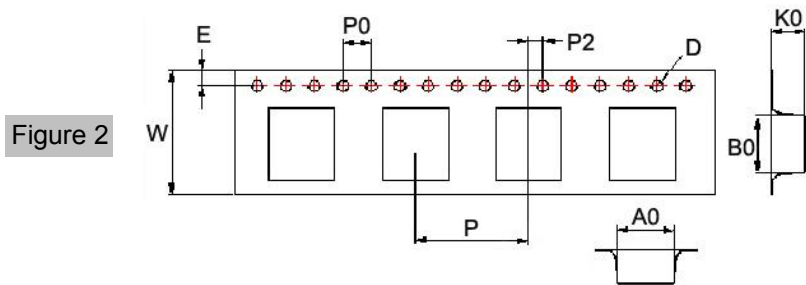
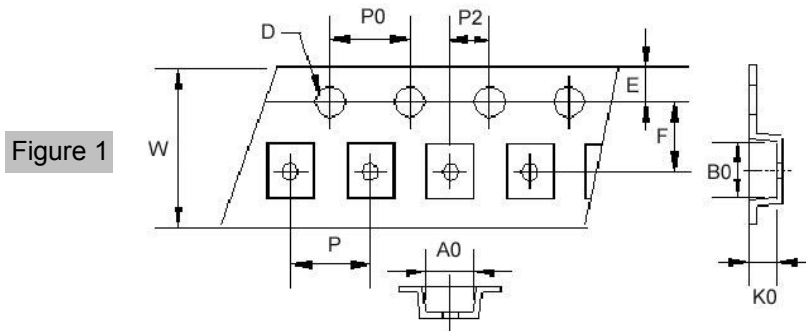


Power Inductor AWVT Series

**Automotive
AEC-Q200**

■ Packaging

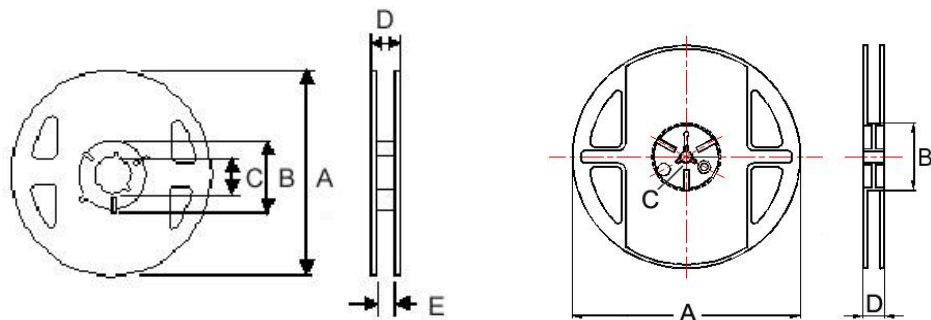
Tape Dimensions



Reel Dimensions

Figure 1

Figure 2



Dimensions in mm

TYPE	Fig	Tape Dimensions										Reel Dimensions					Quantity PCS / Reel
		A0	B0	K0	D	E	F	W	P	P0	P2	A	B	C	D	E	
AWVT00201610	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
AWVT00252010	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
AWVT00252012	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
AWVT00303010	1	3.2	3.2	1.4	1.55	1.75	3.5	8	4	4	2	180	60	13	14.4	8.4	2000
AWVT00303012	1	3.2	3.2	1.4	1.55	1.75	3.5	8	4	4	2	180	60	13	14.4	8.4	2000
AWVT00404012	2	4.25	4.25	1.3	1.55	1.75	5.5	12	8	4	2	178	60	13	13.2	-	1000
AWVT00404015	2	4.25	4.25	1.7	1.55	1.75	5.5	12	8	4	2	178	60	13	13.2	-	1000
AWVT00404026	2	4.25	4.25	3	1.55	1.75	5.5	12	8	4	2	178	60	13	13.2	-	500
AWVT00505020	2	5.25	5.25	2.2	1.55	1.75	5.5	12	8	4	2	330	100	13	13.4	-	2000
AWVT00606020	2	6.25	6.25	2.2	1.55	1.75	7.5	16	12	4	2	330	100	13	16	-	2000
AWVT00808040	2	8.25	8.25	4.15	1.55	1.75	7.5	16	12	4	2	330	100	13	17.4	-	1000