

Power Inductor AMRZ Series

**Automotive
AEC-Q200**

RoHS Compliant
Halogen Free
REACH Compliant

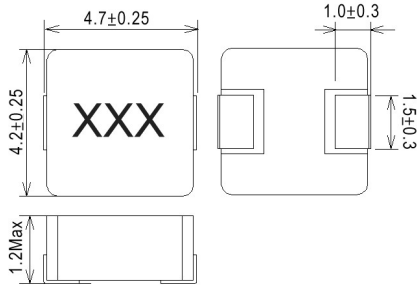


- Power Circuit
- Shield
- Wire Wound
- Metal
- Ultra High Current

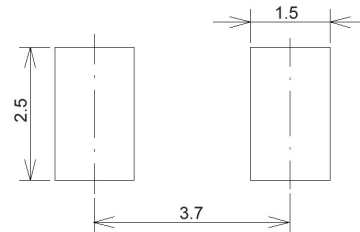
Part Numbering

A	MRZ	00	040420	1R0	M	A1
Grade	Series Name	Control Code	Dimensions Code (mm)	Inductance (uH)	Tolerance	Internal Code
			040412 4.2x4.7x1.2	R22 0.22	M ±20%	
			040420 4.2x4.7x1.8	1R0 1.0		
			060630 6.8x7.3x2.8	3R3 3.3		
			101040 10.2x11.6x3.8			
			131365 12.8x13.8x6.5			

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AMRZ00040412 Type
■ Dimensions


unit:mm

■ Recommended Land Pattern


unit:mm

■ Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC(mΩ) Max(Typ)	Isat (A)Typ.	Irms (A)Typ.	Tolerance (±%)	Marking
AMRZ00040412R22MA1	0.22	100kHz/0.5V	12(11)	15.0	8.5	20	R22
AMRZ00040412R47MA1	0.47	100kHz/0.5V	20(18)	9.0	5.0	20	R47
AMRZ000404121R0MA1	1	100kHz/0.5V	43(39)	6.0	4.0	20	1R0

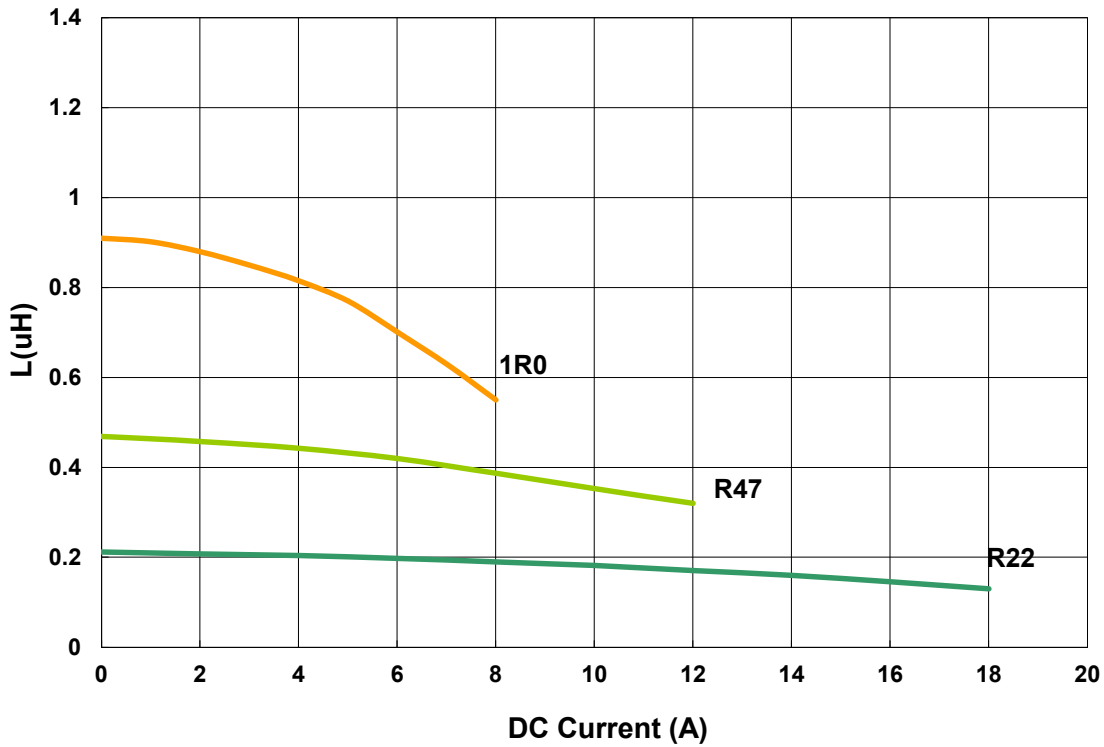
Note: When ordering, please specify tolerance code. Tolerance: M=±20%

1. Operating temperature range - 55°C ~ 155°C
2. Isat for Inductance drop 30% from its value without current
3. I rms for a 40°C temprature rise from 25°C ambient with current
4. Absolute maximum voltage 30VDC
5. Measure Equipment:
 L: WK3260B or WK6500P
 RDC: CHEN HWA502 or 16502
 Isat: WK3260B+WK3265B
 I rms: CHROMA 1810

