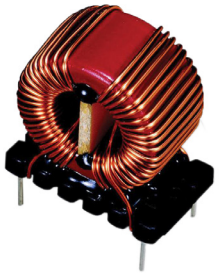
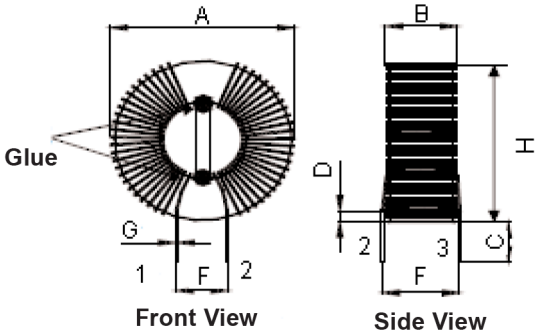
Common Mode Choke

multicomp PRO

RoHS Compliant

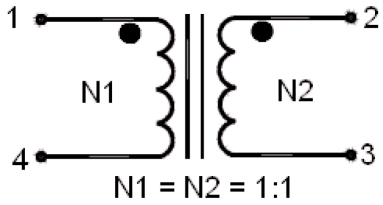


Configurations and Dimensions



A	23mm (Max.)
B	13.5mm (Max.)
C	15 ±1mm
D	0 to 4mm
E	7.5mm
F	15 ±3mm
F	Ø0.5mm (Typ.)
G	23mm (Max.)

Schematic Diagram



N1 = N2 = 1:1

Note:

1. Wire UEFN/U (155°C) Ø0.5mm
2. N1 = N2 = 35TS (Reference)
   N1:C.W N2:C.CW

Test Data for Mechanical

Test Item	A mm	B mm	C mm	D mm	E1 mm	E2 mm	F mm	G mm
Specification	**23 (Max.)**	**13.5 Max.)**	**15 ±1**	**0 to 4**	**7.5 (Ref.)**	**11.5 (Ref.)**	**Ø0.5 (Typ.)**	**23 (Max.)**
1	20.96	12.61	15.17	2.57	7.84	11.6	0.49	20.26
2	20.31	12.53	15.22	2.58	7.74	11.57	0.5	20.33
3	20.34	12.63	15.08	2.62	7.71			20.3
4	20.26	12.58	15.49	2.73	7.4	11.31	0.49	20.27
5	20.05	12.62	14.89	2.8	7.28	11.68		20.15
Average	**20.38**	**12.59**	**15.17**	**2.66**	**7.59**	**11.55**	**0.49**	**20.26**

Electrical Characteristics

Test Condition		
10kHz / 50μA	L (1-4)	10mH ±30%
	L (2-3)	
T_A = 25°C	DCR (1-4)	125mΩ (Max.)
	DCR (2-3)	
	IDC	2A

Operating temperature : -25°C to +85°C

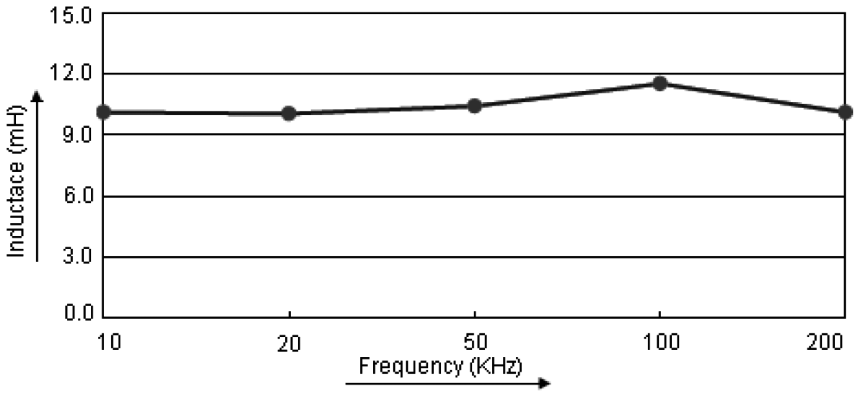
Material List

No.	Item	Material Description
1	Core	A07 T18 × 10 × 10C (Red)
2	Wire	Ø0.5mm UEFN/U (155°C)
3	Solder (Lead-free)	Sn99.3% / Cu0.7%
4	Vernish	T-4260 (a) / TX-111
5	Space	FR4 (thickness 2mm)
6	Glue	TH100A and TH100B

Reliability Test

Test Item	Specifications	Test Method and Remarks
Operating temperature range	-25°C to +85°C	Including temperature rise due to self-generated heat.
Storage condition	Ambient temperature : 0°C to 40°C Humidity : Below 70% RH	To maintain the solderability of terminal electrodes, care must be taken to control temperature and humidity in the storage area.
Moisture sensitivity	Appearance : No abnormality No damage DCR change : Within ±5% Inductance change : Within ±5%	According to J-STD-020B level 3 Test condition : 60°C 60% RH Test duration : 40 hrs Recovery : 1 to 2 hours of recovery under the standard condition after the removal from the test chamber.
Solderability	All termination shall exhibit a continuous solder coating free from defects for a minimum of 95% of the surface area of any individual lead.	According to J-STD-002B Steam aging category : 97°C 98% RH Steam aging duration : 8 hrs Solder : Lead-free solder Solder temperature : 260 ±5°C Dip time : 5 +0 / -0.5s

Electric Characteristics



Test Data for Electrical

Test Item	L (1-4) mH	L (2-3) mH	DCR (1-4) mΩ	DCR (2-3) mΩ
Condition	**10kHz / 50μA**	**10kHz / 50μA**	**T_A = 25°C**	**T_A = 25°C**
Specification	**10 ±30%**	**10 ±30%**	**125 (Max.)**	**125 (Max.)**
1	9.42	9.42	96.66	96.28
2	9.8	9.8	96.69	95.81
3	10.35	10.35	95.66	95.64
4	10.4	10.4	96.76	96.13
5	10.1	10.1	97.82	96.07
Average	**10.01**	**10.01**	**96.72**	**95.99**

Part Number Table

Description	Part Number
Choke, Common Mode, 10MH, 2A	MCT18X10X10C-103NU