

■ APPLICATION

Low profile, high current power supplies
Battery powered devices
DC/DC converters in distributed power systems
DC/DC converters for field programmable gate array

■ FEATURES

RoHS Compliant & Halogen Free
Super low resistance, ultra high current rating
High performance (I sat) realized by magnetic metal powder core

■ PRODUCT IDENTIFICATION

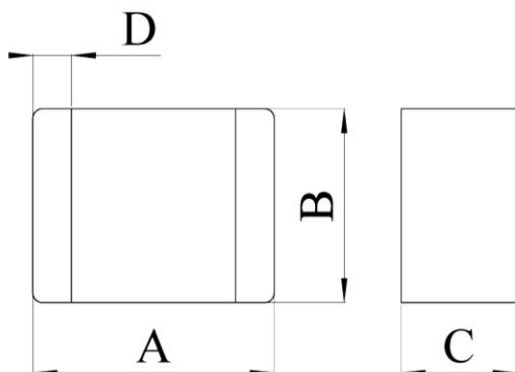
① ② ③ ④ ⑤

MLV - TP10N R47 N - P4

- ① Product Code
- ② Dimensions: 2.0 x 1.6 x 1.0 mm
- ③ Inductance: R47 = 0.47 μ H
- ④ Tolerance: N = \pm 30%
- ⑤ Series Type: P4 Type

NOTE: Please refer to the “Product Dimension” for detail dimensions.

■ PRODUCT DIMENSION



NOTE: Dimensions in mm

PRODUCT NO.	A	B	C	D
MLV-TP10NSERIES-P4	2.0 ± 0.2	1.6 ± 0.2	1.0 Max	0.5 ± 0.3

ELECTRICAL REQUIREMENTS

PART NUMBER	INDUCTANCE Lo(μH)±30% @0A	R _{dc} (mΩ)		HEAT RATING CURRENT(I _{dc}) DC AMPS ¹		SATURATION CURRENT(I _{sat}) DC AMPS ²	
		Typ.	Max	Typ.	Max	Typ.	Max
MLV-TP10NR24N-P4	0.24	16	20	5.5	4.7	7.0	6.3
MLV-TP10NR33N-P4	0.33	21	26	4.7	4.0	6.1	5.5
MLV-TP10NR47N-P4	0.47	26	32	4.2	3.6	5.3	4.8
MLV-TP10NR68N-P4	0.68	36	43	3.7	3.1	4.8	4.3
MLV-TP10N1R0N-P4	1.0	48	56	3.1	2.7	3.9	3.6
MLV-TP10N1R5N-P4	1.5	76	91	2.4	2.1	3.2	2.9
MLV-TP10N2R2N-P4	2.2	117	140	1.9	1.7	2.6	2.4
MLH-TP10N4R7N-P4	4.7	235	282	1.3	1.1	1.8	1.6
MLH-TP10N100N-P4	10	650	780	0.75	0.65	1.2	1.0

Test frequency: 1MHz, 0.25V

Testing instrument L: Agilent4285A, CH3302/G LCR METER

CH1320, CH1320S BIAS CURRENT SOURCE

R_{dc}: CH11025, GOM802 MICRO OHMMETE

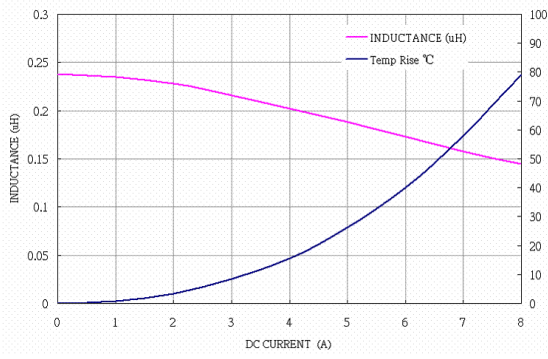
NOTES:

1. DC current (I_{dc}) that will cause an approximate Δ T of 40°C
2. DC current (I_{sat}) that will cause Lo to drop approximately 30%
3. All test data is referenced to 25°C ambient
4. Operating temperature range -40°C to +125°C
5. Withstand voltage: 25V DC

