

Power Inductor AWVC Series

**Automotive
AEC-Q200**

RoHS Compliant
 Halogen Free
 REACH Compliant


 Power
Circuit

Shield

 Magnetic
Resin LVx

Ferrite

 High
Current

Part Numbering

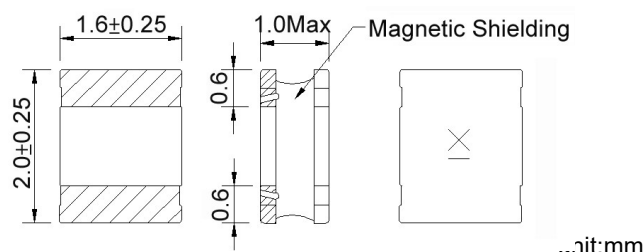
A	WVC	00	252012	1R0	M	00
Grade	Series Name	Control Code	Dimensions Code (mm)	Inductance (uH)	Tolerance	Internal Code
			201610 2.0x1.6x1.0	R47 0.47	M ±20%	
			201612 2.0x1.6x1.2	1R0 1.0	T ±30%	
			252012 2.5x2.0x1.2	101 100		
			404018 4.0x4.0x1.9			
			505040 5.0x5.0x4.0			
			606028 6.0x6.0x2.8			
			606045 6.0x6.0x4.5			

Power Inductor AWVC Series

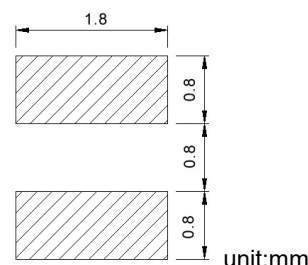
**Automotive
AEC-Q200**

AWVC00201610 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
AWVC00201610R24□00	0.24	1MHz,200mV	0.026	3.20(2.80)	3.00(2.70)	20,30	M
AWVC002016101R0□00	1.0	1MHz,200mV	0.095	1.80(1.60)	1.80(1.60)	20,30	B
AWVC002016101R5□00	1.5	1MHz,200mV	0.14	1.60(1.40)	1.60(1.40)	20,30	C
AWVC002016102R2□00	2.2	1MHz,200mV	0.19	1.30(1.10)	1.30(1.10)	20,30	D
AWVC002016103R3□00	3.3	1MHz,200mV	0.295	0.96(0.86)	0.98(0.88)	20,30	E
AWVC002016104R7□00	4.7	1MHz,200mV	0.36	0.84(0.75)	0.90(0.81)	20,30	F
AWVC002016106R8□00	6.8	1MHz,200mV	0.64	0.66(0.59)	0.70(0.63)	20,30	G
AWVC00201610100□00	10	1MHz,200mV	1.0	0.54(0.48)	0.56(0.50)	20,30	H
AWVC00201610150□00	15	1MHz,200mV	1.5	0.39(0.35)	0.42(0.37)	20,30	K
AWVC00201610180□00	18	1MHz,200mV	1.6	0.39(0.35)	0.41(0.36)	20,30	J
AWVC00201610220□00	22	1MHz,200mV	1.7	0.38(0.34)	0.40(0.36)	20,30	I

