

MHSC Series



MHSC series is designed for low profile type with low DCR and ultra large current, especially for height limited boards. Its molded magnetic shielded type is suitable for high-density mounting and ultra low buzz noise. Soldering conditions can be easily confirmed when mounting onto the board. This series also provides customers with embossed carrier type packaging for automatic mounting machine.

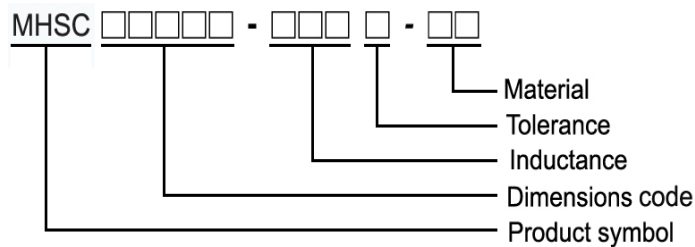
Features

- RoHS compliant
- Ultra low profile on board
- Shielded construction
- Ultra low buzz noise, due to un-assembly structure

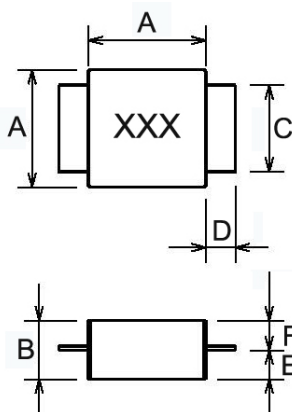
Applications

- High density DC/DC converter in height limited board
- POL converters
- High current VRM/VDR for notebook / Server / desktop CPUs
- High current DC/DC converter in distributed power system
- High speed charger

Product Identification



Shapes and Dimensions

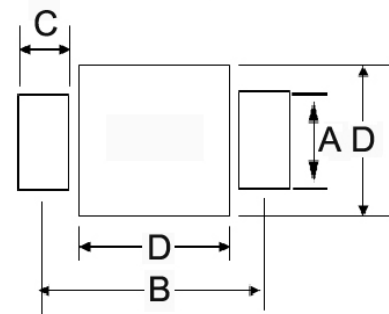


Dimensions in mm

TYPE	A	B	C	D	E	F
04020	4.2±0.2	2.0 ^{+0.2} _{-0.3}	1.5±0.2	1.2±0.3	1.2	1.0
06022	6.6±0.2	2.2 ^{+0.2} _{-0.3}	3.0±0.2	1.5±0.3	1.4	1.0
06036	6.6±0.2	3.6 ^{+0.2} _{-0.3}	3.0±0.2	1.5±0.3	2.3	1.5
08036	8.0±0.2	3.6 ^{+0.2} _{-0.3}	6.0±0.2	2.0±0.3	2.3	1.3±0.2

