

Cautions and Warnings

Please be noted that this spec is only for reference if you have projects designed with the product number listed in. If you are looking for new project design-in, please find BWMR Series specification/datasheet on Chilisin website. Or you may find our sales contact for more information on old part number at your convenience. Appreciated your attention and understanding.

Note: 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.

MRSC Series



MRSC series, metal alloy wire wound power inductor, its rated current could be increased up to 35% compare to ferrite base power inductor.

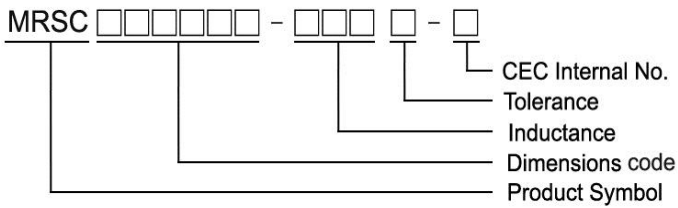
Features

- RoHS, Halogen Free and REACH Compliance
- Constructure Low RDC and high rated current.
- Wide inductance range
- Shielded and miniature package design

Applications

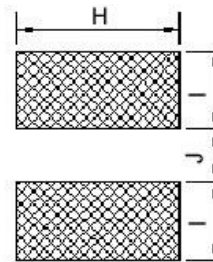
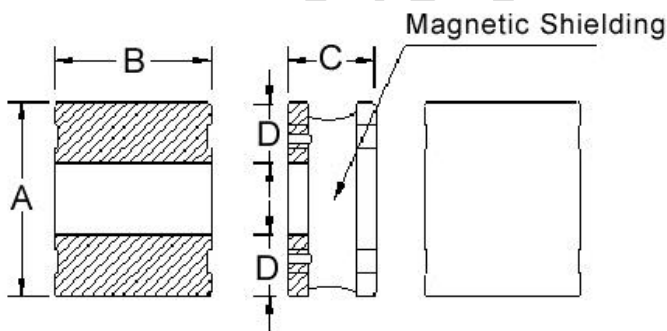
- Smartphones, tablets and wearable devices
- DSC, camcorders
- DC/DC converters

Product Identification



Shape and Dimensions

Recommended Pattern



Dimensions in mm

TYPE	A	B	C	D	H	I	J
MRSC201B10	2.0±0.2	1.6±0.2	1.0 Max	0.65	1.7	0.7	0.7
MRSC201B12	2.0±0.2	1.6±0.2	1.2 Max	0.50	1.7	0.6	0.9
MRSC252A10	2.5±0.2	2.0±0.2	1.0 Max	0.85	2.1	0.9	0.8
MRSC252A12	2.5±0.2	2.0±0.2	1.2 Max	0.85	2.1	0.9	0.8

Electrical Characteristics

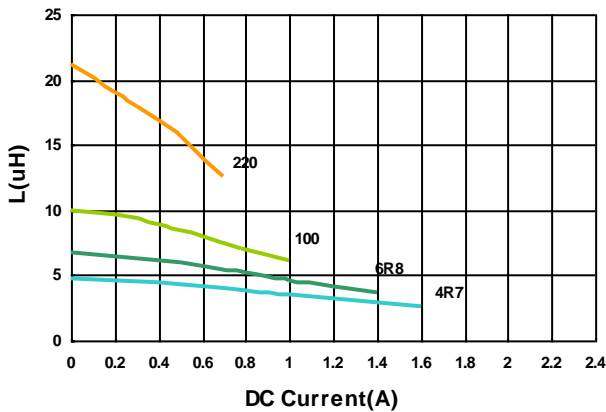
Part Number	Inductance (uH)	Test Frequency (MHz)	Tolerance (±%)	SRF (MHz) Min	RDC(mΩ) (Max) Typ	Isat (A) (Max) Typ	Irms (A) (Max) Typ
MRSC201B10-4R7□-N	4.7	1	20, 30	25	370(308)	1.00(1.20)	0.86(0.96)
MRSC201B10-6R8□-N	6.8	1	20, 30	19	526(438)	0.86(0.96)	0.73(0.82)
MRSC201B10-100□-N	10	1	20, 30	15	768(640)	0.70(0.78)	0.64(0.72)
MRSC201B10-220□-N	22	1	20, 30	9	1560(1300)	0.49(0.55)	0.40(0.45)