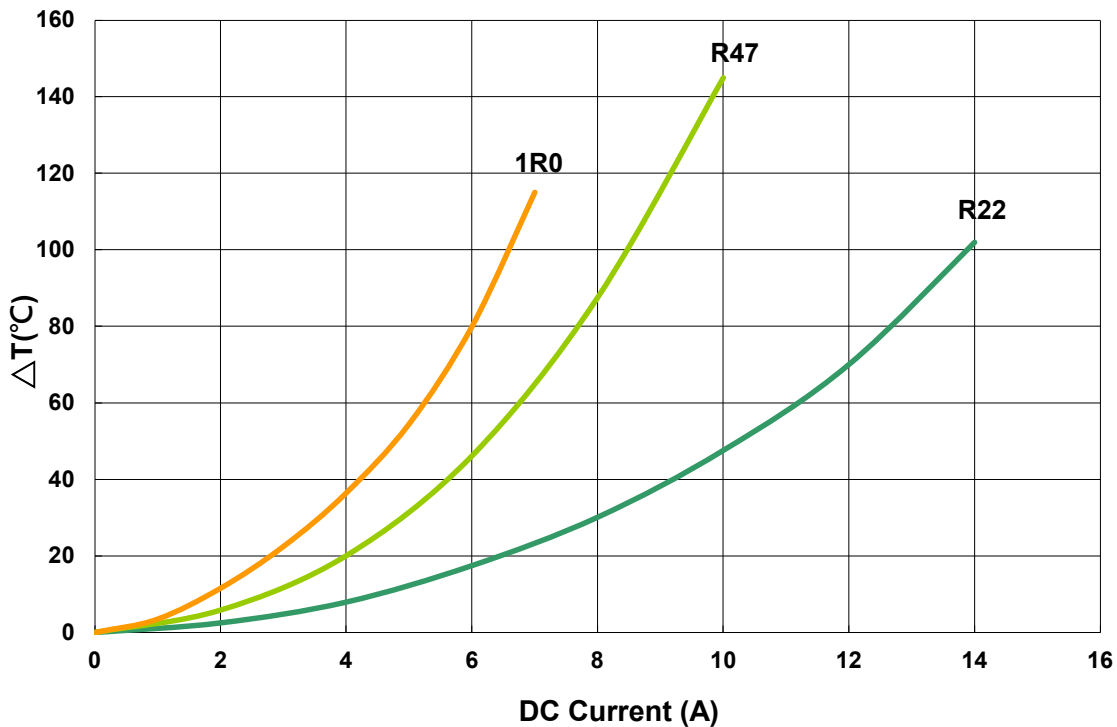
AMRZ00040412 Type

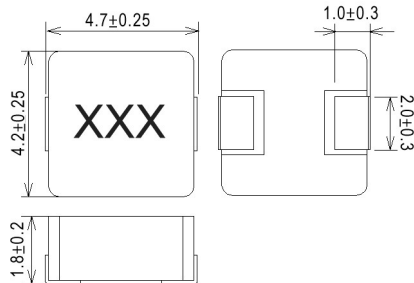
Characteristics Graph

Inductance vs. DC Current

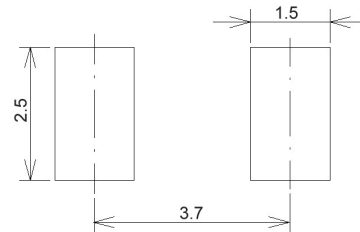


Temperature Change vs. DC Current



AMRZ00040420 Type
■ Dimensions


unit:mm

■ Recommended Land Pattern


unit:mm

■ Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC(mΩ) Max(Typ)	Isat (A)Typ.	Irms (A)Typ.	Tolerance (±%)	Marking
AMRZ00040420R47MB1	0.47	100kHz/0.5V	14(12)	10.0	7.0	20	R47
AMRZ000404201R0MB1	1	100kHz/0.5V	27(24)	7.0	4.5	20	1R0
AMRZ000404201R5MB1	1.5	100kHz/0.5V	46(38)	6.0	4.0	20	1R5
AMRZ000404202R2MB1	2.2	100kHz/0.5V	55(50)	5.0	3.0	20	2R2
AMRZ000404204R7MB1	4.7	100kHz/0.5V	105(95)	3.5	2.2	20	4R7