Recommended Pattern

PCB LAYOUT



Dimensions in mm

TYPE	A	B	C	D
04020	2.0	6.5	1.8	4.5
06022	3.5	9.5	2.2	6.9
06036	3.5	9.5	2.2	6.9
08036	6.0	11.9	3.0	8.4

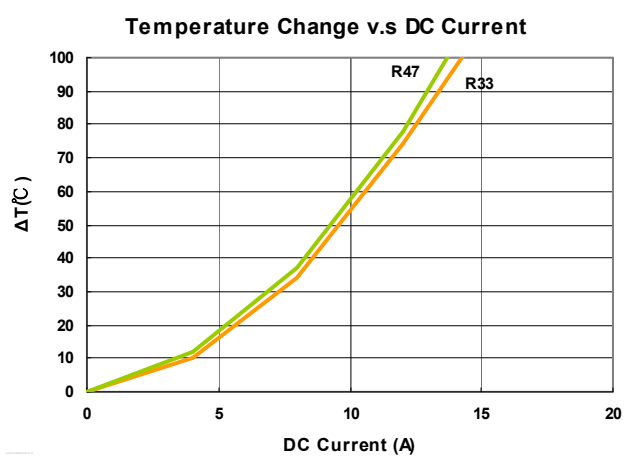
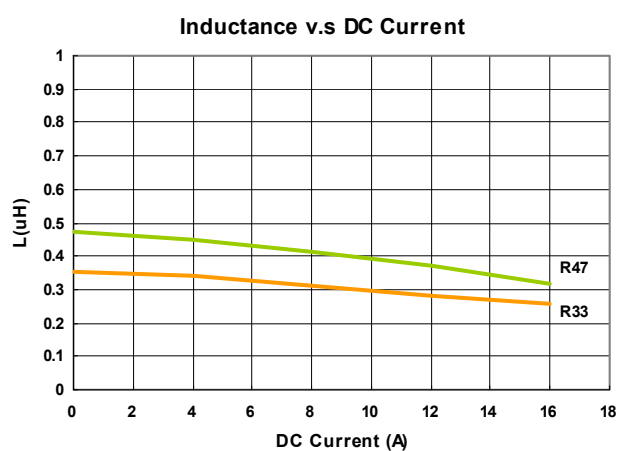
Molding Power Choke – MHSC Series

Electrical Characteristics

Part Number	Inductance	Tolerance	Test Frequency (KHz)	Irms	Isat	RDC
	(μ H)	($\pm\%$)		(A)Typ	(A)Typ	(m Ω)Max.
MHSC04020-R33M-R8	0.33	20	100KHz,0.5V	8.5	16	10
MHSC04020-R47M-R8	0.47	20	100KHz,0.5V	8	14	11

- **Irms** DC current (A) that will cause an approximate ΔT of 40°C.
- **Isat** DC current (A) that will cause L to drop approximately 30%
- Tolerance : M= $\pm 20\%$
- L : WK 3260B
- Rdc : CHEN HWA502
- Operating temperature range from -55°C to 125°C. (Including self - temperature rise)

Test Instruments : WK3260B Impedance / Material Analyzer



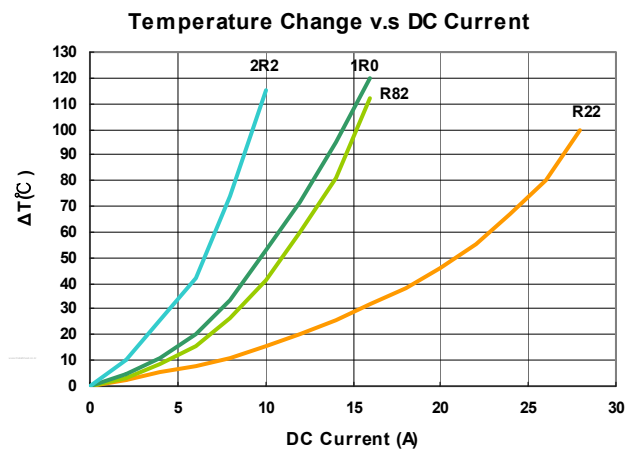
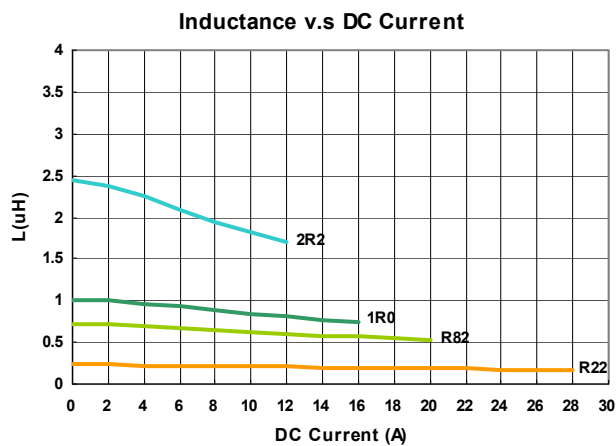
Molding Power Choke – MHSC Series