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

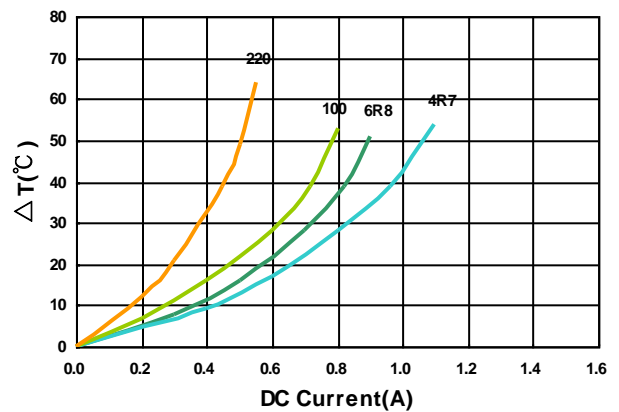
- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- I rms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
- L : Agilent 4285A+Agilent 42841A, or equivalent,1MHz 200mV
- RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
- Isat & I rms : Agilent/HP4285A+Agilent 42841A
- SRF : HP4294A+16092A

Test Instruments : HP4285A Material/Impedance Analyzer

Inductance vs. DC Current



Temperature Change vs. DC Current



Electrical Characteristics

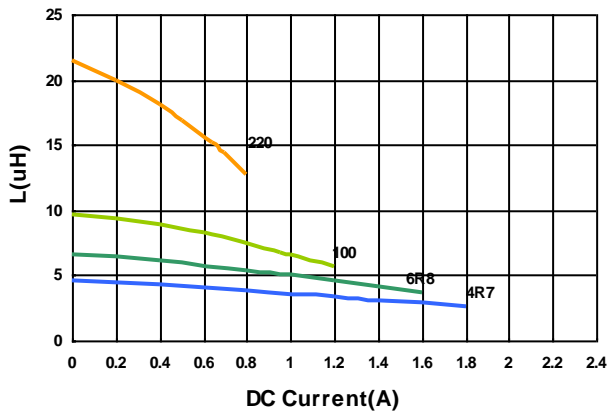
Part Number	Inductance (uH)	Test Frequency (MHz)	Tolerance (±%)	SRF (MHz) Min	RDC(mΩ) (Max) Typ	Isat (A) (Max) Typ	Irms (A) (Max) Typ
MRSC201B12-4R7□-N	4.7	1	20, 30	26	324(270)	1.20(1.40)	1.00(1.20)
MRSC201B12-6R8□-N	6.8	1	20, 30	20	456(380)	1.00(1.20)	0.78(0.92)
MRSC201B12-100□-N	10	1	20, 30	16	720(600)	0.85(0.95)	0.65(0.73)
MRSC201B12-220□-N	22	1	20, 30	10	1500(1250)	0.57(0.64)	0.41(0.46)

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

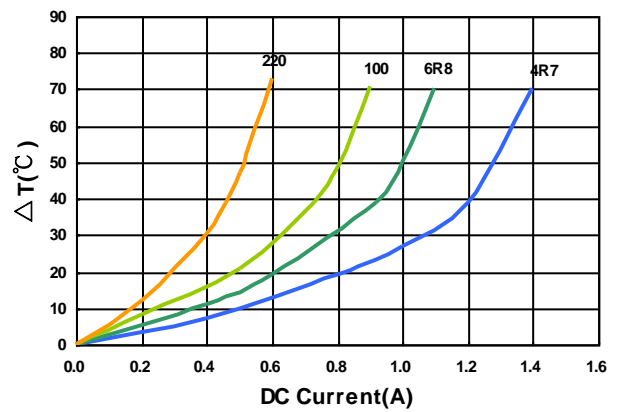
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Inductance vs. DC Current