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

1. Operating temperature range -40℃ ~ 125℃ (Including self - temperature rise)

2. Isat for Inductance drop 30% from its value without current

3. Irms for a 40℃ temperature rise from 25℃ ambient with current

4. Measure Equipment:

L: HP4285A+HP42841A

RDC: DIGITAL MILLINHM METER CHROMA 16502, or equivalent

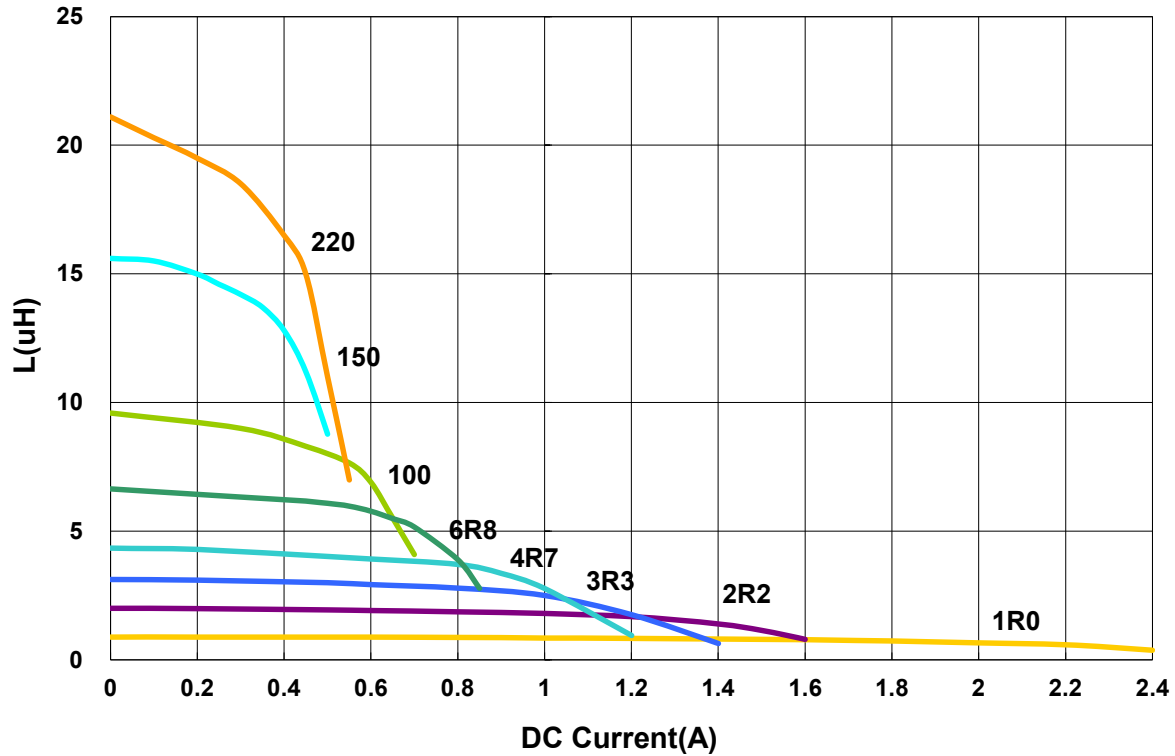
Isat: Agilent HP4284A

Irms: Agilent HP4284A

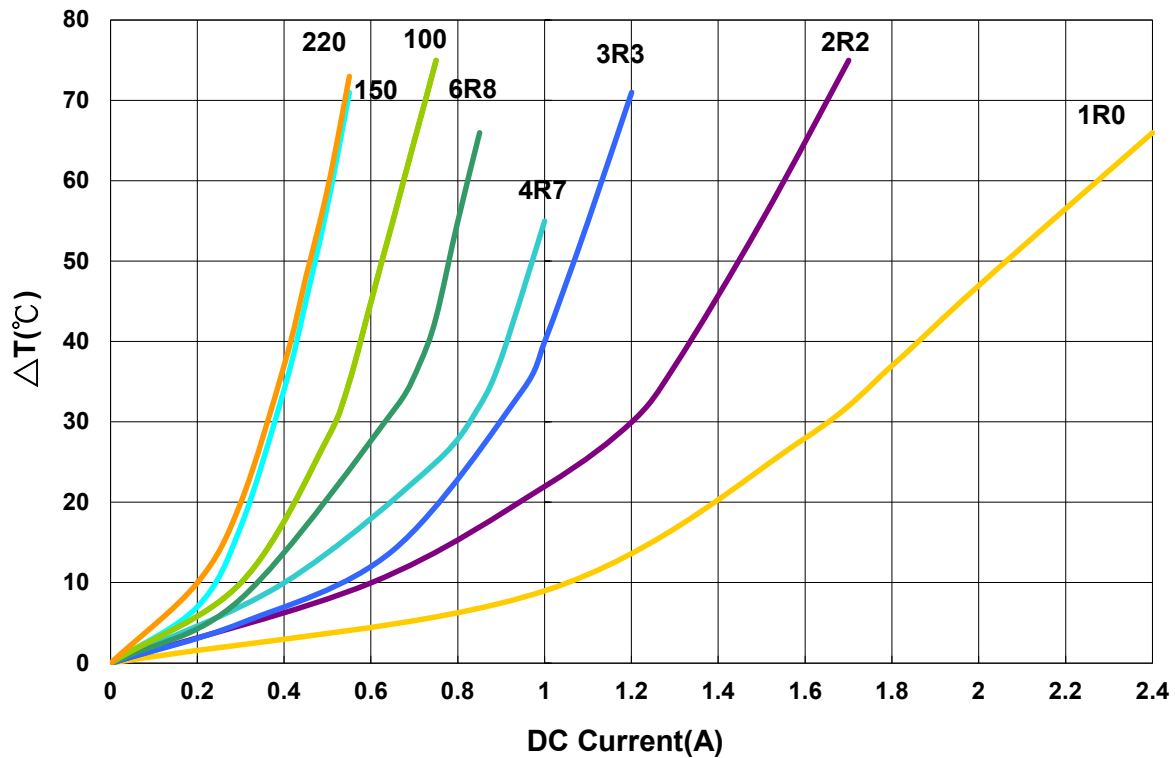
AWVC00201610 Type

Characteristics Graph

Inductance vs. DC Current



Temperature Change vs. DC Current



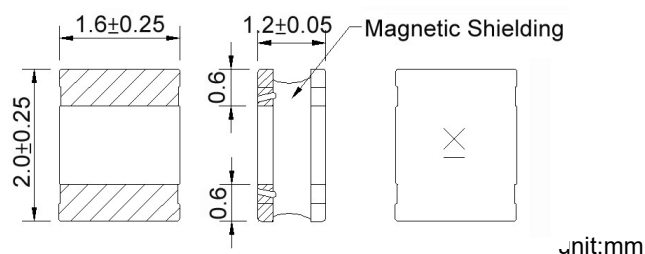
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Power Inductor AWVC Series

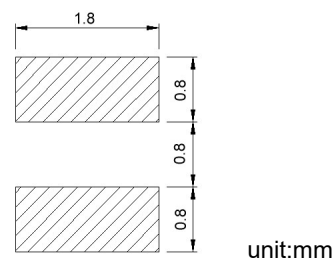
Automotive
AEC-Q200

AWVC00201612 Type

■ Dimensions



■ Recommended Land Pattern



■ Electrical Characteristics

Part No.	Inductance (μ H)	Test Freq.	RDC (Ω) $\pm 30\%$	Isat(A) Typ.(Max)	Irms(A) Typ.(Max)	Tolerance ($\pm\%$)	Marking
AWVC00201612R50□00	0.5	1MHz,200mV	0.051	2.60(2.30)	2.30(2.00)	20,30	B
AWVC002016121R0□00	1.0	1MHz,200mV	0.083	1.90(1.70)	1.80(1.60)	20,30	C
AWVC002016122R2□00	2.2	1MHz,200mV	0.159	1.30(1.20)	1.30(1.20)	20,30	E
AWVC002016123R3□00	3.3	1MHz,200mV	0.22	1.10(0.99)	1.00(0.95)	20,30	F
AWVC002016124R7□00	4.7	1MHz,200mV	0.33	0.92(0.82)	0.90(0.81)	20,30	G
AWVC00201612100□00	10	1MHz,200mV	0.58	0.62(0.55)	0.58(0.52)	20,30	I
AWVC00201612150□00	15	1MHz,200mV	0.9	0.48(0.43)	0.45(0.40)	20,30	J
AWVC00201612220□00	22	1MHz,200mV	1.4	0.40(0.36)	0.40(0.36)	20,30	K

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

- Operating temperature range $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$ (Including self - temperature rise)
- 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: HP4285A+HP42841A