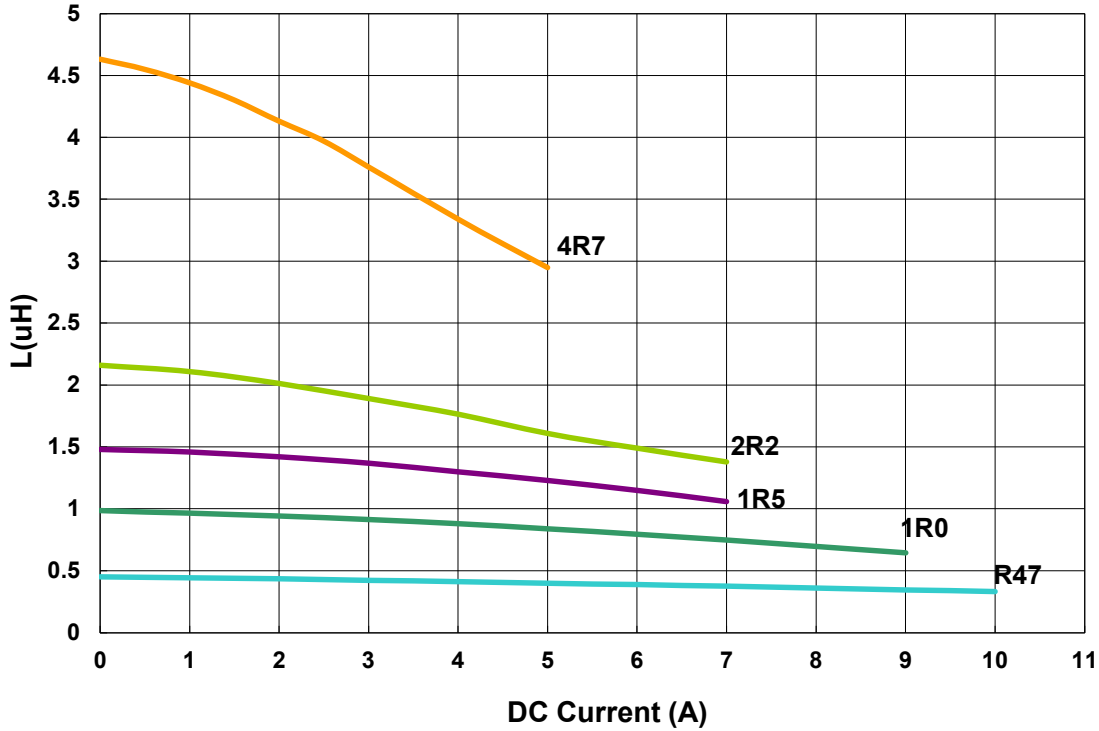
Note: When ordering, please specify tolerance code. Tolerance: M=±20%

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4. Absolute maximum voltage 30VDC
5. Measure Equipment:
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 RDC: CHEN HWA502 or 16502
 Isat: WK3260B+WK3265B
 I rms: CHROMA 1810