Temperature Change vs. DC Current



Electrical Characteristics

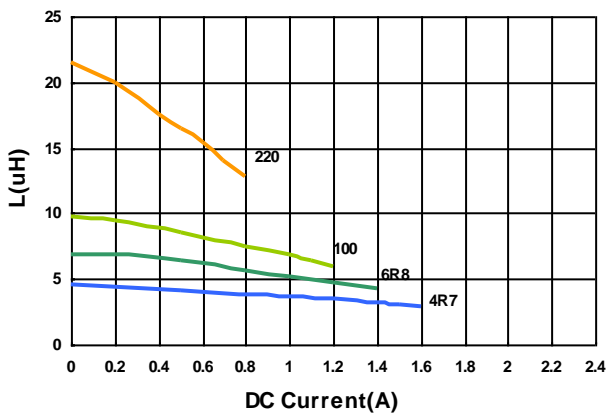
Part Number	Inductance (uH)	Test Frequency (MHz)	Tolerance (±%)	SRF (MHz) Min	RDC(mΩ) (Max) Typ	Isat (A) (Max) Typ	Irms (A) (Max) Typ
MRSC252A10-4R7□-N	4.7	1	20, 30	19	264(220)	1.30(1.40)	1.10(1.20)
MRSC252A10-6R8□-N	6.8	1	20, 30	15	396(330)	1.00(1.10)	0.90(1.00)
MRSC252A10-100□-N	10	1	20, 30	12	500(435)	0.90(1.00)	0.80(0.90)
MRSC252A10-220□-N	22	1	20, 30	8	1260(1050)	0.56(0.63)	0.45(0.50)

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

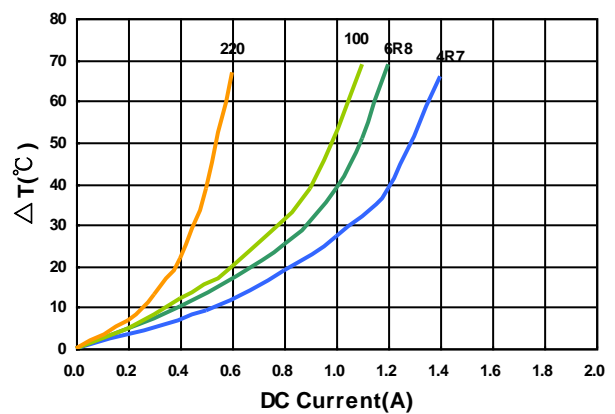
- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
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Inductance vs. DC Current



Temperature Change vs. DC Current



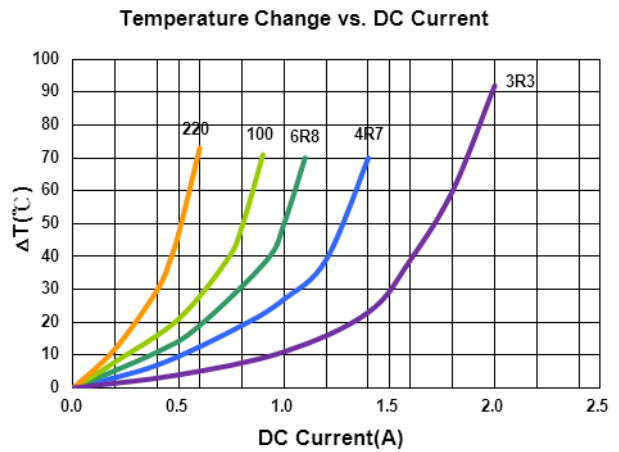
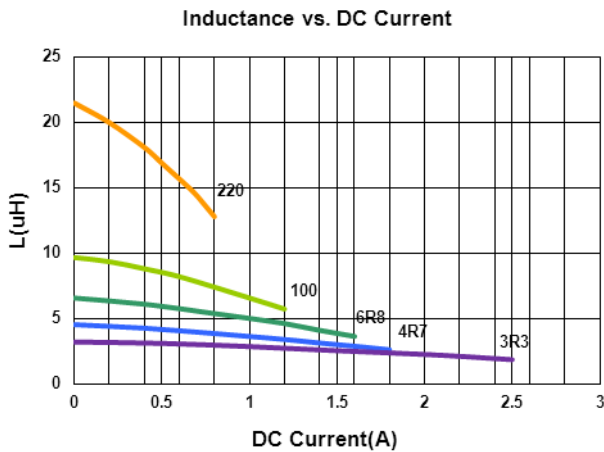
Electrical Characteristics

