SMD Power Inductor

TMHC0603S-series(N)-D

1. Features

1. Shielded construction.
2. Capable of corresponding high frequency (5MHz).
3. Low loss realized with low DCR.
4. High performance (Isat) realized by metal dust core.
5. Ultra low buzz noise, due to composite construction.
6. 100% Lead(Pb)-Free and RoHS compliant.

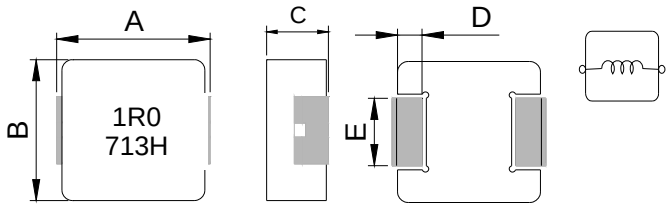
Halogen-free

Pb-free

2. Applications

1. DC/DC converters in distributed power systems.
2. DC/DC converter for Field Programmable Gate Array(FPGA).
3. Battery powered devices.
4. Thin type on-board power supply module for exchanger.
5. VRM for server.
6. High current, low profile POL converters.
7. PDA/notebook/desktop/server and battery powered devices.

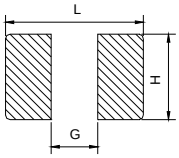
3. Dimensions



Series	A	B	C	D	E
TMHC0603	7.1±0.3	6.6±0.2	2.8±0.2	1.6±0.3	3.0±0.2

Unit:mm

Recommend PC Board Pattern



L(mm)	G(mm)	H(mm)
8.0	3.7	3.4

Note: 1. The above PCB layout reference only.
2. Recommend solder paste thickness at 0.15mm and above.

4. Part Numbering

TMHC	0603	S	-	1R0	MN	-	D
A	B	C		D	E		F

A: Series	
B: Dimension	BxC
C: Type	Standard.
D: Inductance	R10=0.1uh，1R0=1.0uh，100=10uh，101=100uh，102=1000uh.
E: Inductance Tolerance	K=±10%，L=±15%，M=±20%，N=±25%，Y=±30%
F: Code	Marking: Black.1R0 and 713H (7:YY, 13:WW, H:P/N, follow production date).

5. Specification

Part Number	Inductance L0 A(uH) ±20%	Heat Rating Current DC Irms(A).		Saturation Current DC I sat(A).		DCR (mΩ)Typ.	DCR (mΩ)Max.
		Typ	Max	Typ	Max		
TMHC0603S-R33MN-D	0.33	20.0	17.0	32.0	28.0	3.5	3.9
TMHC0603S-R68MN-D	0.68	15.5	14.0	25.0	22.0	4.8	5.5
TMHC0603S-1R0MN-D	1.00	11.0	10.0	22.0	19.0	8.3	10
TMHC0603S-1R5MN-D	1.50	9.0	8.0	18.0	17.0	11	14
TMHC0603S-2R2MN-D	2.20	8.0	7.0	14.0	12.0	15	18
TMHC0603S-3R3MN-D	3.30	6.0	5.3	13.5	11.5	27	30
TMHC0603S-4R7MN-D	4.70	5.5	4.9	10.0	8.5	37	40

Note:

1. Test frequency : Ls : 100KHz /1.0V.
2. All test data referenced to 25℃ ambient.
3. Testing Instrument(or equ) : L: HP4284A,CH11025,CH3302,CH1320,CH1320S LCR METER / Rdc:CH16502,Agilent33420A MICRO OHMMETER.
4. Heat Rated Current (Irms) will cause the coil temperature rise approximately ΔT of 40℃
5. Saturation Current (Isat) will cause L0 to drop approximately 30%.
6. The part temperature (ambient + temp rise) should not exceed 125℃ under worst case operating conditions.Circuit design,component,PCB trace size and thickness,airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
7. Special inquiries besides the above common used types can be met on your requirement.