RDC: DIGITAL MILLINHM METER CHROMA 16502, or equivalent

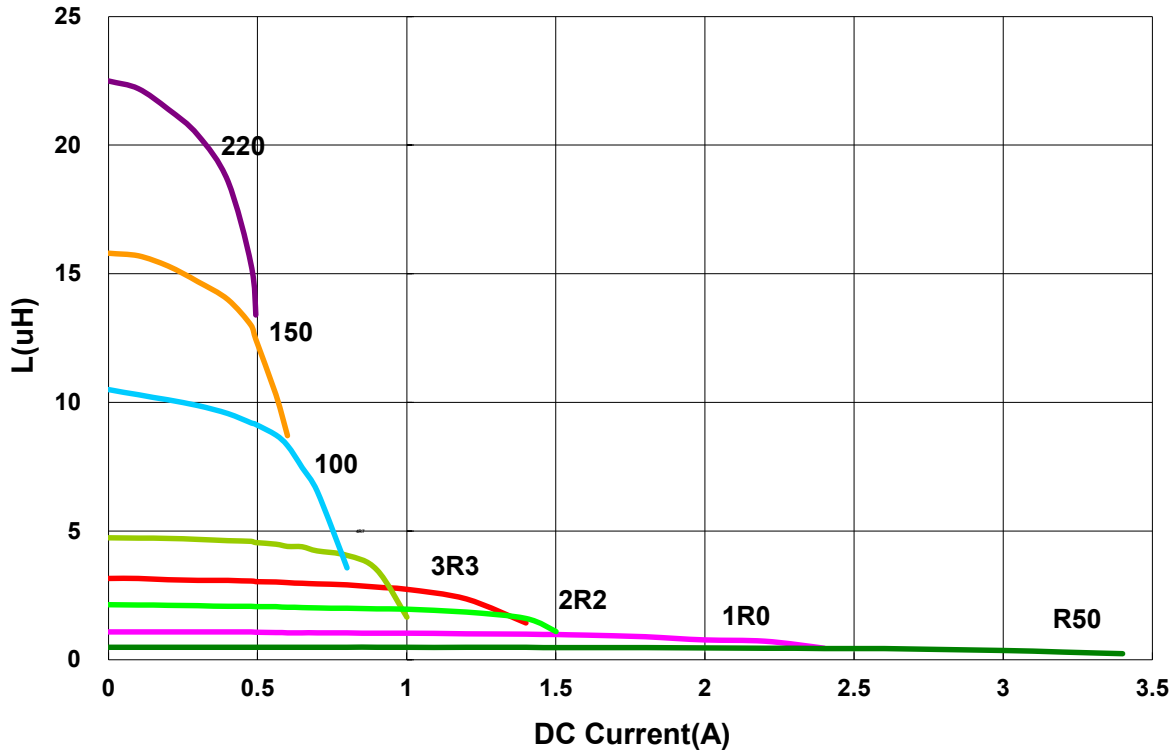
Isat: Agilent HP4284A

Irms: Agilent HP4284A

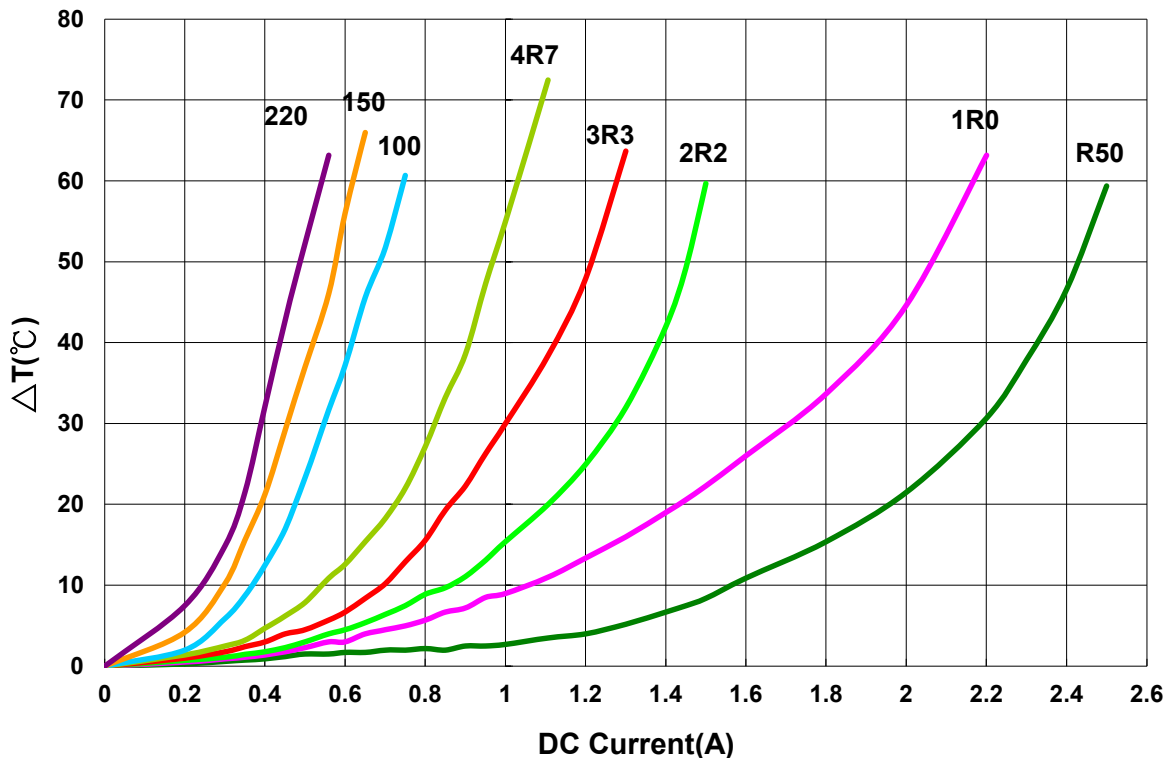
AWVC00201612 Type

Characteristics Graph

Inductance vs. DC Current



Temperature Change vs. DC Current



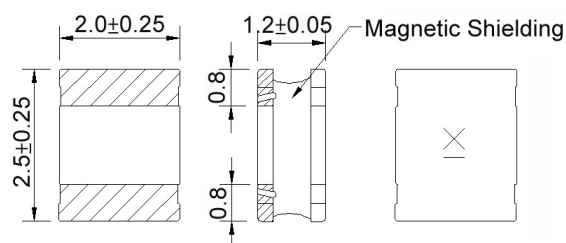
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Power Inductor AWVC Series

Automotive
AEC-Q200

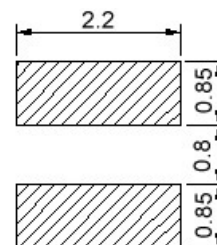
AWVC00252012 Type

■ 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
AWVC00252012R68□00	0.68	1MHz,200mV	0.035	2.80(2.50)	2.60(2.30)	20,30	N

