FEATURES

- Low profile, high current power supplies.
- Low loss realized with low DCR.
- Ultra low buzz noise, due to composite construction.
- Frequency up to 3MHz.
- Available for automatic mounting in tape and real package.

APPLICATIONS

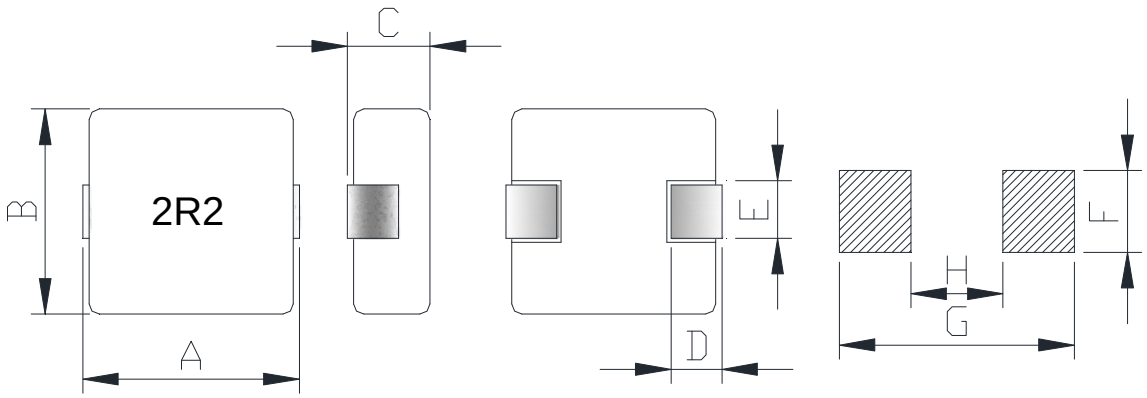
- Excellent for power line DC-DC conversion application used in power switching, personal computer and other handheld electronic equipment.

PRODUCT IDENTIFICATION

MJC – 1030 T –2R2 – M

- M: Inductance Tolerance (K:10% ; M:20% ; N:30%)
- 2R2: Inductance Value 100: 10uH
- T: Thickness T = 3.0mm
- 1030: Product dimensions
- MJC: Series name

SHAPES AND DIMENSIONS



Series	Dimensions(mm)							
	A	B	C	D	E	F	G	H
MJC-1030T-2R2-M	11.60 Max	10.10±0.3	3.00Max	2.50±0.5	3.00±0.5	4.00	13.0	6.00

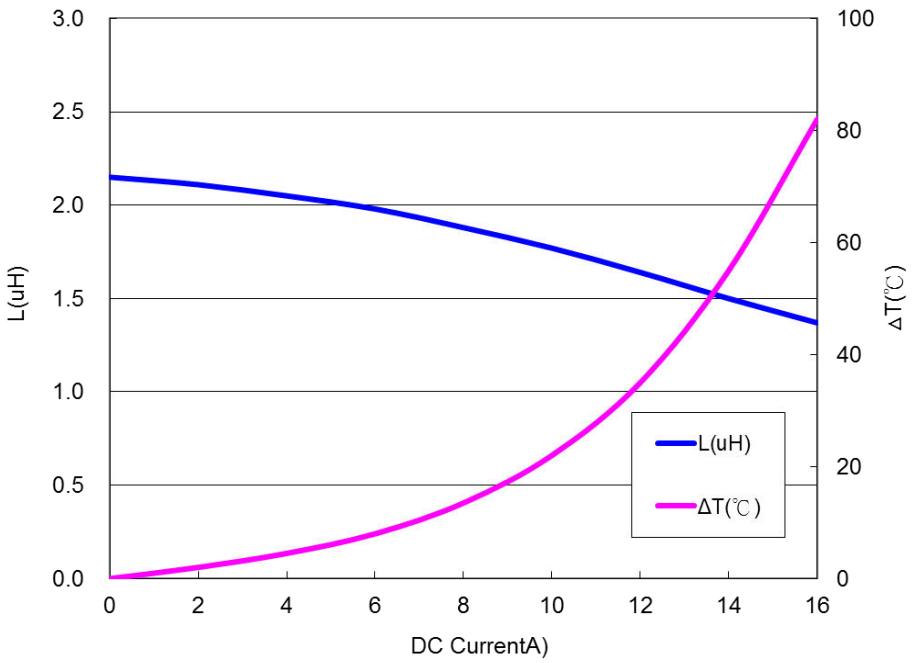
Note: Beyond the above specification also could satisfy the special requirement

ELECTRICAL CHARACTERISTICS

- **Isat:** DC current at which the inductance drops 30% from its value without current.
- **Irms:** Current that causes a 40℃ temperature rise from 25℃ ambient.