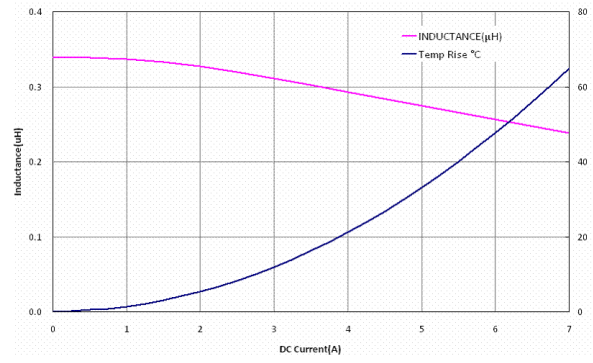
ELECTRICAL CHARACTERISTICS

Reference data

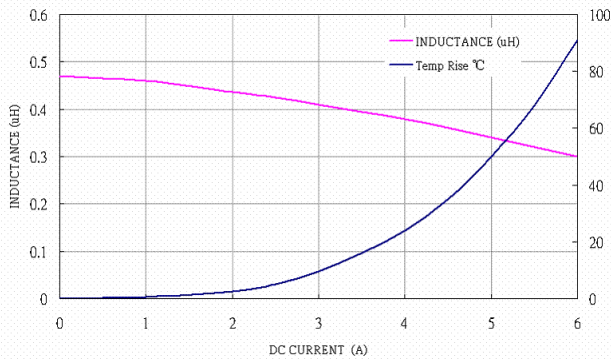
MLV-TP10NR24N-P4



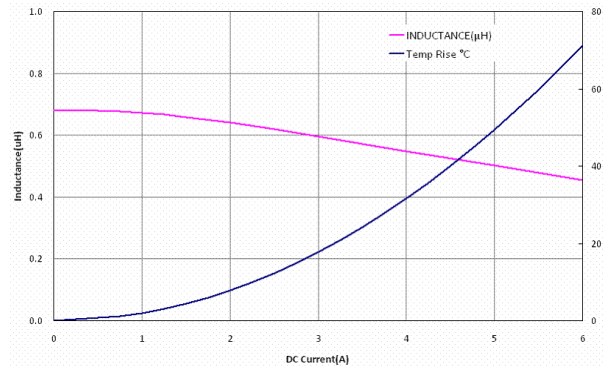
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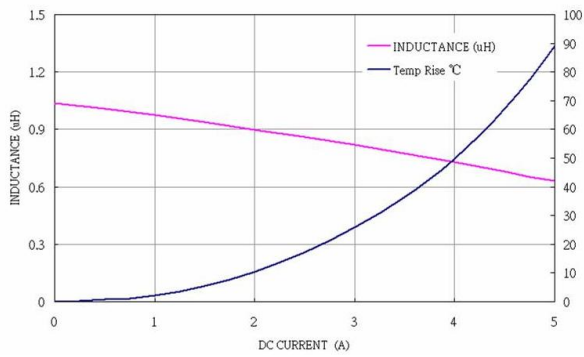
MLV-TP10NR47N-P4



