

■ 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

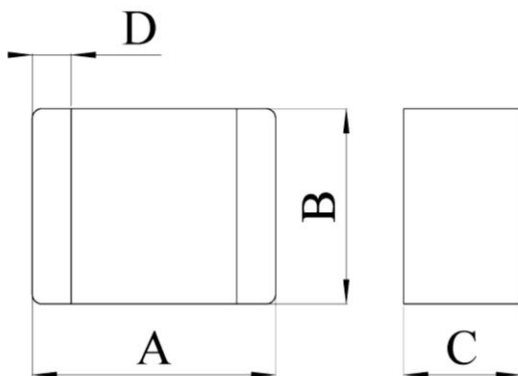
① ② ③ ④ ⑤

MLV - YT12N 1R0 N - O3

- ① Product Code
- ② Dimensions: 2.5 x 2.0 x 1.2 mm
- ③ Inductance: 1R0 = 1.0 μ H
- ④ Tolerance: N = \pm 30%
- ⑤ Series Type: O3 Type

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

■ PRODUCT DIMENSION



NOTE : Dimensions in mm

PRODUCT NO.	A	B	C	D
MLV-YT12NSERIES-O3	2.5 ± 0.2	2.0 ± 0.2	1.2 Max	0.6 ± 0.2

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-YT12NR33N-O3	0.33	17	23	5.4	4.6	7.0	6.0
MLV-YT12NR47N-O3	0.47	21	27	4.7	4	6.1	5.2
MLV-YT12NR68N-O3	0.68	30	37	4.1	3.5	5.1	4.3
MLV-YT12N1R0N-O3	1.0	35	42	3.8	3.2	4.5	3.8
MLV-YT12N1R5N-O3	1.5	50	60	3.0	2.6	3.9	3.3
MLV-YT12N2R2N-O3	2.2	70	84	2.6	2.2	3.3	2.8
MLV-YT12N3R3N-O3	3.3	115	140	2.0	1.7	2.5	2.1

Test frequency: 1MHz, 0.25V

Testing instrument L: Agilent4285A, CH3302/G LCR METER

CH1320, CH1320S BIAS CURRENT SOURCE

R_{dc}: CH11025, GOM802 MICRO OHMMETE

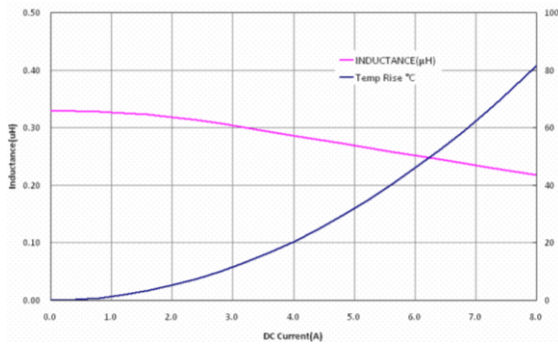
NOTES:

1. DC current (I_{dc}) that will cause an approximate ΔT 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 +85°C
5. Withstand voltage: 25V DC