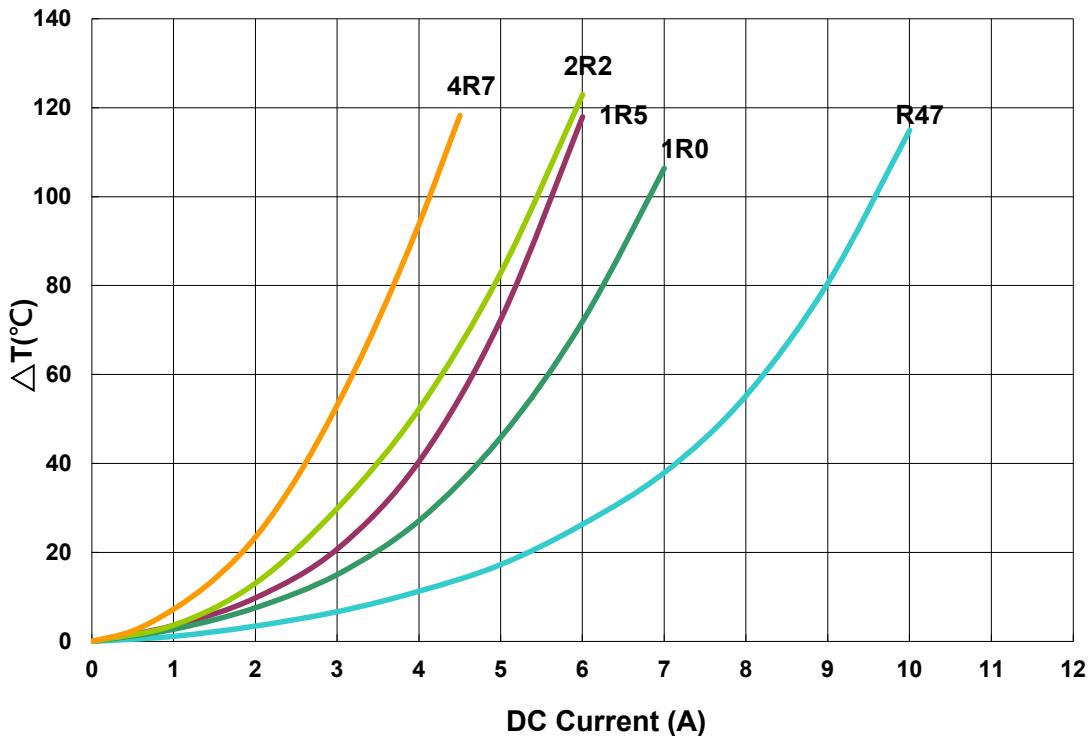
AMRZ00040420 Type

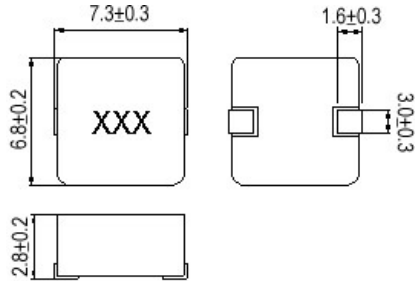
Characteristics Graph

Inductance vs. DC Current

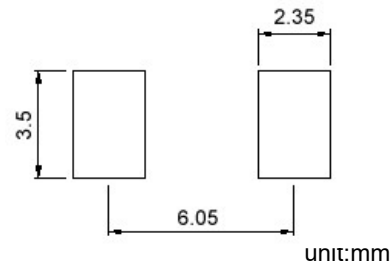


Temperature Change vs. DC Current



AMRZ00060630 Type
■ Dimensions


unit:mm

■ Recommended Land Pattern


unit:mm

■ Electrical Characteristics

Part No.	Inductance (μ H)	Test Freq.	RDC(m Ω) Max(Typ)	Isat (A)Typ.	Irms (A)Typ.	Tolerance (\pm %)	Marking
AMRZ00060630R47MA1	0.47	100kHz,0.5V	4.3(3.9)	20.0	16.5	20	R47
AMRZ000606301R0MA1	1	100kHz,0.5V	10(9)	18.0	10.0	20	1R0
AMRZ000606301R5MA1	1.5	100kHz,0.5V	14(13)	13.0	9.0	20	1R5
AMRZ000606302R2MA1	2.2	100kHz,0.5V	20(18)	10.0	8.0	20	2R2
AMRZ000606303R3MA1	3.3	100kHz,0.5V	28(25)	9.0	6.5	20	3R3
AMRZ000606304R7MA1	4.7	100kHz,0.5V	40(35)	8.0	5.5	20	4R7
AMRZ000606305R6MA1	5.6	100kHz,0.5V	45(38)	7.0	5.0	20	5R6
AMRZ000606306R8MA1	6.8	100kHz,0.5V	49.5(45)	6.0	4.5	20	6R8
AMRZ000606308R2MA1	8.2	100kHz,0.5V	55(50)	5.2	4.3	20	8R2
AMRZ00060630100MA1	10	100kHz,0.5V	68(62)	5.0	4.0	20	100
AMRZ00060630150MA1	15	100kHz,0.5V	125(110)	4.5	3.2	20	150
AMRZ00060630220MA1	22	100kHz,0.5V	145(130)	3.5	3.0	20	220

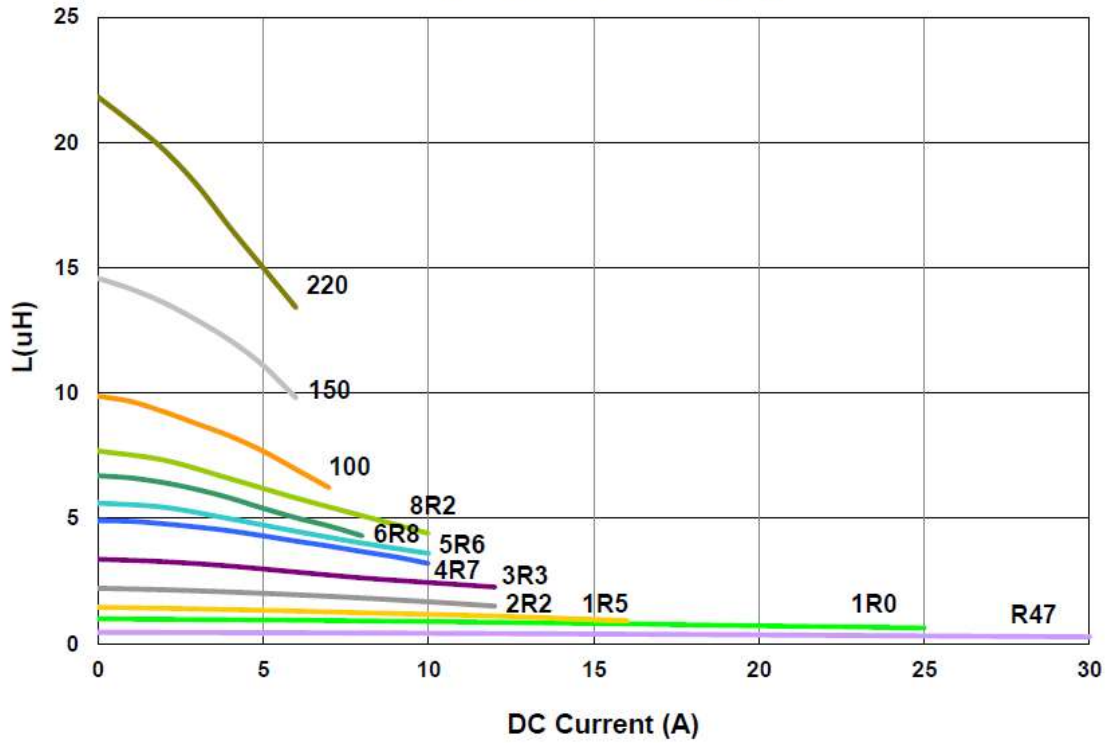
Note: When ordering, please specify tolerance code. Tolerance: M= \pm 20%

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 Isat: WK3260B+WK3265B
 Iirms: CHROMA 1810