Part Number	Inductance (uH)	Test Frequency (MHz)	Tolerance (±%)	SRF (MHz) Min	RDC(mΩ) (Max) Typ	Isat (A) (Max) Typ	Irms (A) (Max) Typ
MRSC252A12-3R3□-N	3.3	1	20, 30	25	186(155)	1.80(2.10)	1.45(1.65)
MRSC252A12-4R7□-N	4.7	1	20, 30	23	240(200)	1.70(1.90)	1.30(1.50)
MRSC252A12-6R8□-N	6.8	1	20, 30	16	345(285)	1.30(1.60)	1.00(1.20)
MRSC252A12-100□-N	10	1	20, 30	14	480(400)	1.00(1.30)	0.85(1.00)
MRSC252A12-220□-N	22	1	20, 30	8	1090(910)	0.74(0.83)	0.54(0.60)

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

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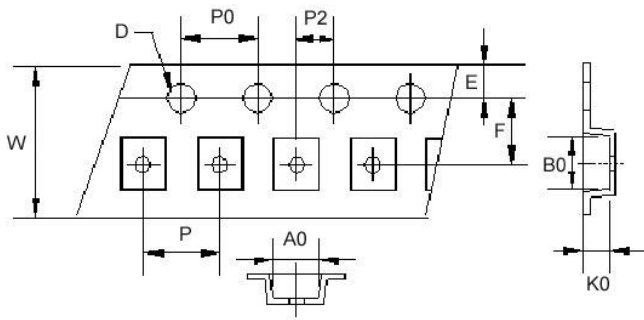
Test Instruments : HP4285A Material/Impedance Analyzer



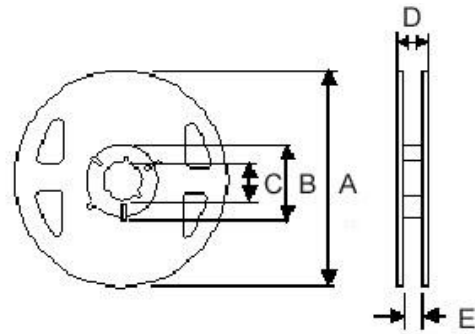
Sealed Power Inductors - MRSC Series

Packaging Specifications

Tape Dimensions



Reel Dimensions



Dimensions in mm

TYPE	Tape Dimensions										Reel Dimensions					Quantity PCS / Reel
	A0	B0	K0	D	E	F	W	P	P0	P2	A	B	C	D	E	
MRSC201B10	1.90	2.20	1.15	1.55	1.75	3.5	8	4	4	2	180	60	13	14.4	8.4	2000
MRSC201B12	1.95	2.20	1.35	1.55	1.75	3.5	8	4	4	2	180	60	13	14.4	8.4	2000
MRSC252A10	2.35	2.80	1.15	1.55	1.75	3.5	8	4	4	2	180	60	13	14.4	8.4	2000
MRSC252A12	2.35	2.80	1.35	1.55	1.75	3.5	8	4	4	2	180	60	13	14.4	8.4	2000

NOT FOR NEW DESIGN

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