



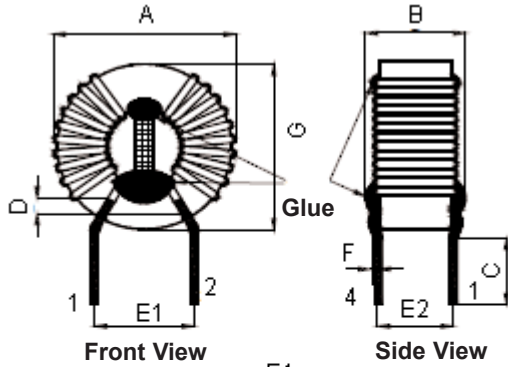
PART NO.

MCT18X10X10C-102NU

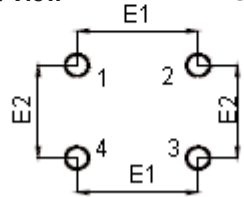
REVISIONS

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	SID	20/4/11	BHA	20/4/11		04/5/11

Configurations and Dimensions

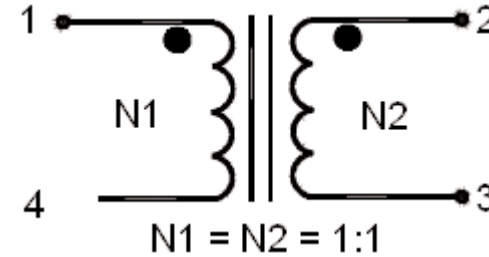


A	23.5 mm	(Max.)
B	16 mm	(Max.)
C	5 ±1 mm	-
D	1 to 3 mm	-
E1	7.5 ±2 mm	-
E2	10.7 ±2 mm	-
F	∅1 ±0.1 mm	-
G	25.5 mm	(Max.)



Suggest PCB Layout

Schematic Diagram



Note:

1. Wire UEFN/U (155°C) ∅1mm
2. N1 = N2 = 11TS (Reference) N1:C.W N2:C.CW

Electrical Characteristics

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

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

Test Data for Mechanical

Test Item	A mm	B mm	C mm	D mm	E1 mm	E2 mm	F mm	G mm
Specification	23.5 (Max.)	16 (Max.)	5 ±1	1 to 3	7.5 ±2	10.7 ±2	∅1 ±0.1	25.5 (Max.)
1	21.4	14.39	5.1	1.98	7.01	10.5	0.97	18.42
2	21.8	14.35	5.12	2.14	7.39	10.52	0.98	18.5
3	21.45	13.82	5.18	1.56	7.2	10.51	0.97	18.47
4	21.72	13.87	5.2	1.97	7.18	10.57	0.98	18.37
5	21.66	14.25	5.25	1.68	7.27	10.34	0.97	18.45
Average	21.61	14.14	5.17	1.87	7.21	10.49	0.97	18.44

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DRAWN BY:	DATE:
SID	20/4/11
CHECKED BY:	DATE:
BHA	20/4/11
APPROVED BY:	DATE:
	04/5/11

DRAWING TITLE:

Common Mode Choke

SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10003236	MCT18X10X10C-102NU	A
SCALE: NTS		U.O.M.: mm	SHEET: 1 OF 3



PART NO.

MCT18X10X10C-102NU

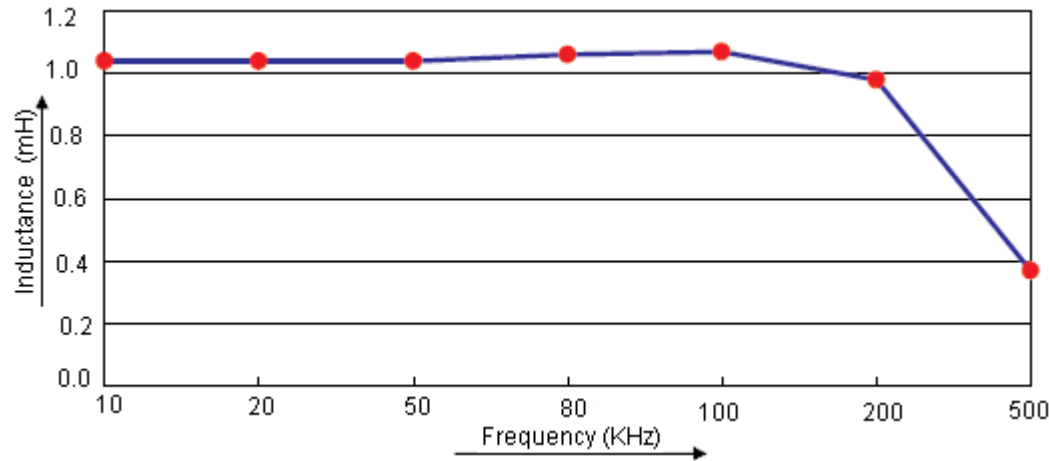
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Test Data for Electrical

Test Item	L (1-4) mH	L (2-3) mH	DCR (1-4) mΩ	DCR (2-3) mΩ	Hi-Pot (Coil To Coil)
Condition	10 KHz / 50 μA	10 KHz / 50 μA	T _a = 25°C	T _a = 25°C	1,500 V ac 5 mA 1 (min.) 50 Hz
Specification	1 ±30%	1 ±30%	10 (Max.)	10 (Max.)	Pass
1	0.97	0.97	8.4	8.42	Pass
2	1.05	1.05	8.37	8.57	
3	0.94	0.94	8.42	8.31	
4	0.96	0.96	8.31	8.37	
5	0.95	0.95	8.41	8.42	
Average	0.97	0.97	8.38	8.42	Pass

Electric Characteristics



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APPROVED BY:	DATE:
	04/5/11

DRAWING TITLE:			
Common Mode Choke			
SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10003236	MCT18X10X10C-102NU	A
SCALE: NTS		U.O.M.: mm	SHEET: 2 OF 3



PART NO.

MCT18X10X10C-102NU

REVISIONS

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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 / -0.5 s

Material List

No.	Item	Material Description
1	Core	A07 T18 × 10 × 10C (Red)
2	Wire	Ø1 mm UEFN/U (155°C)
3	Solder (Lead-free)	Sn99.3% / Cu0.7%
4	Vernish	T-4260 (a) / TX-111
5	Space	FR4 (thickness 2 mm)
6	Glue	TH100A and TH100B

Part Number Table

Description	Part Number
Choke, Common Mode, 1MH, 6A	MCT18X10X10C-102NU

<http://www.element14.com>

<http://www.farnell.com>

<http://www.newark.com>

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DRAWING TITLE:			
Common Mode Choke			
SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10003236	MCT18X10X10C-102NU	A
SCALE: NTS		U.O.M.: mm	SHEET: 3 OF 3