Electrical Characteristics

Part Number	Inductance	Tolerance	Test Frequency (KHz)	Irms	Isat	RDC
	(μ H)	($\pm\%$)		(A)Typ	(A)Typ	(m Ω)Max.
MHSC06022-R22M-R8	0.22	20	100KHz,0.5V	18	28	6
MHSC06022-R82M-R8	0.82	20	100KHz,0.5V	9.5	18	13.8
MHSC06022-1R0M-R8	1.0	20	100KHz,0.5V	9	16	15.4
MHSC06022-2R2M-R8	2.2	20	100KHz,0.5V	6	10.5	29.8

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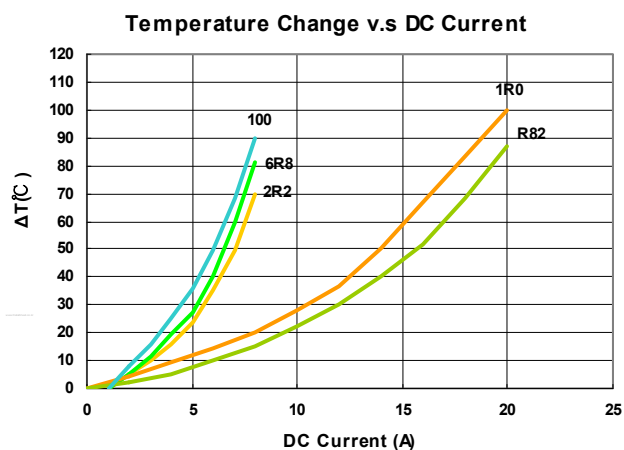
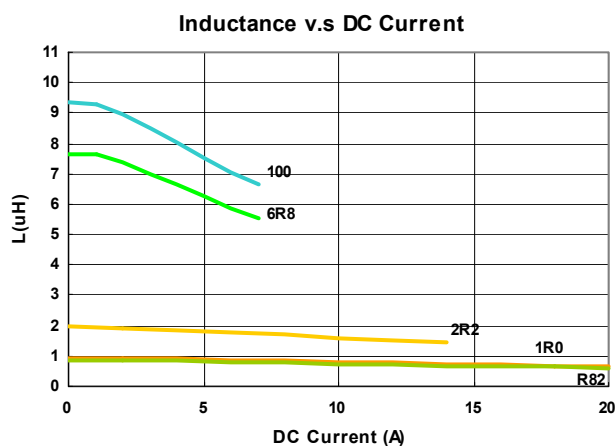
Molding Power Choke – MHSC Series

Electrical Characteristics

Part Number	Inductance	Tolerance	Test Frequency (KHz)	Irms	Isat	RDC
	(μ H)	($\pm\%$)		(A)Typ	(A)Typ	(m Ω)Max.
MHSC06036-R82M-R8	0.82	20	100KHz,0.5V	14	20	6.8
MHSC06036-1R0M-R8	1.0	20	100KHz,0.5V	12	19	8.2
MHSC06036-2R2M-R8	2.2	20	100KHz,0.5V	9.5	14	14.5
MHSC06036-6R8M-R8	6.8	20	100KHz,0.5V	5.5	7	44.5
MHSC06036-100M-R8	10	20	100KHz,0.5V	4.5	6.5	66