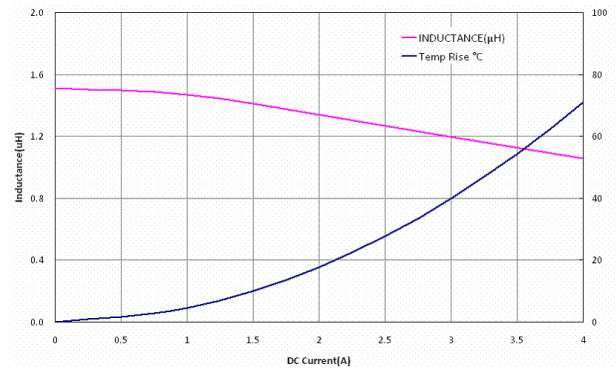
MLV-TP10NR68N-P4



MLV-TP10N1R0N-P4

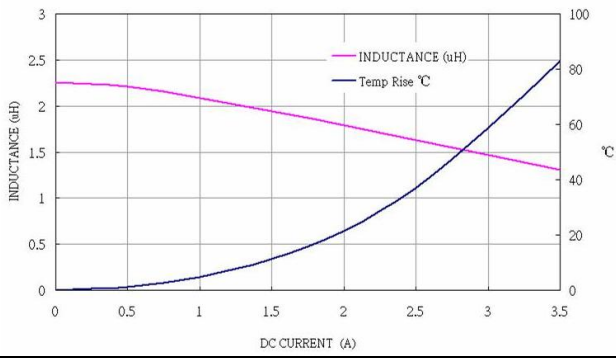


MLV-TP10N1R5N-P4

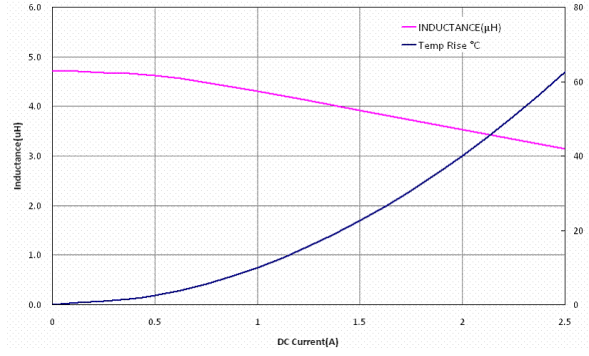


MAG.LAYERS

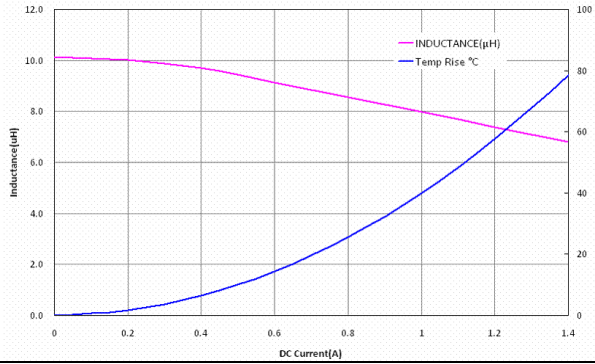
MLV-TP10N2R2N-P4



MLH-TP10N4R7N-P4

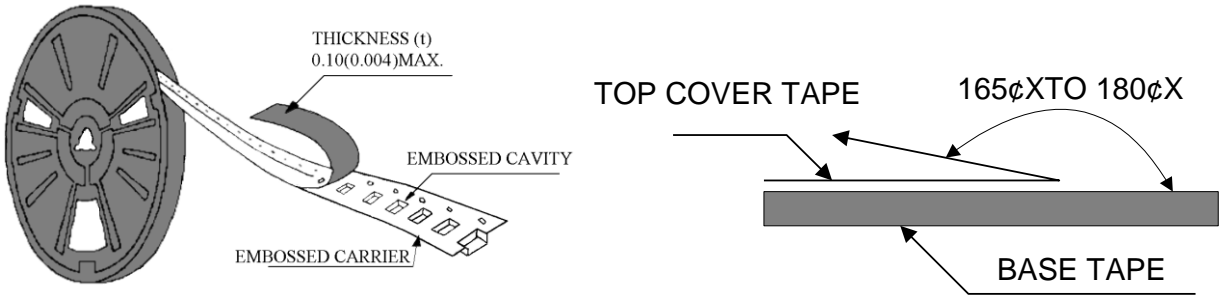


MLH-TP10N100N-P4



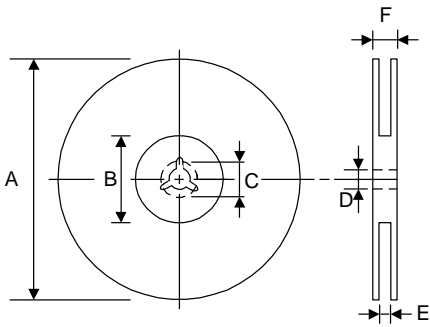
PACKAGING

● Peel-off Force

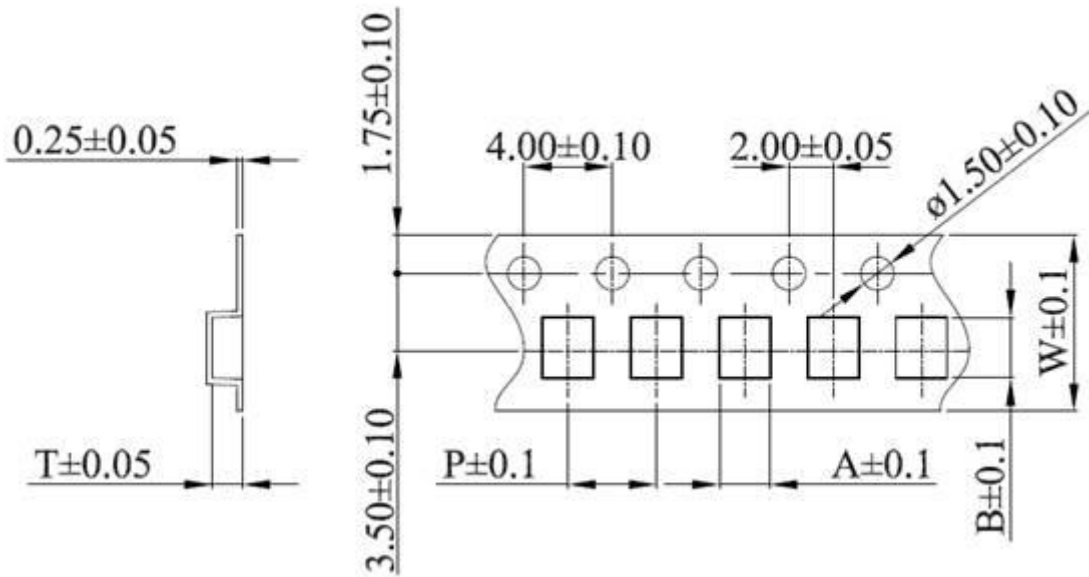


The force for peeling off cover tape is 10 grams in the arrow direction.