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

1. Operating temperature range — 40℃ ~ 125℃ (Including self - temperature rise)

2. Isat for Inductance drop 30% from its value without current.

3. Irms for a 40℃ temperature rise from 25℃ ambient with current

4. Measure Equipment:

L: HP4285A+HP42841A

RDC: DIGITAL MILLINHM METER CHROMA 16502, or equivalent

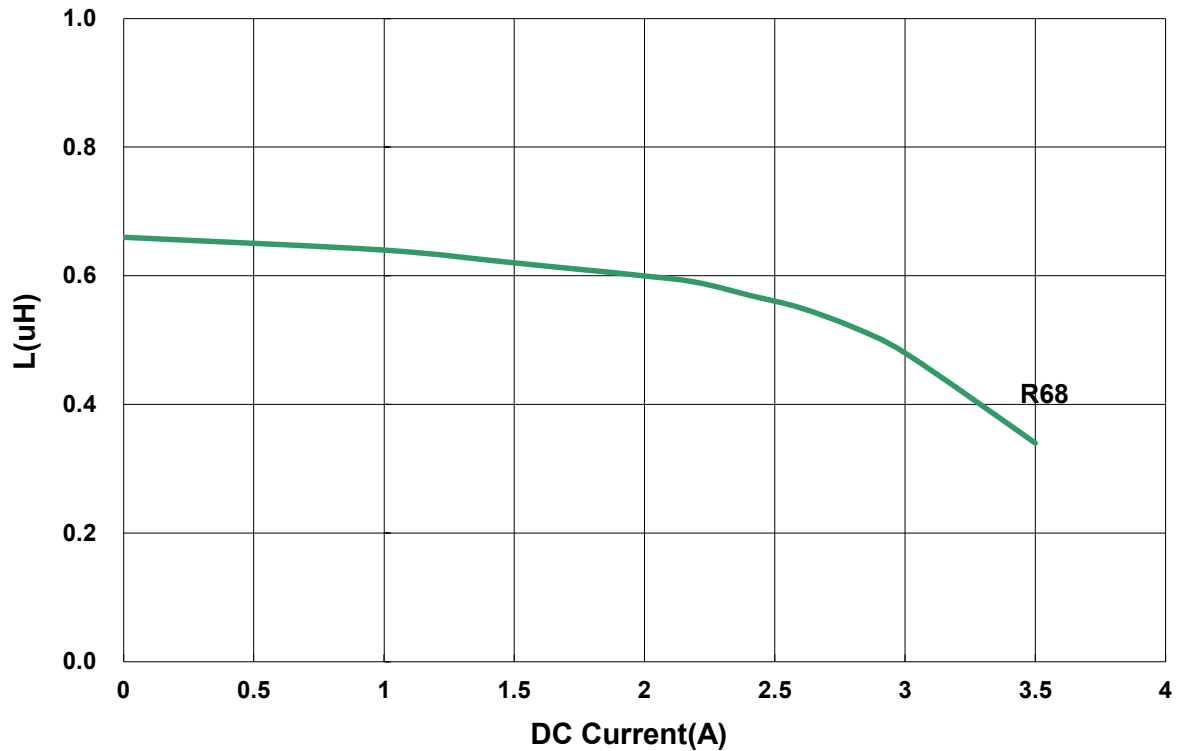
Isat: Agilent HP4284A

Irms: Agilent HP4284A

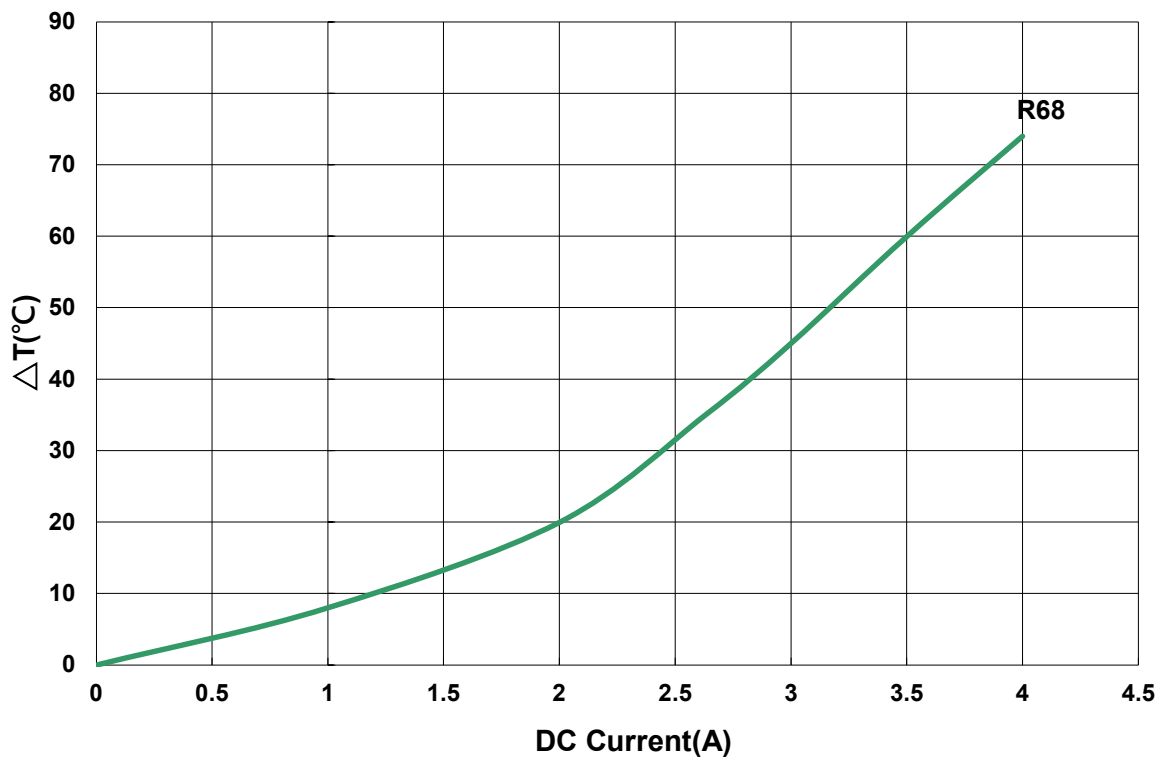
AWVC00252012 Type

■ Characteristics Graph

Inductance vs. DC Current



Temperature Change vs. DC Current



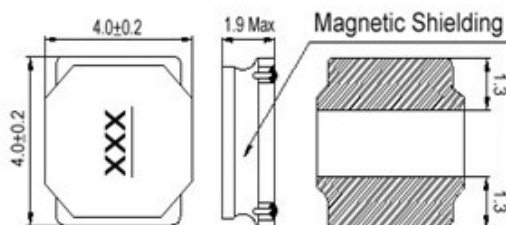
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Power Inductor AWVC Series

Automotive
AEC-Q200

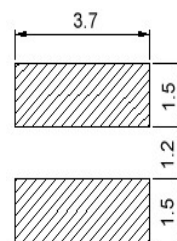
AWVC00404018 Type

■ 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
AWVC004040181R2□00	1.2	100kHz,1V	0.027	3.70(3.30)	3.60(3.20)	20,30	1R2
AWVC004040184R7□00	4.7	100kHz,1V	0.077	2.00(1.80)	1.80(1.60)	20,30	4R7
AWVC004040186R8□00	6.8	100kHz,1V	0.105	1.50(1.30)	1.35(1.20)	20,30	6R8
AWVC00404018100□00	10	100kHz,1V	0.160	1.40(1.20)	1.20(1.00)	20,30	100
AWVC00404018150□00	15	100kHz,1V	0.245	1.05(0.94)	0.95(0.85)	20,30	150
AWVC00404018220□00	22	100kHz,1V	0.335	0.90(0.81)	0.88(0.79)	20,30	220

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

- Operating temperature range —40℃ ~ 125℃ (Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40℃ temperature rise from 25℃ ambient with current
- Measure Equipment:

L: HP4285A+HP42841A

RDC: DIGITAL MILLINHM METER CHROMA 16502, or equivalent

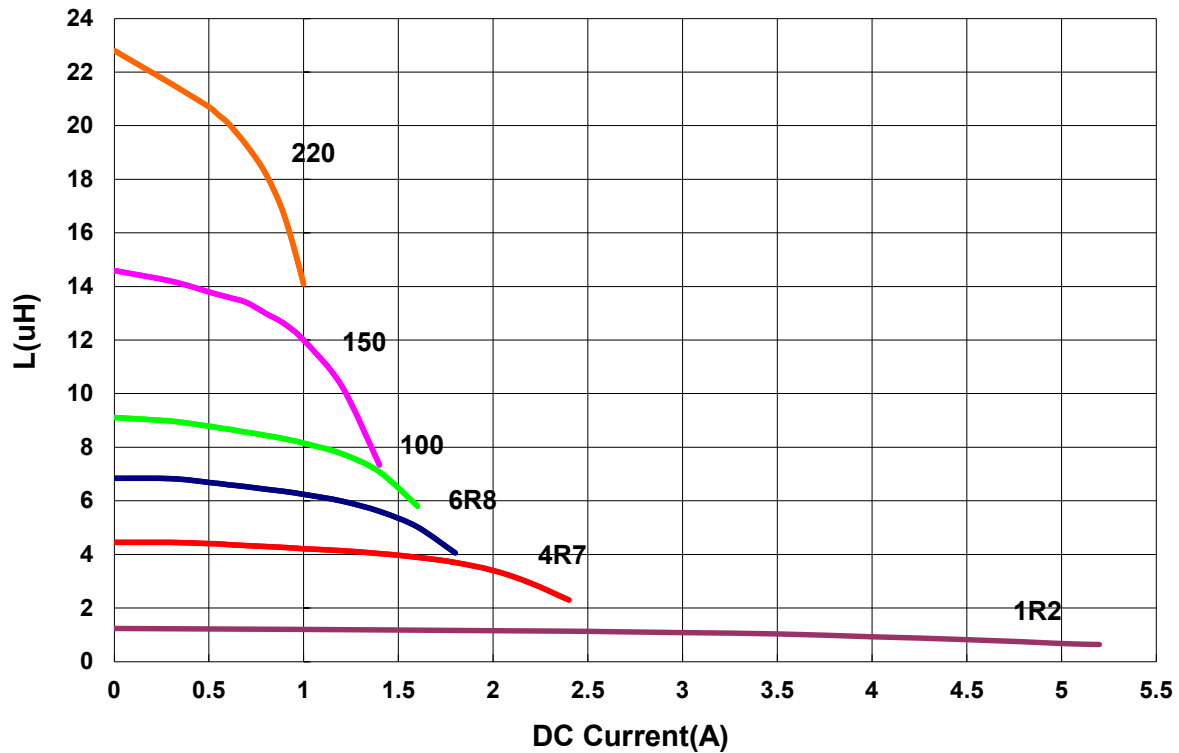
Isat: Agilent HP4284A

Irms: Agilent HP4284A

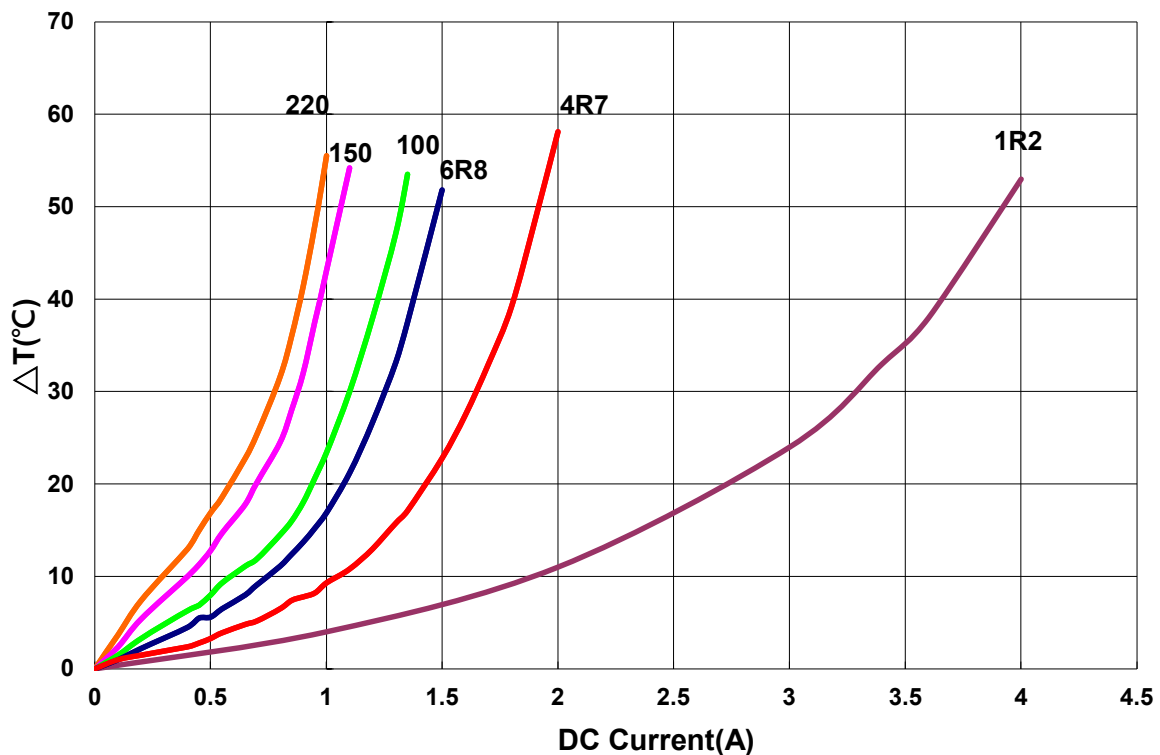
AWVC00404018 Type

Characteristics Graph

Inductance vs. DC Current



Temperature Change vs. DC Current



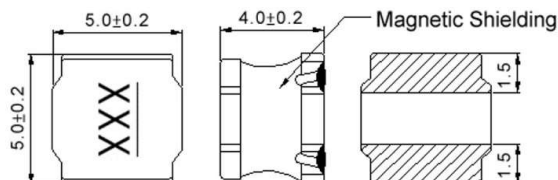
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Power Inductor AWVC Series

Automotive
AEC-Q200

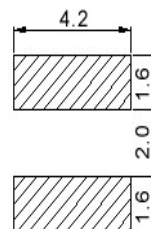
AWVC00505040 Type

■ 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
AWVC005050401R0□00	1.0	100kHz,1V	0.012	8.8(7.9)	5.9(5.3)	20,30	1R0
AWVC005050401R5□00	1.5	100kHz,1V	0.014	7.9(7.1)	5.4(4.8)	20,30	1R5
AWVC005050402R2□00	2.2	100kHz,1V	0.020	6.8(6.1)	4.5(4.0)	20,30	2R2
AWVC005050402R7□00	2.7	100kHz,1V	0.026	6.0(5.4)	4.2(3.7)	20,30	2R7
AWVC005050403R3□00	3.3	100kHz,1V	0.026	5.3(4.7)	4.2(3.7)	20,30	3R3
AWVC005050404R7□00	4.7	100kHz,1V	0.032	4.4(3.9)	3.2(2.8)	20,30	4R7
AWVC005050406R8□00	6.8	100kHz,1V	0.050	3.8(3.4)	3.0(2.7)	20,30	6R8
AWVC005050408R2□00	8.2	100kHz,1V	0.065	3.3(2.9)	2.4(2.1)	20,30	8R2
AWVC00505040100□00	10	100kHz,1V	0.070	3.0(2.70)	2.3(2.0)	20,30	100
AWVC00505040150□00	15	100kHz,1V	0.115	2.4(2.1)	1.8(1.6)	20,30	150
AWVC00505040220□00	22	100kHz,1V	0.160	2.0(1.80)	1.6(1.4)	20,30	220
AWVC00505040151□00	150	100kHz,1V	1.180	0.74(0.66)	0.58(0.52)	20,30	151
AWVC00505040181□00	180	100kHz,1V	1.250	0.67(0.60)	0.54(0.48)	20,30	181
AWVC00505040221□00	220	100kHz,1V	1.450	0.65(0.58)	0.50(0.45)	20,30	221

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

- Operating temperature range —40℃～125℃ (Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40℃ temperature rise from 25℃ ambient with current
- Measure Equipment:

L: HP4285A+HP42841A

RDC: DIGITAL MILLINHM METER CHROMA 16502, or equivalent

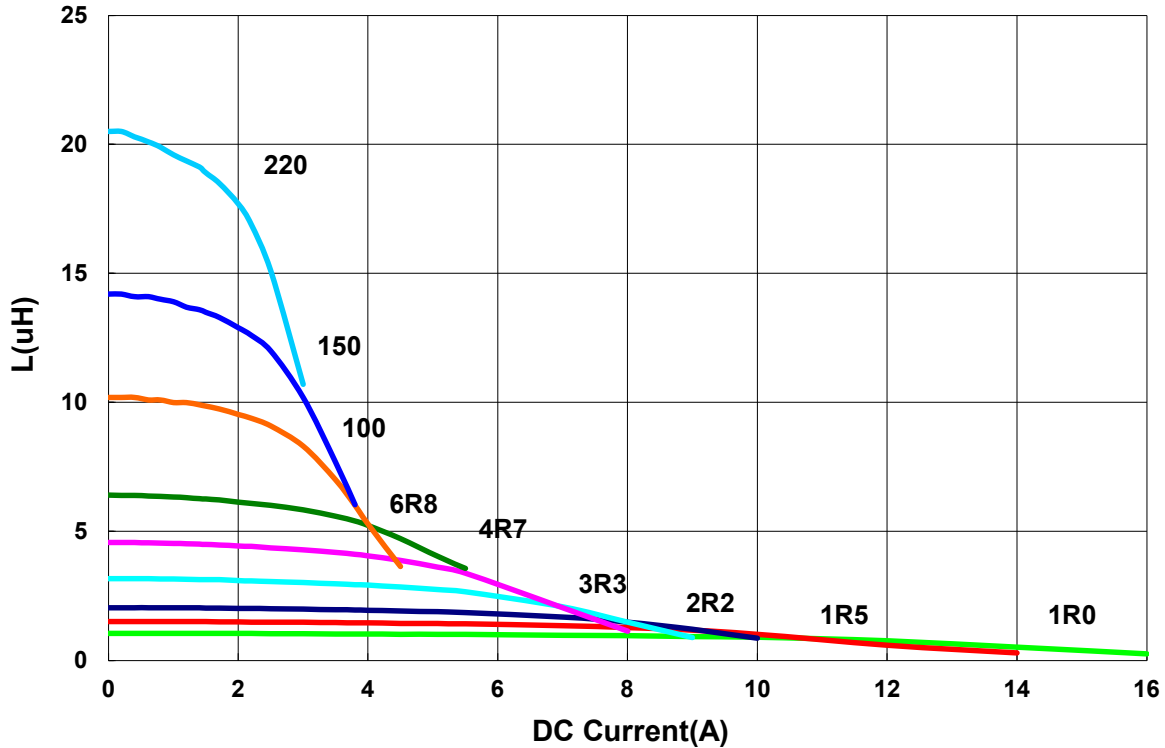
Isat: Agilent HP4284A

Irms: Agilent HP4284A

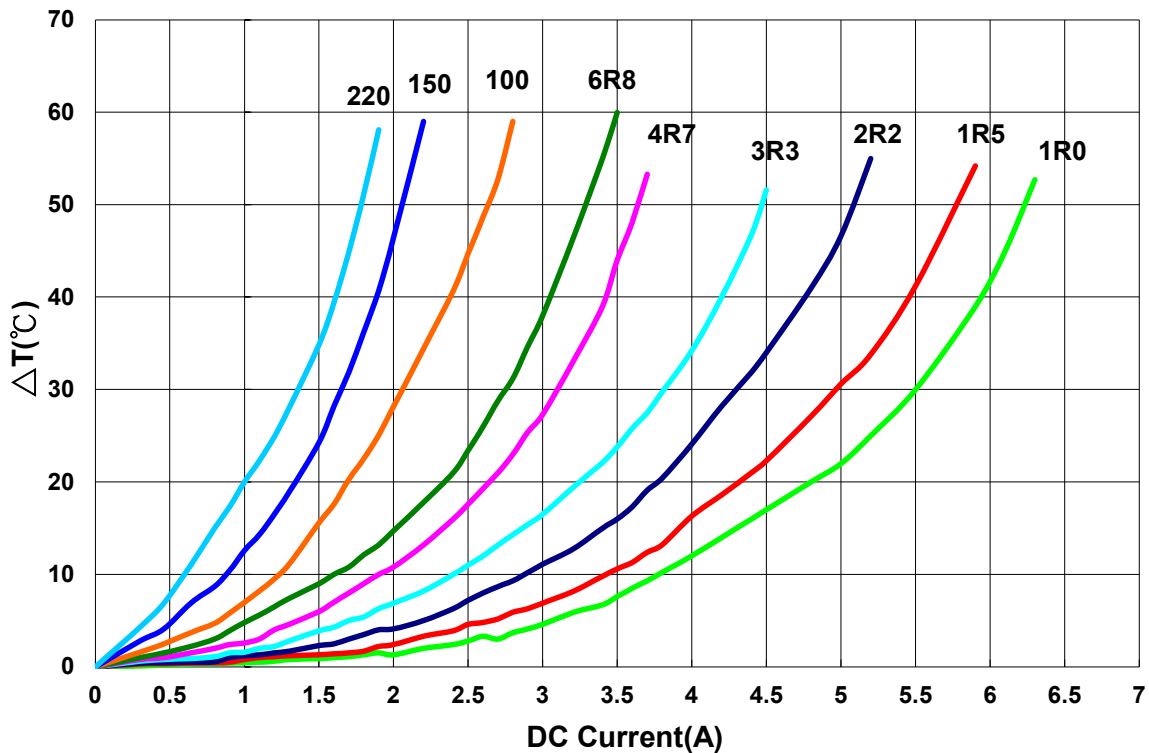
AWVC00505040 Type

Characteristics Graph

Inductance vs. DC Current



Temperature Change vs. DC Current



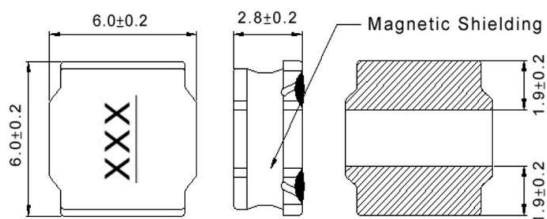
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Power Inductor AWVC Series

Automotive
AEC-Q200

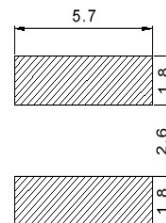
AWVC00606028 Type

■ Dimensions



unit:mm

■ Recommended Land Pattern



unit:mm

■ Electrical Characteristics

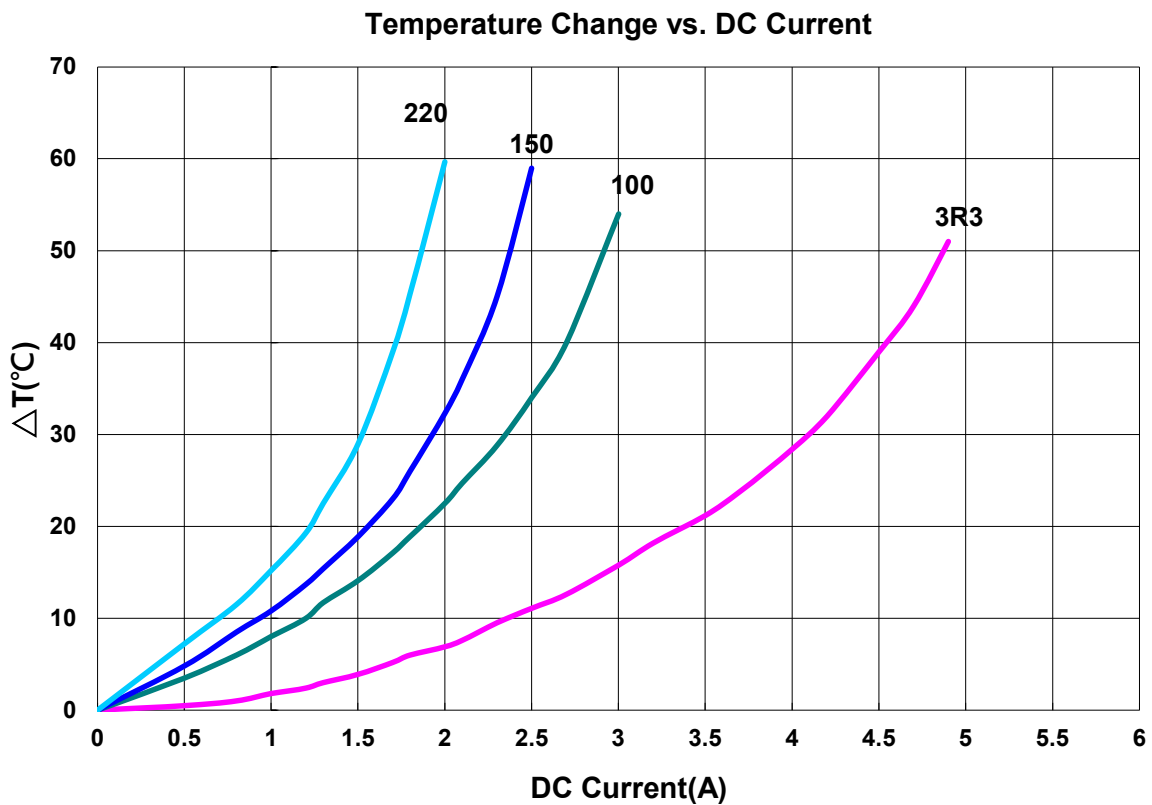
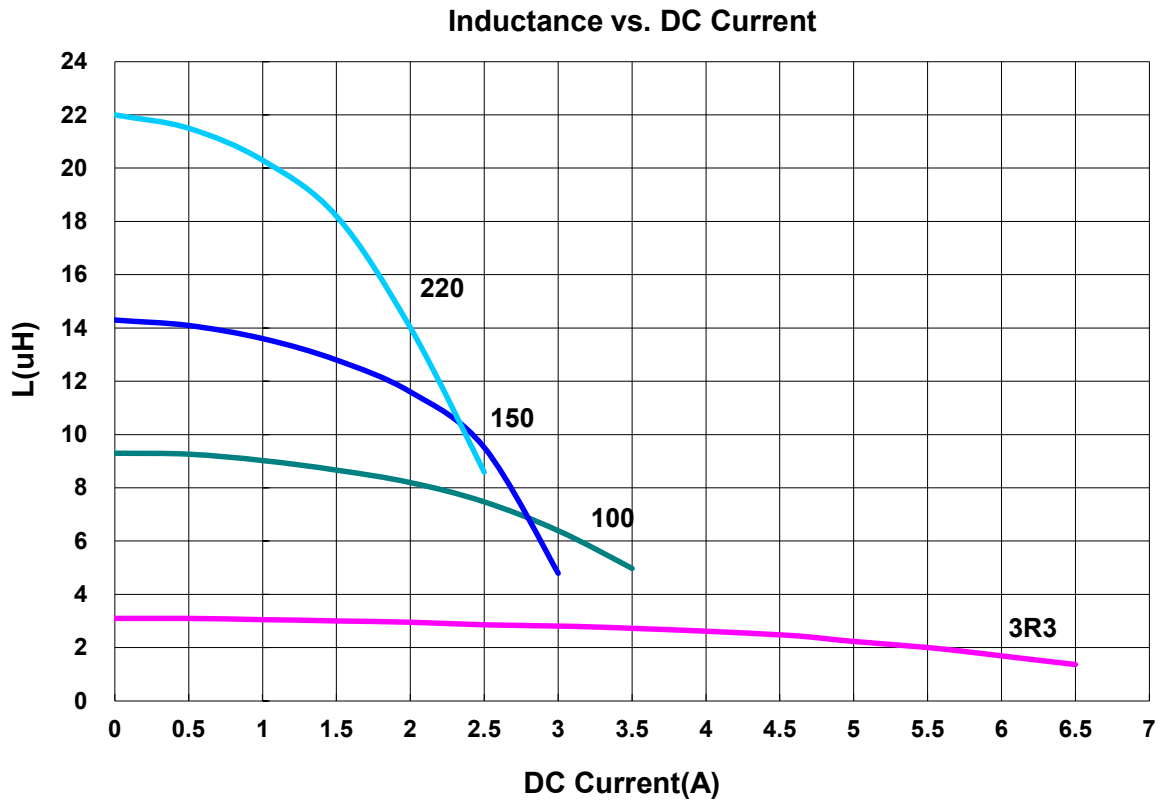
Part No.	Inductance (uH)	Test Freq.	RDC (Ω)±30%	Isat(A) Typ.(Max)	Irms(A) Typ.(Max)	Tolerance (±%)	Marking
AWVC006060283R3□00	3.3	100kHz, 1V	0.027	4.5(4.00)	4.0(3.60)	20,30	3R3
AWVC00606028100□00	10	100kHz, 1V	0.065	2.6(2.30)	2.5(2.20)	20,30	100
AWVC00606028150□00	15	100kHz, 1V	0.093	2.1(1.80)	2.0(1.80)	20,30	150
AWVC00606028220□00	22	100kHz, 1V	0.135	1.7(1.50)	1.65(1.40)	20,30	220