P/N	L0 Inductance μH ±20% @0A	DCR (mΩ)		Heat Rating Current	Saturation Current
		[Typical]	[Max]	Idc (Amp)	Isat (Amp)
				Typical	Typical
MJC-1030T-2R2-M	2.2	9.0	9.9	12	13

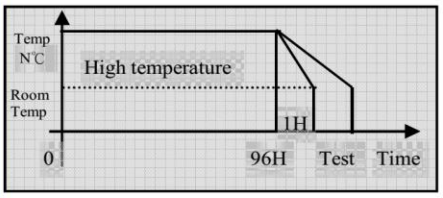
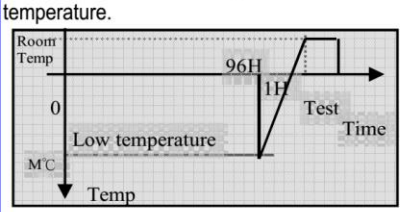
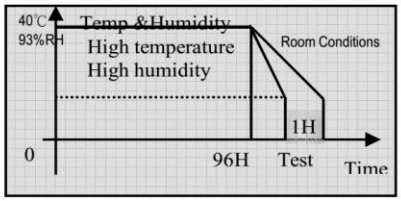
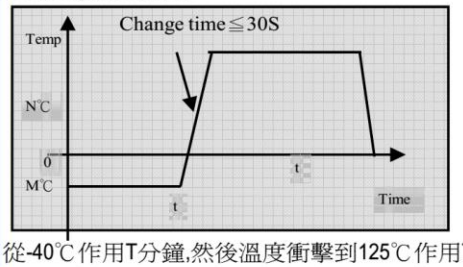
TYPICAL PERFORMANCE CURVES



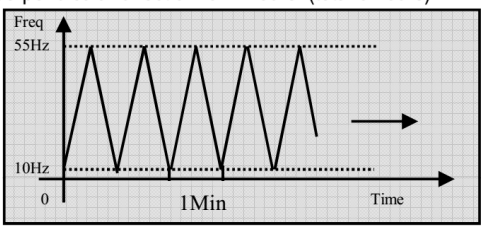
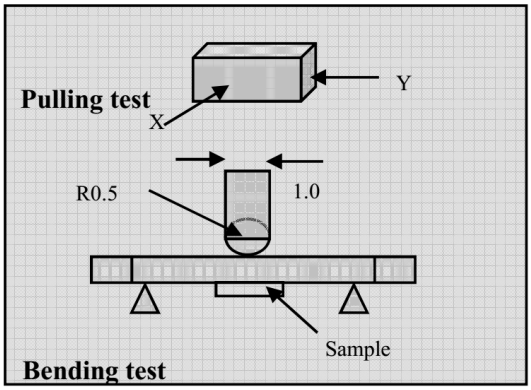
Note: Beyond the above specification also could satisfy the special requirement