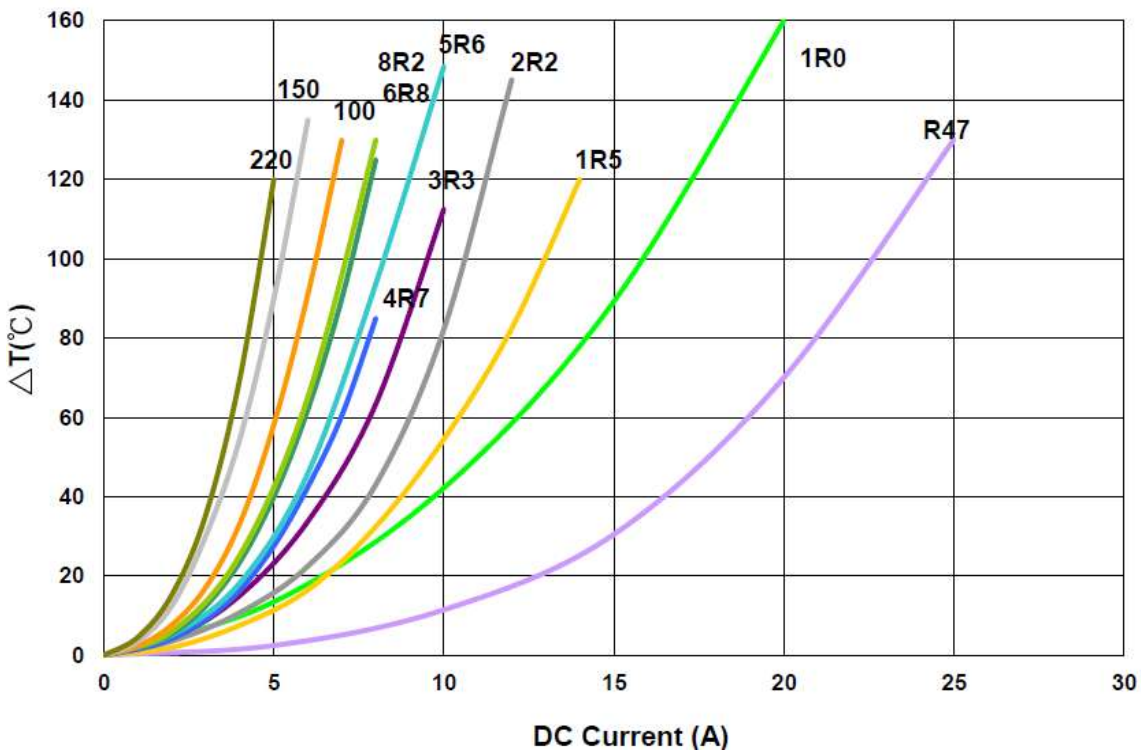
AMRZ00060630 Type

Characteristics Graph

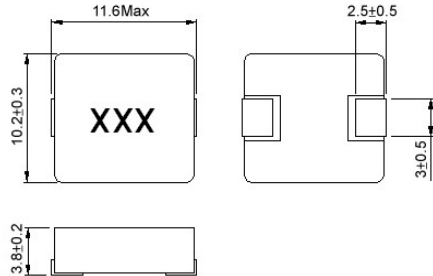
Inductance vs. DC Current



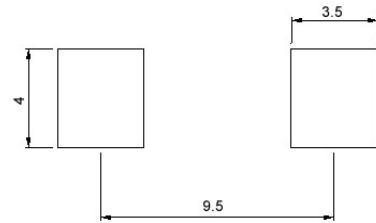
Temperature Change vs. DC Current



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AMRZ00101040 Type
■ Dimensions


unit:mm

■ Recommended Land Pattern


unit:mm

■ Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC(mΩ) Max(Typ)	Isat (A)Typ.	Irms (A)Typ.	Tolerance (±%)	Marking
AMRZ001010401R0MA1	1	100kHz/0.5V	3.3(3.0)	20.0	18.0	20	1R0
AMRZ001010402R2MA1	2.2	100kHz/0.5V	6.8(6.0)	16.0	14.0	20	2R2
AMRZ001010403R3MA1	3.3	100kHz/0.5V	11(10)	13.0	11.0	20	3R3
AMRZ001010404R7MA1	4.7	100kHz/0.5V	16(14.5)	11.0	9.0	20	4R7
AMRZ001010406R8MA1	6.8	100kHz/0.5V	24(20)	9.0	8.0	20	6R8
AMRZ00101040100MA1	10	100kHz/0.5V	30(27)	7.0	6.5	20	100
AMRZ00101040150MA1	15	100kHz/0.5V	45(40)	6.3	6.0	20	150
AMRZ00101040220MA1	22	100kHz/0.5V	66(60)	5.0	4.5	20	220
AMRZ00101040330MA1	33	100kHz/0.5V	100(90)	4.0	3.5	20	330
AMRZ00101040470MA1	47	100kHz/0.5V	165(150)	3.5	3.0	20	470

