

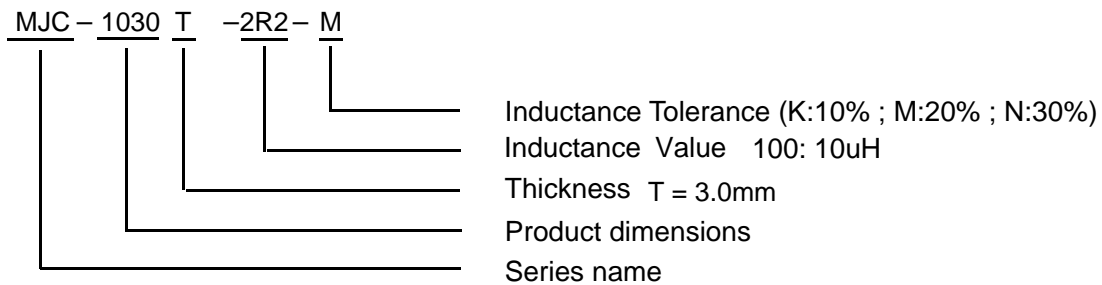
FEATURES

- 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 reel package.

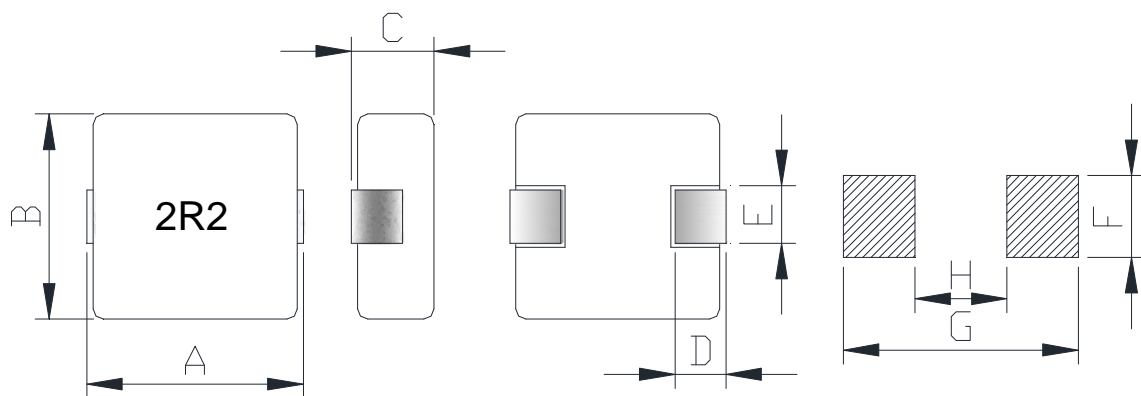
APPLICATIONS

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

PRODUCT IDENTIFICATION



SHAPES AND DIMENSIONS



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

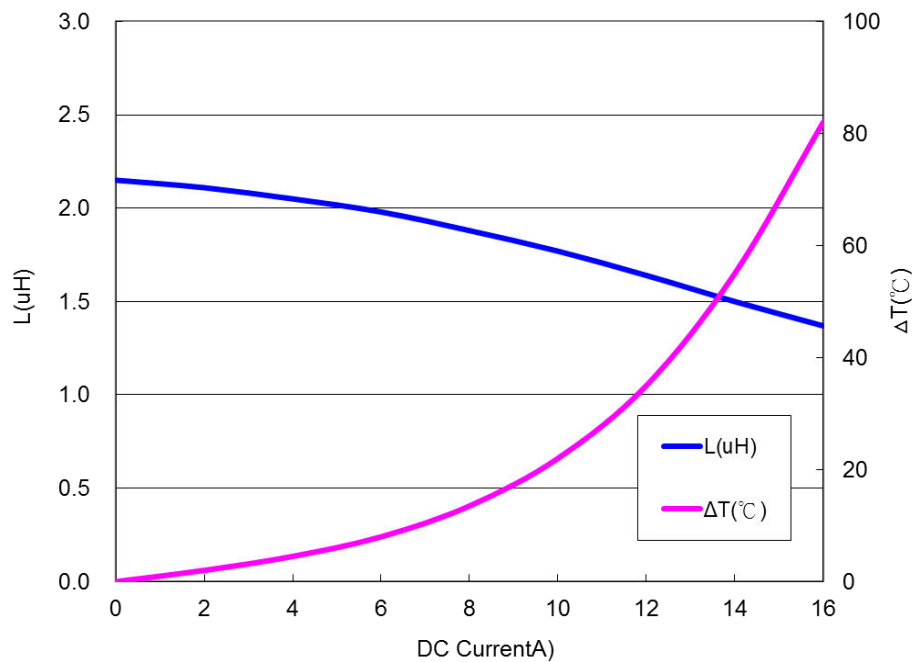
Note: Beyond the above specification also could satisfy the special requirement