RELIABILITY TEST

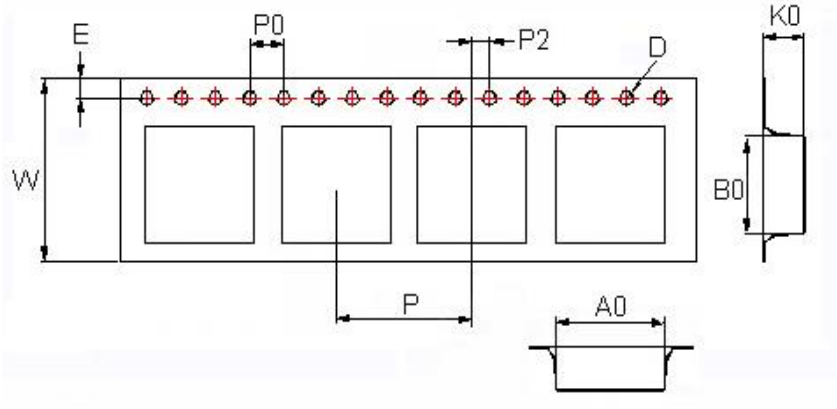
FOR SMT/SMD and other similar types

	Item (項目)	Required Characteristics (要求)	Test Method / Condition (測試方法)
Environmental tests (環境試驗)	High temperature Storage test Reference documents: MIL-STD-202G Method 108A 高溫儲存試驗	1.No case deformation or change in appearance. 2.△L/L≦10% or15% 3.△Q/Q≦30% 4.△DCR/DCR≦10% N:依據產品規格設定 1.無明顯的外觀缺陷 2.感值變化不超過10%或者15% 3.品質因數變化不超過30% 4.直流電阻變化不超過10%	Temperature: N±2℃ Time : 96±2 hours Tested not less than 1 hour, nor more than 2 hours at room temperature.  溫度: N±2℃ 時間: 96±2 小時 樣品在室溫下放置1小時,不超2小時必須測試.
	Low temperature Storage test Reference documents: IEC 68-2-1A 6.1 6.2 低溫儲存試驗	1.No case deformation or change in appearance. 2.△L/L≦10% or15% 3.△Q/Q≦30% 4.△DCR/DCR≦10% M:依據產品規格設定 1.無明顯的外觀缺陷 2.感值變化不超過10%或者15% 3.品質因數變化不超過30% 4.直流電阻變化不超過10%	Temperature: M±2℃ Time : 96±2 hours Tested not less than 1 hour, nor more than 2 hours at room temperature.  溫度: M±2℃ 時間: 96±2 小時 樣品在室溫下放置1小時,不超2小時必須測試.
	Humidity test Reference documents: MIL-STD-202G Method 103B 濕度測試	1.No case deformation or change in appearance. 2.△L/L≦10% or15% 3.△Q/Q≦30% 4.△DCR/DCR≦10% 1.無明顯的外觀缺陷 2.感值變化不超過10%或者15% 3.品質因數變化不超過30% 4.直流電阻變化不超過10%	Temperature: 40±2℃ , Humidity: 93±3%RH Time : 96±2 hours Tested not less than 1 hour, nor more than 2 hours at room temperature.  溫度:40±2℃ , 溼度: 93±3%RH 時間 : 96±2 hours 樣品在室溫下放置1小時,不超2小時間必須測試.
	Thermal shock test Reference documents: MIL-STD-202G Method 107G 熱衝擊測試	1.No case deformation or change in appearance. 2.△L/L≦10% or15% 3.△Q/Q≦30% 4.△DCR/DCR≦10% For T: weight≦28g : 15Min; M:低溫設定 28g≦weight≦136g : 30Min N:高溫設定 1.無明顯的外觀缺陷 2.感值變化小於10%或者15% 3.品質因數變化小於30% 4.直流電阻變化小於10%	First M℃ forT time, lastN℃ forT time as 1 cycle. Go through 20 cycles.  從-40℃作用T分鐘,然後溫度衝擊到125℃作用T分鐘,作爲一個循環,共作用20次.