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

- Operating temperature range —40℃ ~ 125℃ (Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40℃ temperature rise from 25℃ ambient with current
- Measure Equipment:
L: HP4285A+HP42841A
RDC: DIGITAL MILLINHM METER CHROMA 16502, or equivalent
Isat: Agilent HP4284A
Irms: Agilent HP4284A

AWVC00606028 Type

Characteristics Graph



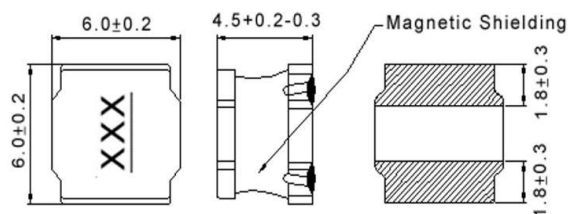
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AEC-Q200

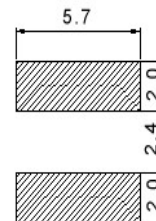
AWVC00606045 Type

■ 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
AWVC006060451R0□00	1	100kHz, 1V	0.010	13(11.50)	7.3(6.50)	20,30	1R0
AWVC006060451R5□00	1.5	100kHz, 1V	0.012	12(10.50)	6.6(5.90)	20,30	1R5
AWVC006060452R2□00	2.2	100kHz, 1V	0.018	9.5(8.50)	5.2(4.60)	20,30	2R2
AWVC006060453R3□00	3.3	100kHz, 1V	0.022	7.8(7.00)	4.4(3.90)	20,30	3R3
AWVC006060454R7□00	4.7	100kHz, 1V	0.030	6.8(6.10)	4.0(3.60)	20,30	4R7
AWVC006060456R8□00	6.8	100kHz, 1V	0.042	5.7(5.10)	3.3(2.90)	20,30	6R8
AWVC00606045100□00	10	100kHz, 1V	0.060	4.6(4.10)	2.6(2.30)	20,30	100
AWVC00606045150□00	15	100kHz, 1V	0.090	3.8(3.40)	2.2(1.90)	20,30	150
AWVC00606045220□00	22	100kHz, 1V	0.130	3.3(2.90)	1.9(1.70)	20,30	220