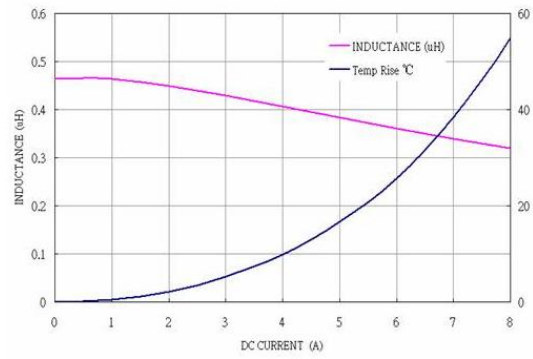
ELECTRICAL CHARACTERISTICS

Reference data

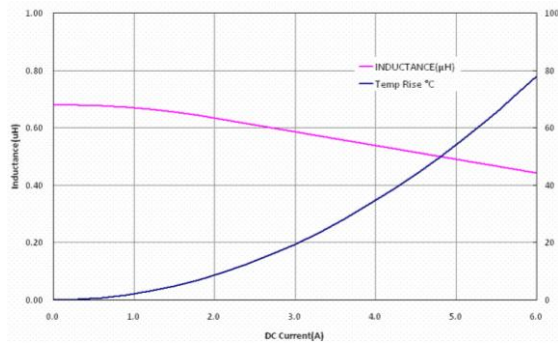
MLV-YT12NR33N-O3



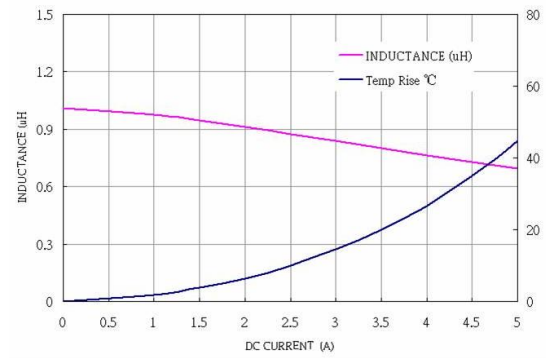
MLV-YT12NR47N-O3



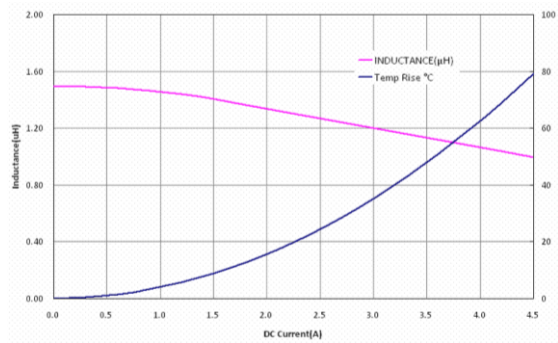
MLV-YT12NR68N-O3



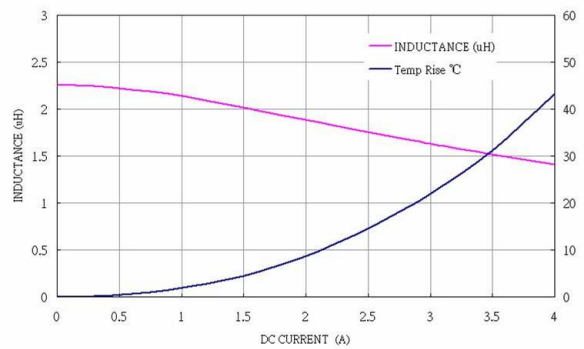
MLV-YT12N1R0N-O3



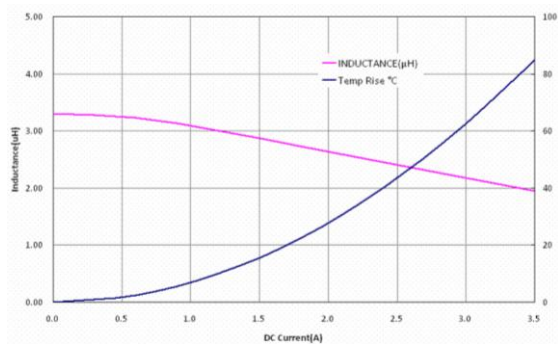
MLV-YT12N1R5N-O3



MLV-YT12N2R2N-O3



MLV-YT12N3R3N-O3

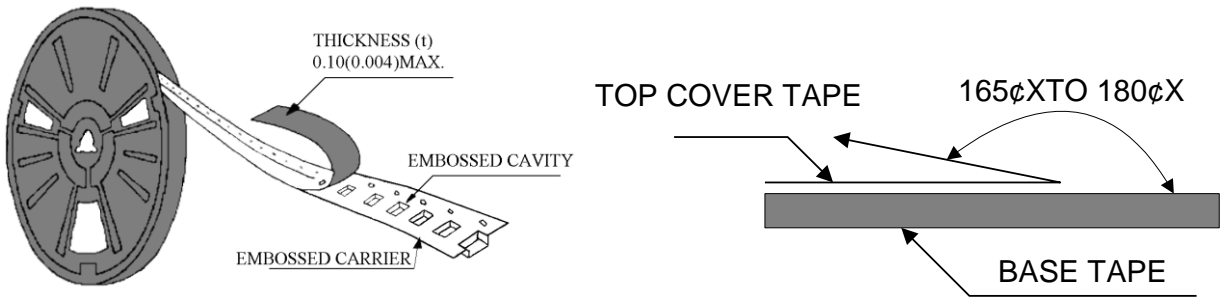


MAG.LAYERS

MLV-YT12NSERIES-O3

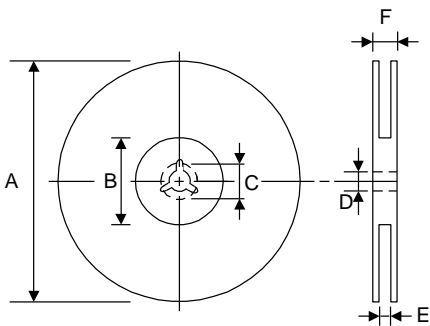