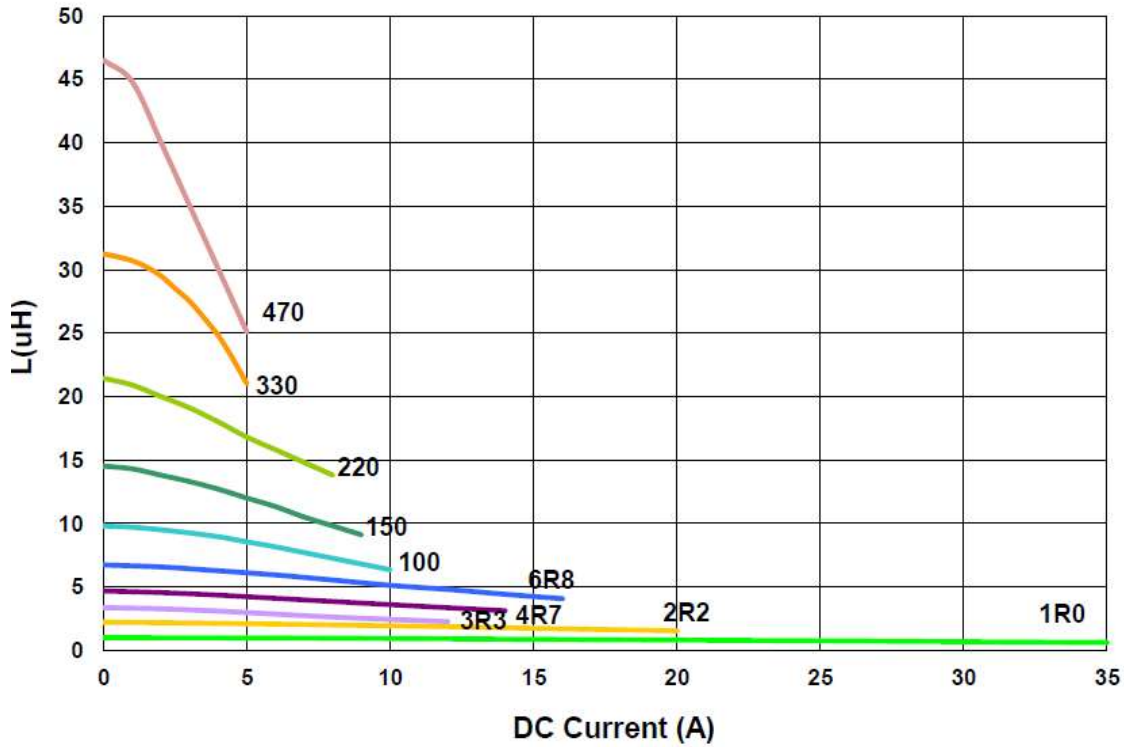
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5. Measure Equipment:
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 RDC: CHEN HWA502 or 16502
 Isat: WK3260B+WK3265B
 I rms: CHROMA 1810