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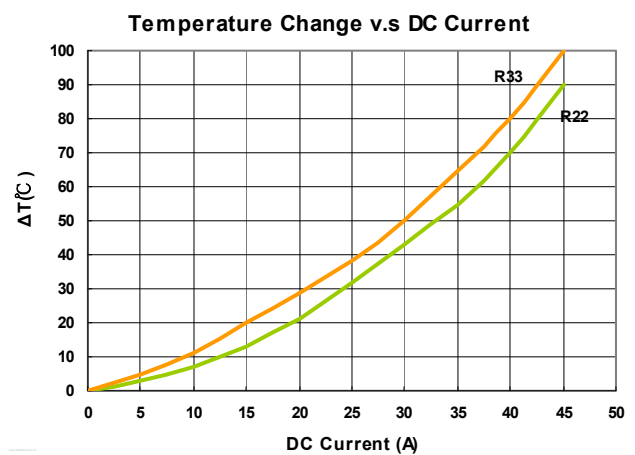
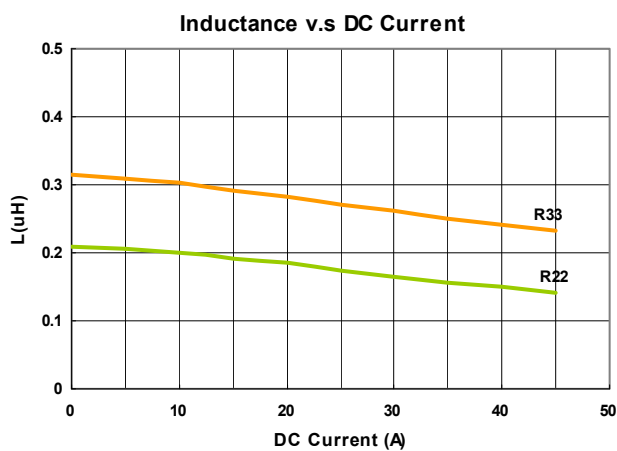
Molding Power Choke – MHSC Series

Electrical Characteristics

Part Number	Inductance	Tolerance	Test Frequency (KHz)	Irms	Isat	RDC
	(μ H)	($\pm\%$)		(A)Typ	(A)Typ	(m Ω)Max.
MHSC08036-R22M-R8	0.22	20	100KHz,0.5V	23	40	1.6(1.2typ)
MHSC08036-R33M-R8	0.33	20	100KHz,0.5V	20	38	2.5(2.0typ)

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- Rdc : CHEN HWA502
- Operating temperature range from -55°C to 125°C. (Including self - temperature rise)

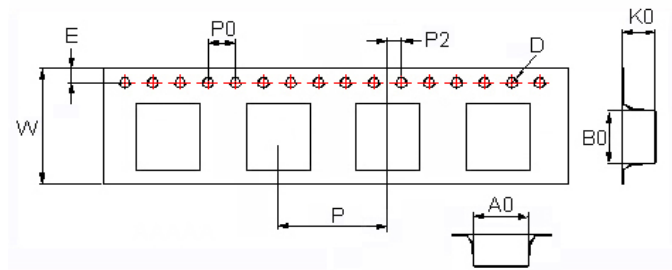
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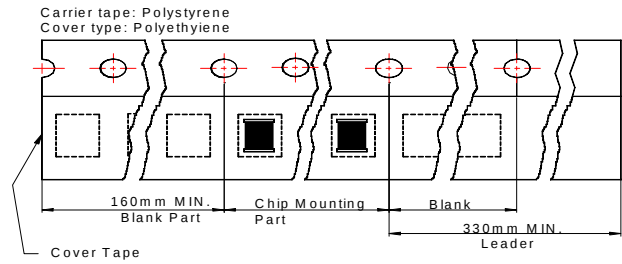
Molding Power Choke – MHSC Series

Packaging Specifications

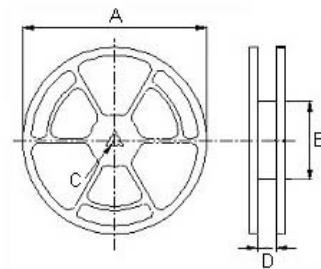
Tape Dimensions



Tape Material



Reel Dimensions



Dimensions in mm

TYPE	Tape Dimensions									Reel Dimensions				Quantity
	A0	B0	K0	D	E	W	P	P0	P2	A	B	C	D	PCS / REEL
04020	4.6	7.2	2.4	1.55	1.75	16	12	4	2	330	100	13	16.0	1000
06022	6.9	10.2	2.6	1.55	1.75	16	12	4	2	330	100	13	16.0	1000
06036	6.9	10.2	4.0	1.55	1.75	16	12	4	2	330	100	13	16.0	1000
08036	8.4	12.6	4.0	1.55	1.75	24	16	4	2	330	100	13	24.4	500