PACKAGING

● Peel-off Force

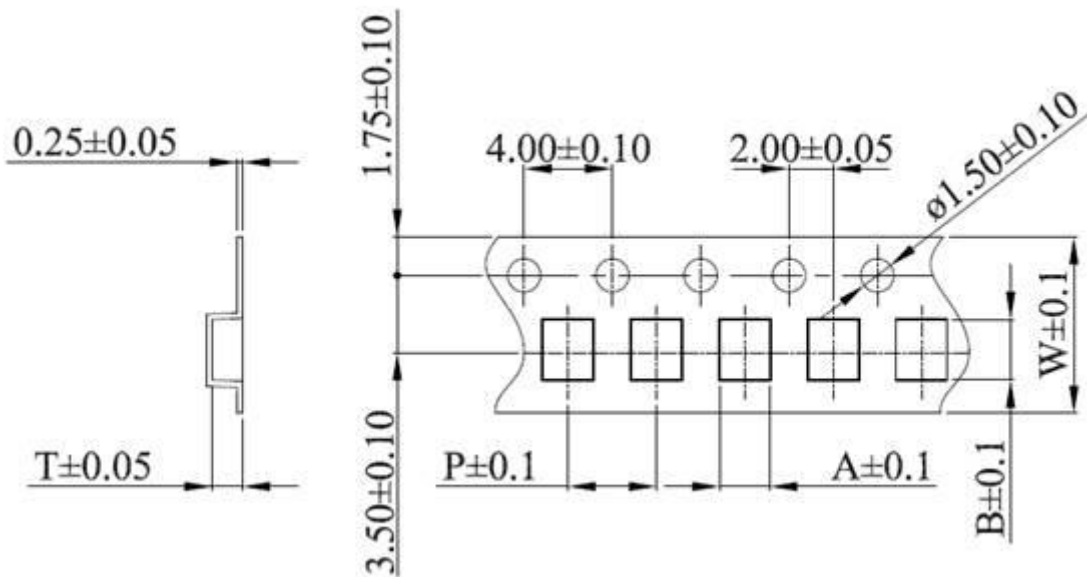


The force for peeling off cover tape is 10 grams in the arrow direction.

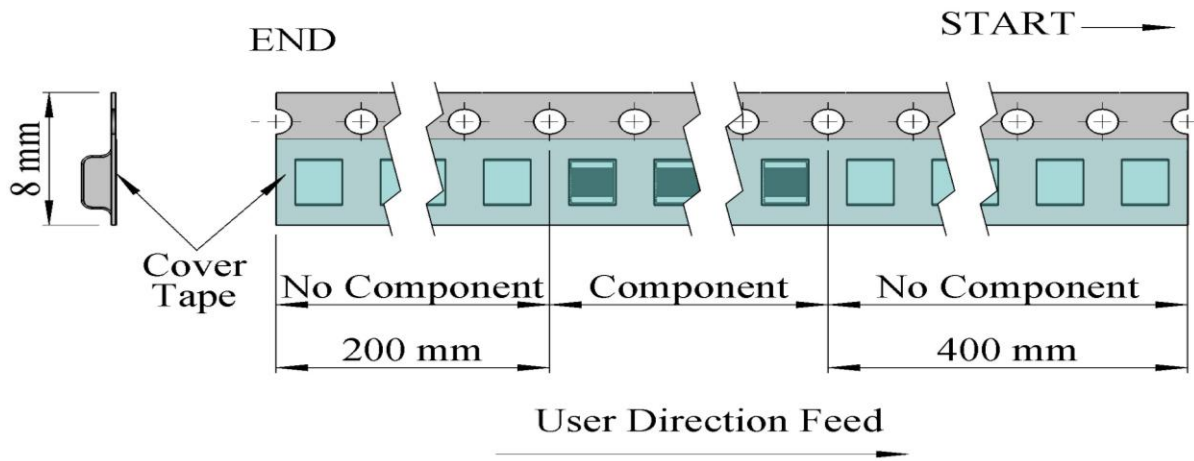
● Dimension (Unit: mm)



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



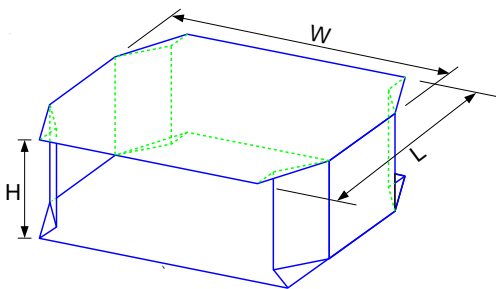
TYPE	SIZE	A	B	W	P	T
MLV	YT12	2.27	2.74	8	4	1.4



● Taping Quantity

SERIES	YT12
PCS/Reel	3000

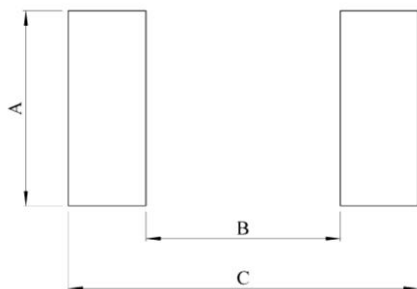
● Tape Packing Case



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	YT12
A	2.0
B	1.2
C	2.8