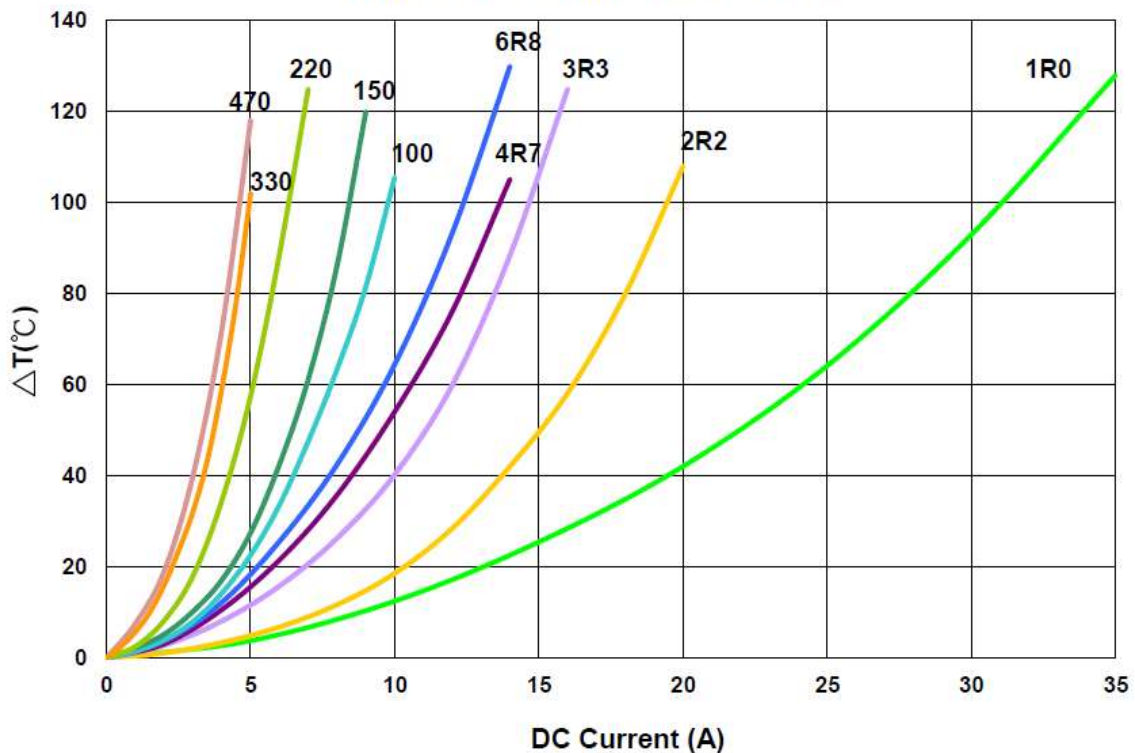
AMRZ00101040 Type

■ Characteristics Graph

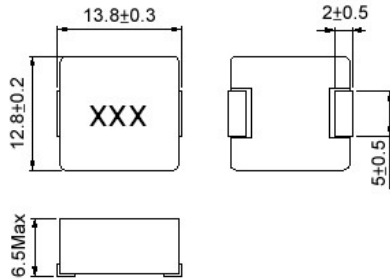
Inductance vs. DC Current



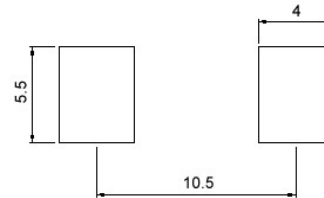
Temperature Change vs. DC Current



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AMRZ00131365 Type
■ Dimensions


unit:mm

■ Recommended Land Pattern


unit:mm

■ Electrical Characteristics

Part No.	Inductance (μ H)	Test Freq.	RDC(m Ω) Max(Typ)	Isat (A)Typ.	Irms (A)Typ.	Tolerance (\pm %)	Marking
AMRZ001313651R0MA1	1	100kHz/0.5V	2.1(1.9)	30.0	28.0	20	1R0
AMRZ001313651R5MA1	1.5	100kHz/0.5V	3.0(2.7)	28.0	23.0	20	1R5
AMRZ001313652R2MA1	2.2	100kHz/0.5V	4.4(3.7)	25.0	18.0	20	2R2
AMRZ001313653R3MA1	3.3	100kHz/0.5V	6.8(5.7)	22.0	16.0	20	3R3
AMRZ001313654R7MA1	4.7	100kHz/0.5V	7.7(7.0)	18.0	14.0	20	4R7
AMRZ00131365100MA1	10	100kHz/0.5V	18(16.5)	12.0	10.0	20	100
AMRZ00131365220MA1	22	100kHz/0.5V	40(35)	7.0	6.0	20	220
AMRZ00131365330MA1	33	100kHz/0.5V	55(50)	6.0	5.0	20	330
AMRZ00131365470MA1	47	100kHz/0.5V	100(80)	5.0	4.0	20	470

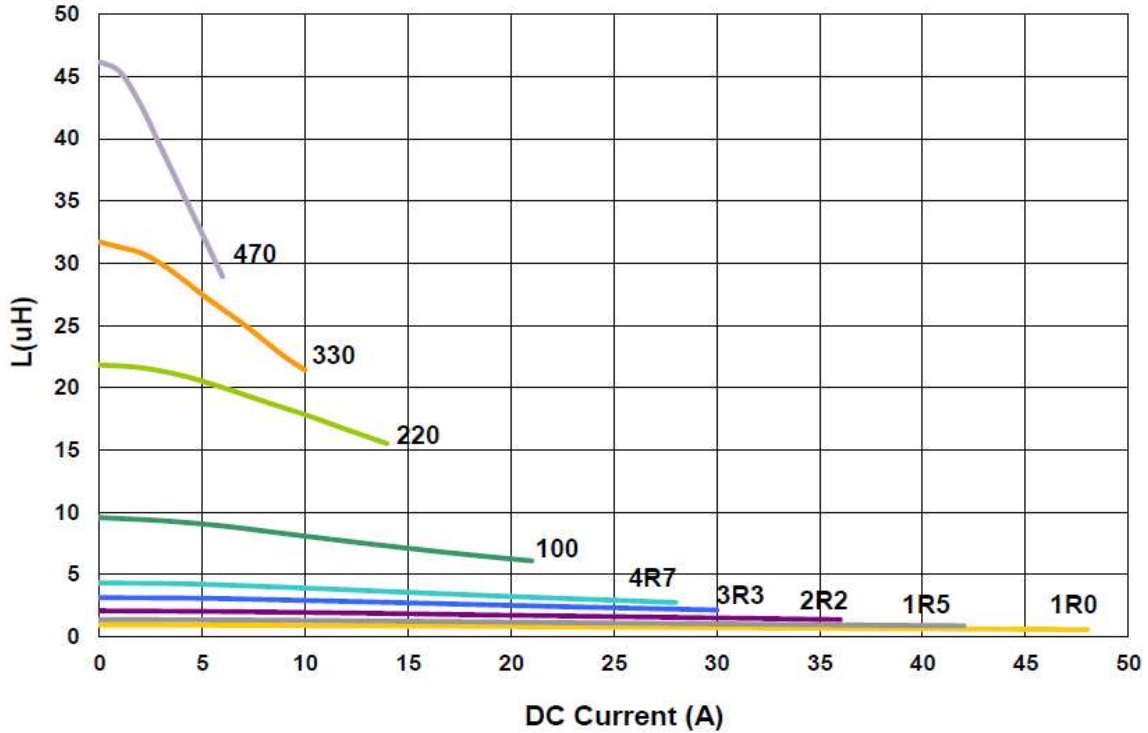
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- Isat for Inductance drop 30% from its value without current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Absolute maximum voltage 30VDC
- Measure Equipment:
 - L: WK3260B or WK6500P
 - RDC: CHEN HWA502 or 16502
 - Isat: WK3260B+WK3265B
 - Irms: CHROMA 1810