FOR SMT/SMD and other similar types

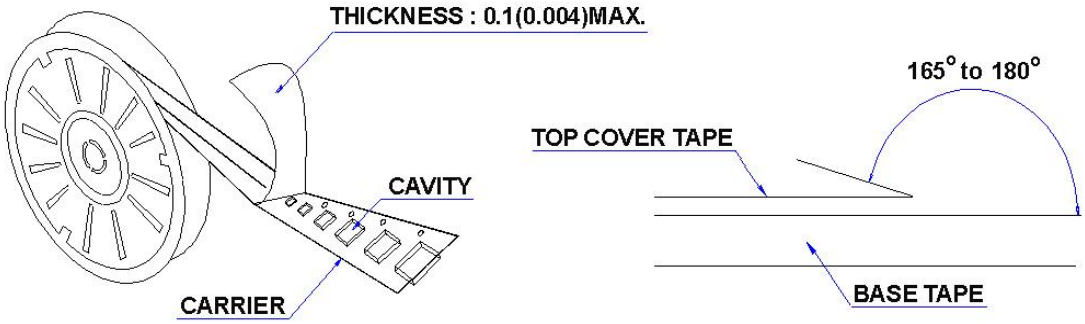
	Item (項目)	Required Characteristics (要求)	Test Method / Condition (測試方法)
Physical characteristic tests (物理特性試驗)	Solderability test Reference documents: MIL-STD-202G Method 208H IPC J-STD-002C 可焊性測試	Terminals area must have 95% min. solder coverage 端子必須有95%以上著錫	1.Dip pads in flux then dip in solder pot at 245±5℃ for 5 seconds. 2.Solder: lead free 3.Flux: rosin flux 1.端子浸入助焊劑, 然後浸入245±5℃錫爐中5秒 2.焊料 :無鉛焊料 3.助焊劑: 松香助焊劑
	Heat endurance of Reflow soldering Reference documents: IPC J-STD-020D 過再流焊測試	1.No case deformation or change in appearance. 2.△L/L≦10% or 15% 3.△Q/Q≦30% 4.△DCR/DCR≦10% 1.無明顯的外觀缺陷 2.感值變化不超過10%或者15% 3.品質因數變化不超過30% 4.直流電阻變化不超過10%	1.Refer to the next page reflow curve Go through 3 times 2.The peak temperature : 260+0/-5℃ 1.參照下頁回流焊曲線過三次 2.峰值溫度爲: 260+0/-5℃
	Vibration test Reference documents: MIL-STD-202G Method 201A 振動測試	1.No case deformation or change in appearance. 2.△L/L≦10% 3.ΔQ/Q≦30% 4.ΔDCR/DCR≦10% 1.無明顯的外觀缺陷 2.感值變化不超過10% 3.品質因數變化不超過30% 4.直流電阻變化不超過10%	Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours. (total 6 hours)  用10~55Hz 振動頻率,振幅1.5mm,振動周期爲1min/cycle.沿X,Y,Z方向各振動2小時.(共6小時)
	Drop test Reference documents: MIL-STD-202G Method 203C 落下試驗	1.No case deformation or change in appearance. 2.△L/L≦10% 3.ΔQ/Q≦30% 4.ΔDCR/DCR≦10% 1.無明顯的外觀缺陷 2.感值變化不超過10% 3.品質因數變化不超過30% 4.直流電阻變化不超過10%	Packaged & Drop down from 1m with 981m/s^2(100G) attitude In 1 angle 1 ridges & 2 surfaces orientations. 將產品包裝後從1米高度自然落下至試驗板上1角1棱2面
	Terminal strength push test Reference documents: JIS C 5321 :1997 端子強度試驗	Pulling test: Define: A: sectional area of terminal 0.5mm^2<A≦1.2mm^2 force ≧20N time : 10sec 1.2mm^2<A force ≧40N time: 10sec Bending test: Soldering the products on PCB,after the pulling test and bending test ,terminal should not pull off 推力測試: 定義: A: 焊接端子截面積 0.5mm^2<A≦1.2mm^2 推力≧20N 時間:10S 1.2mm^2<A 推力≧40N 時間10S 彎折測試: 將產品焊於PCB上,分別經過推力測試和彎折測試後,端子不會發生松脫	Bend the testing PCB at middle point,the deflection shall be 2mm  將PCB對中彎折,到達撓度2mm.
	Resistance to solvent test Reference documents: IEC 68-2-45:1993 耐溶劑性試驗	No case deformation or change in appearance,or obliteration of marking 無外觀破壞及標記破損	To dip parts into IPA solvent for 5±0.5Min,then drying them at room temp for 5Min,at last ,to brushing making 10 times. 在IPA溶劑中浸泡 5±0.5分鐘,室溫下乾燥5分鐘,然後擦拭10次.

Tape Dimensions in mm



TYPE	A0	B0	K0	D	E	W	P	P0	P2
MJC-1030T-2R2-M	10.6	11.7	3.25	1.55	1.75	24	16	4	2

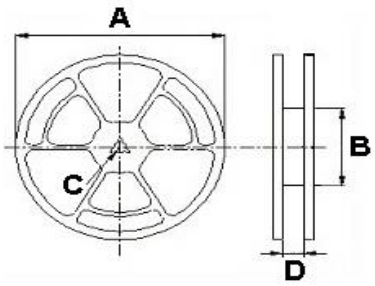
Packaging -Cover tape



The force for tearing off cover tape is 10 to 130 grams in the arrow direction.

Packaging Quantity ：500pcs/Reel

Reel Dimensions



Dimensions in mm

A	B	C	D
330	100	13	24.4

Note: Beyond the above specification also could satisfy the special requirement