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

1. Operating temperature range -40℃ ~ 125℃ (Including self - temperature rise)

2. Isat for Inductance drop 30% from its value without current

3. Irms for a 40℃ temperature rise from 25℃ ambient with current

4. Measure Equipment:

L: HP4285A+HP42841A

RDC: DIGITAL MILLINHM METER CHROMA 16502, or equivalent

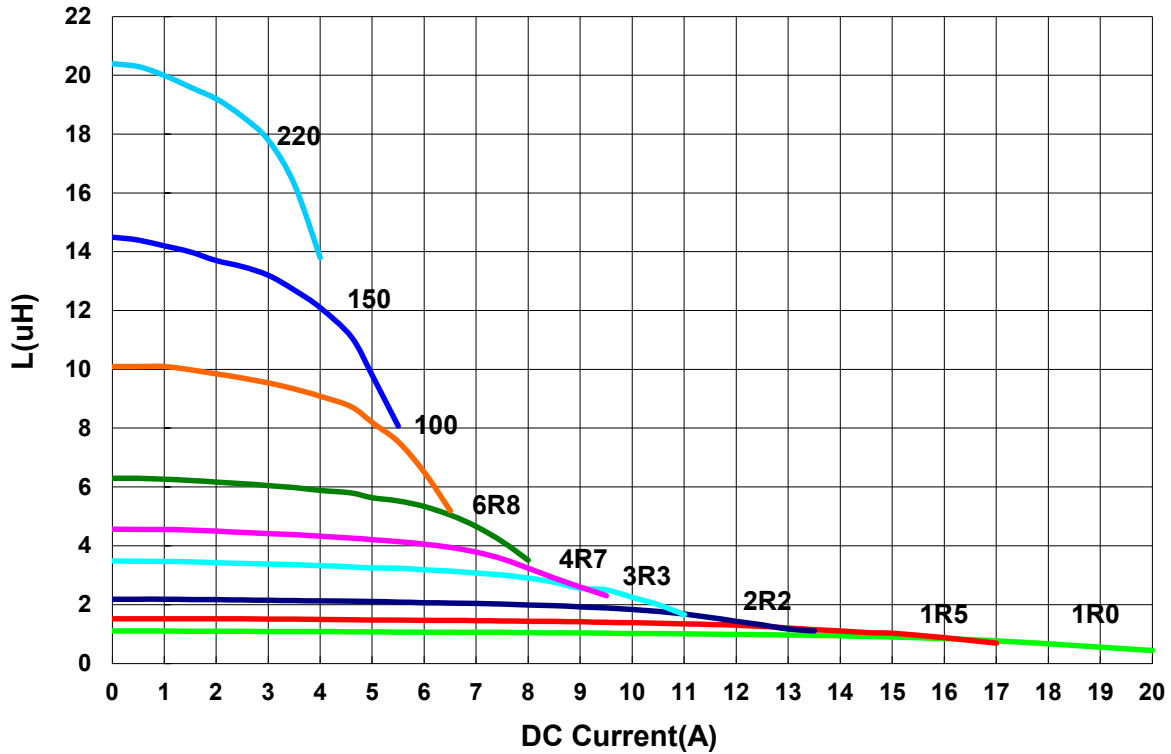
Isat: Agilent HP4284A

Irms: Agilent HP4284A

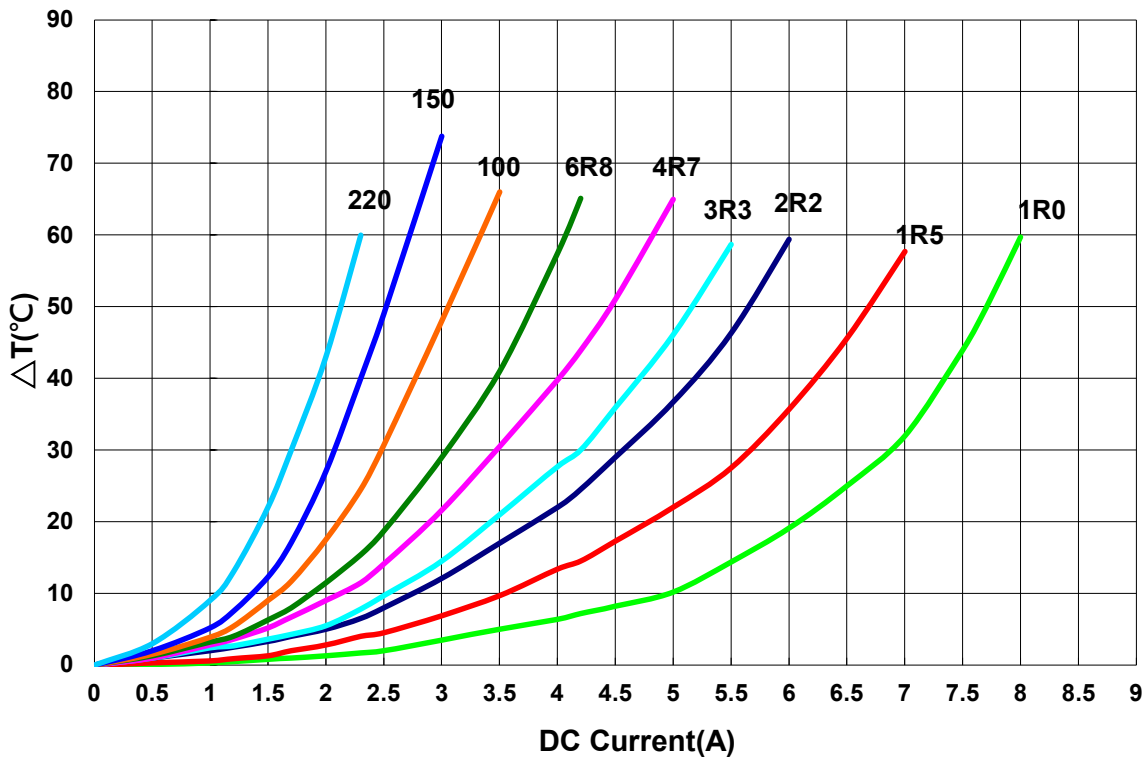
AWVC00606045 Type

Characteristics Graph

Inductance vs. DC Current



Temperature Change vs. DC Current



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Automotive
AEC-Q200

■ Packaging

Tape Dimensions

Figure 1

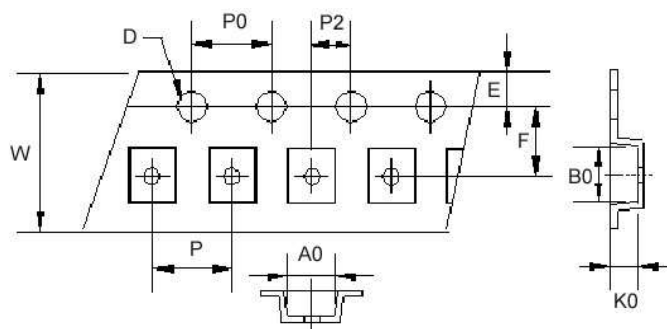
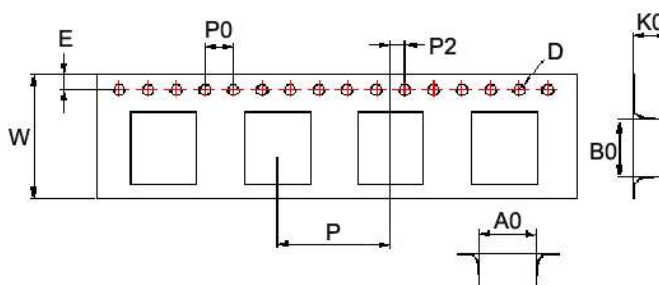


Figure 2



Reel Dimensions

Figure 1

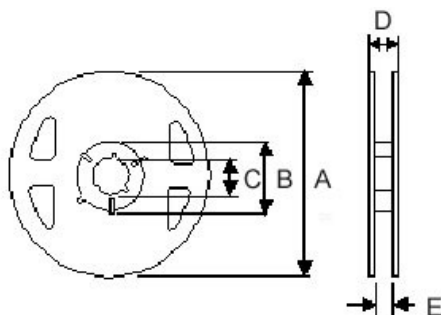
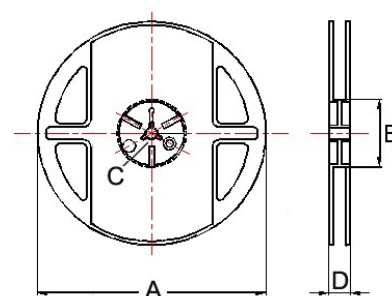


Figure 2



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	
AWVC00201610	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
AWVC00201612	1	1.9	2.2	1.3	1.55	1.75	3.5	8	4	4	2	180	60	13	14.4	8.4	2000
AWVC00252012	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
AWVC00404018	2	4.25	4.25	2.1	1.55	1.75	5.5	12	8	4	2	178	60	13	13.2	-	800
AWVC00505040	2	5.2	5.2	4.2	1.55	1.75	5.5	12	8	4	2	330	100	13	13.4	-	1500
AWVC00606028	2	6.25	6.25	3.00	1.55	1.75	7.5	16	12	4	2	330	100	13	16	-	1500
AWVC00606045	2	6.2	6.2	4.65	1.55	1.75	5.5	12	8	4	2	330	100	13	13.4	-	1000

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AWVC00201610100M00	AWVC00201610100T00	AWVC00201610150M00	AWVC00201610150T00
AWVC00201610180M00	AWVC00201610180T00	AWVC002016101R0M00	AWVC002016101R0T00
AWVC002016101R5M00	AWVC002016101R5T00	AWVC00201610220M00	AWVC00201610220T00
AWVC002016102R2M00	AWVC002016102R2T00	AWVC002016103R3M00	AWVC002016103R3T00
AWVC002016104R7M00	AWVC002016104R7T00	AWVC002016106R8M00	AWVC002016106R8T00
AWVC00201610R24M00	AWVC00201610R24T00	AWVC00201612100M00	AWVC00201612100T00
AWVC00201612150M00	AWVC00201612150T00	AWVC002016121R0M00	AWVC002016121R0T00
AWVC00201612220M00	AWVC00201612220T00	AWVC002016122R2M00	AWVC002016122R2T00
AWVC002016123R3M00	AWVC002016123R3T00	AWVC002016124R7M00	AWVC002016124R7T00
AWVC00201612R50M00	AWVC00201612R50T00	AWVC00252012R68M00	AWVC00252012R68T00
AWVC00404018100M00	AWVC00404018100T00	AWVC00404018150M00	AWVC00404018150T00
AWVC004040181R2M00	AWVC004040181R2T00	AWVC00404018220M00	AWVC00404018220T00
AWVC004040184R7M00	AWVC004040184R7T00	AWVC004040186R8M00	AWVC004040186R8T00
AWVC00505040100M00	AWVC00505040100T00	AWVC00505040150M00	AWVC00505040150T00
AWVC00505040151M00	AWVC00505040151T00	AWVC00505040181M00	AWVC00505040181T00
AWVC005050401R0M00	AWVC005050401R0T00	AWVC005050401R5M00	AWVC005050401R5T00
AWVC00505040220M00	AWVC00505040220T00	AWVC00505040221M00	AWVC00505040221T00
AWVC005050402R2M00	AWVC005050402R2T00	AWVC005050402R7M00	AWVC005050402R7T00
AWVC005050403R3M00	AWVC005050403R3T00	AWVC005050404R7M00	AWVC005050404R7T00
AWVC005050406R8M00	AWVC005050406R8T00	AWVC005050408R2M00	AWVC005050408R2T00
AWVC00606028100M00	AWVC00606028100T00	AWVC00606028150M00	AWVC00606028150T00
AWVC00606028220M00	AWVC00606028220T00	AWVC006060283R3M00	AWVC006060283R3T00
AWVC00606045100M00	AWVC00606045100T00	AWVC00606045150M00	AWVC00606045150T00
AWVC006060451R0M00	AWVC006060451R0T00	AWVC006060451R5M00	AWVC006060451R5T00
AWVC00606045220M00	AWVC00606045220T00	AWVC006060452R2M00	AWVC006060452R2T00