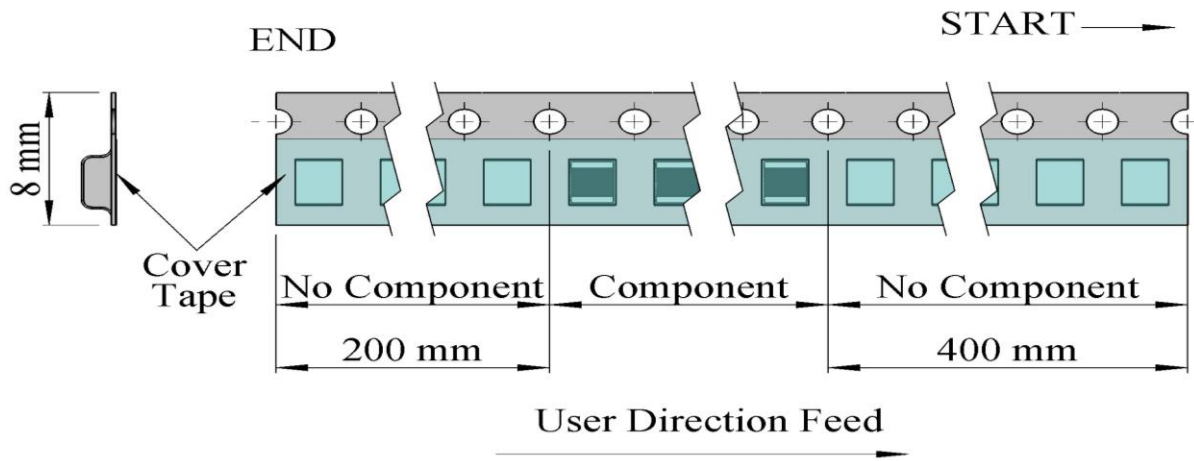
● Dimension (Unit: mm)



TYPE	A	B	C	D	E	F
8 mm	178±1	60 +0.5 -0	19.3 ±0.1	13 ±0.2	9 ±0.5	12 ±0.5



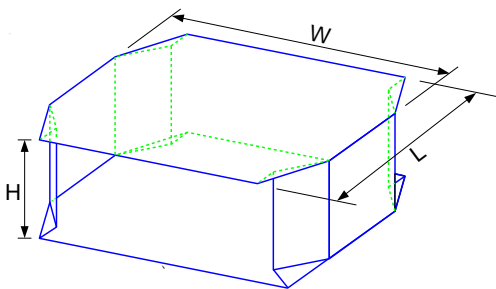
TYPE	SIZE	A	B	W	P	T
MLV	TP10	1.9	2.3	8	4	1.2



● Taping Quantity

SERIES	TP10
PCS/Reel	3000

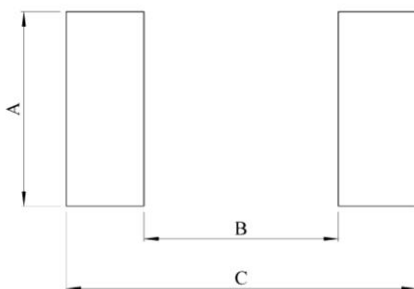
● Tape Packing Case



No. of Reels	W	L	H
2	18±0.5	18±0.5	2.4±0.2
3	18±0.5	18±0.5	3.6±0.2
4	18±0.5	18±0.5	4.8±0.2
5	18±0.5	18±0.5	6.0±0.2

Unit: cm

■ **RECOMMENDED PCB LAYOUT**



Type	TP10
A	1.6
B	0.9
C	2.3