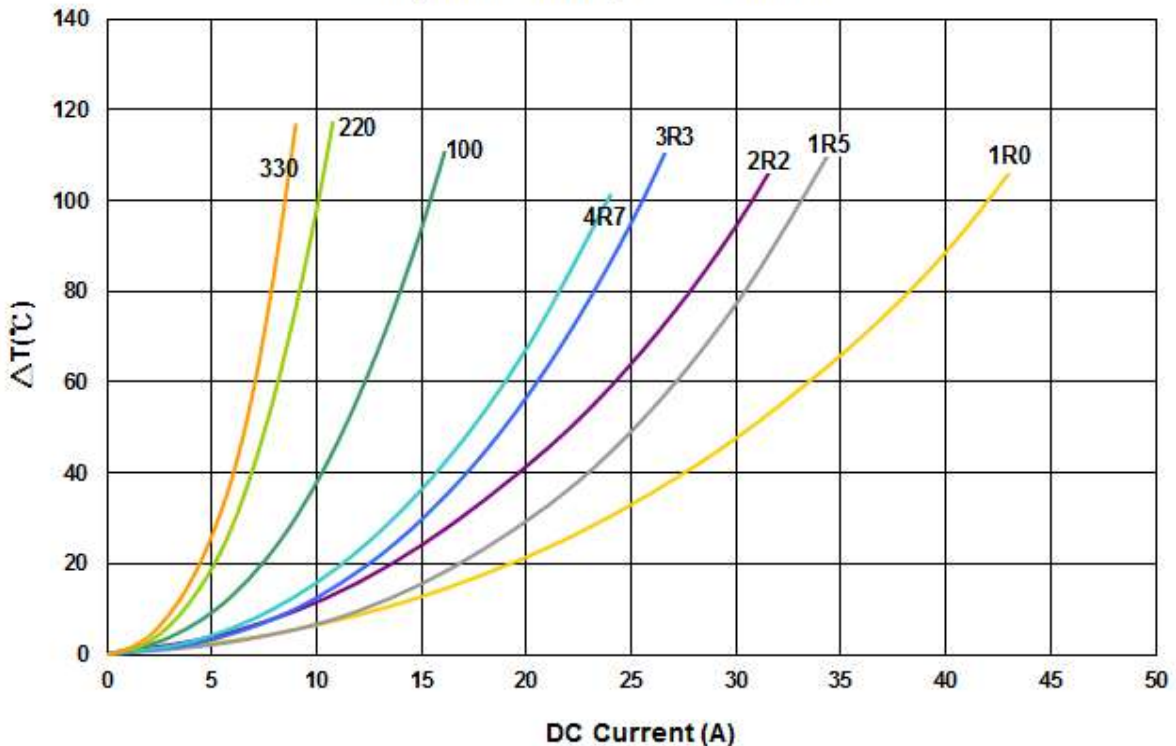
AMRZ00131365 Type

Characteristics Graph

Inductance vs. DC Current



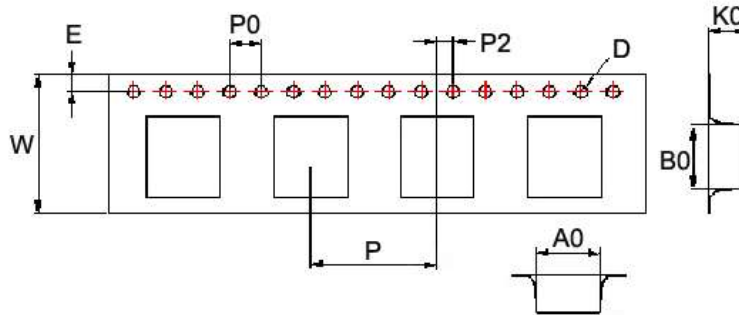
Temperature Change vs. DC Current



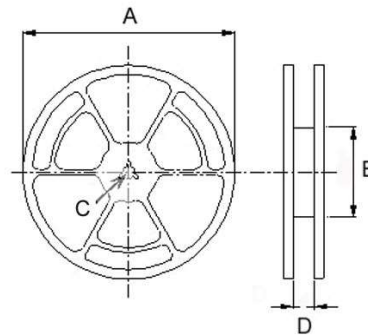
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■ Packaging

Tape Dimensions



Reel Dimensions



Dimensions in mm

TYPE	Tape Dimensions									Reel Dimensions				Quantity PCS / REEL
	A0	B0	K0	D	E	W	P	P0	P2	A	B	C	D	
AMRZ00040412	4.4	4.9	1.5	1.55	1.75	12	8	4	2	330	100	13	13.4	2000
AMRZ00040420	4.3	4.9	2.4	1.55	1.75	12	8	4	2	330	100	13	13.4	2000
AMRZ00060630	7.1	7.6	3.4	1.55	1.75	16	12	4	2	330	100	13	16	1000
AMRZ00101040	10.6	11.7	4.25	1.55	1.75	24	16	4	2	330	100	13	24.4	500
AMRZ00131365	13.1	14.6	6.75	1.55	1.75	24	16	4	2	330	100	13	24.4	500