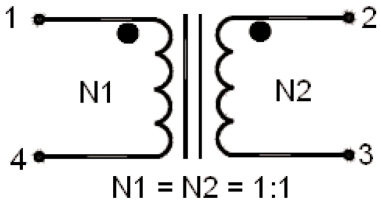
Common Mode Choke

multicomp PRO

RoHS Compliant

Schematic Diagram

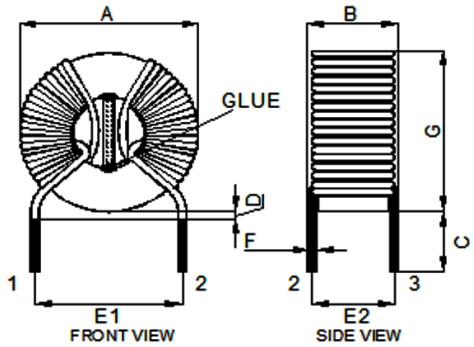


N1 = N2 = 1:1

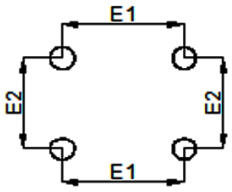
Note:

1. Wire UEFN/U (155°C) Ø0.8mm
2. N1=N2=22TS(Ref)
   N1:C.W N2:C.CW

Configurations and Dimensions



A	30mm (Max.)
B	21mm (Max.)
C	8mm (Ref.)
D	1mm (Max.)
E1	23 ±3mm
E2	15 ±3mm
F	Ø0.8mm (Typ.)
G	27.5mm (Max.)



Suggest PCB Layout

Test Data for Mechanical

Test Item	A mm	B mm	C mm	D mm	E1 mm	E2 mm	F mm	G mm
Specification	**30 (Max.)**	**21 Max.)**	**8 (Ref.)**	**1 (Max.)**	**23 ±3**	**15 ±3**	**Ø0.8 (Typ.)**	**27.5 (Max.)**
1	28.28	18.85	8.35	0.18	23.8	15.8	0.8	25.53
2	28.38	18.4	8.26	0.15	23.62	16.25	0.76	25.88
3	28.19	18.42	8.51	0.2	23.73	16.52	0.78	25.59
4	28.46	18.7	8.6	0.16	23.95	16.75	0.75	25.4
5	28.49	18.7	8.39	0.22	24.25	16.71	0.76	25.89
Average	**28.36**	**18.61**	**8.42**	**0.18**	**23.87**	**16.41**	**0.77**	**25.66**

Electrical Characteristics

Test Condition		
10kHz / 50μA	L (1-4)	5mH ±30%
	L (2-3)	
T_A = 25°C	DCR (1-4)	45mΩ (Max.)
	DCR (2-3)	
	IDC	6A
HI-Pot (Coil To Coil)		1,500V AC 5mA 1min

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

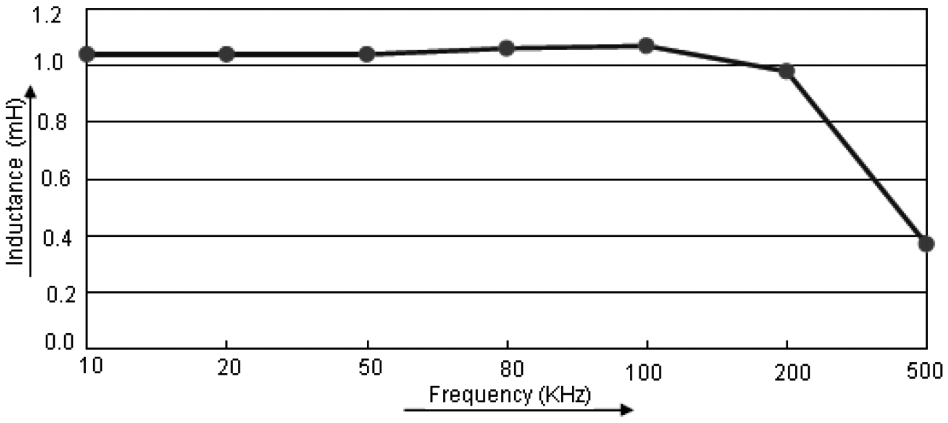
Material List

No.	Item	Material Description
1	Core	A07 T18 × 10 × 10C (Red)
2	Wire	Ø1mm 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	Hi-Pot (Coil To Coil)
Condition	**10kHz / 50µA**	**10kHz / 50µA**	**T_A = 25°C**	**T_A = 25°C**	**1,500V AC 5mA 1 (min.) 50Hz**
Specification	**5 ±30%**	**5 ±30%**	**45 (Max.)**	**45 (Max.)**	**Pass**
1	4.88	4.86	35.36	35.42	Pass
2	4.9	4.9	35.39	35.4	
3	5.54	5.56	35.53	35.56	
4	5.72	5.74	36.56	36.55	
5	5.76	5.78	35.16	35.2	
Average	**5.36**	**5.37**	**35.6**	**35.63**	**Pass**

Part Number Table

Description	Part Number
Common Mode Choke, 5mH, 6A	MCT25X15X15C-502NU