ELECTRICAL CHARACTERISTICS

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

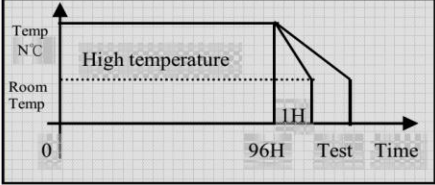
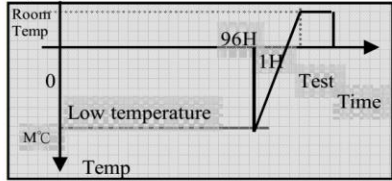
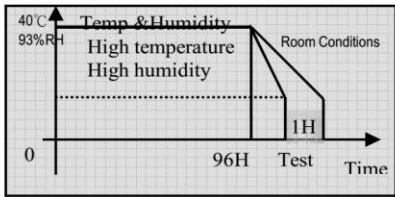
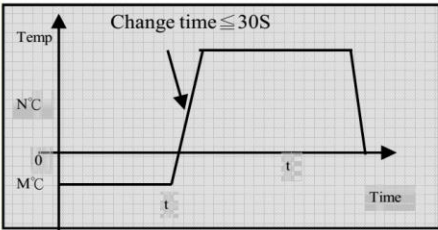
TYPICAL PERFORMANCE CURVES



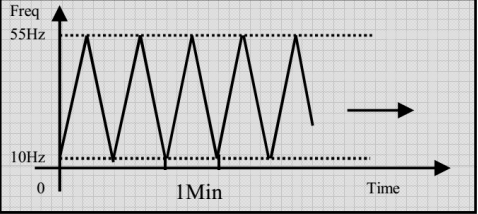
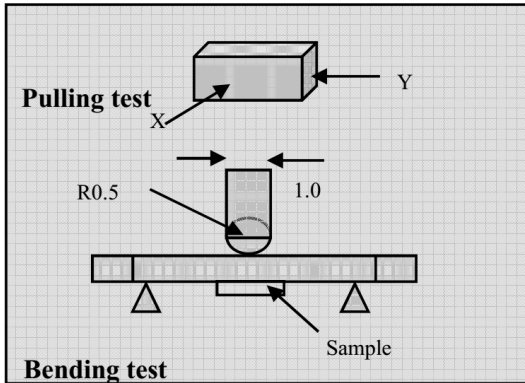
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RELIABILITY TEST

FOR SMT/SMD and other similar types

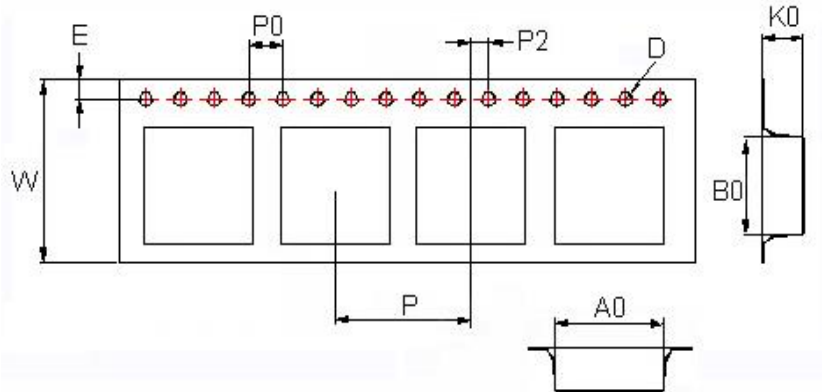
Item (項目)	Required Characteristics (要求)	Test Method / Condition (測試方法)
High temperature Storage test Reference documents: MIL-STD-202G Method 108A 高溫儲存試驗	1.No case deformation or change in appearance. 2. $\Delta L/L \leq 10\%$ or 15% 3. $\Delta Q/Q \leq 30\%$ 4. $\Delta DCR/DCR \leq 10\%$ N:依據產品規格設定 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: $N \pm 2^\circ\text{C}$ Time : 96 ± 2 hours Tested not less than 1 hour, nor more than 2 hours at room temperature.  溫度: $N \pm 2^\circ\text{C}$ 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. $\Delta L/L \leq 10\%$ or 15% 3. $\Delta Q/Q \leq 30\%$ 4. $\Delta DCR/DCR \leq 10\%$ 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: $M \pm 2^\circ\text{C}$ Time : 96 ± 2 hours Tested not less than 1 hour, nor more than 2 hours at room temperature.  溫度: $M \pm 2^\circ\text{C}$ 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. $\Delta L/L \leq 10\%$ or 15% 3. $\Delta Q/Q \leq 30\%$ 4. $\Delta DCR/DCR \leq 10\%$ 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: $40 \pm 2^\circ\text{C}$, Humidity: $93 \pm 3\% \text{RH}$ Time : 96 ± 2 hours Tested not less than 1 hour, nor more than 2 hours at room temperature.  溫度: $40 \pm 2^\circ\text{C}$, 溼度: $93 \pm 3\% \text{RH}$ 時間 : 96 ± 2 hours 樣品在室溫下放置1小時,不超2小時必須測試.
Thermal shock test Reference documents: MIL-STD-202G Method 107G 熱衝擊測試	1.No case deformation or change in appearance. 2. $\Delta L/L \leq 10\%$ or 15% 3. $\Delta Q/Q \leq 30\%$ 4. $\Delta DCR/DCR \leq 10\%$ For T: weight $\leq 28\text{g}$: 15Min; M:低溫設定 $28\text{g} \leq \text{weight} \leq 136\text{g}$: 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 $M^\circ\text{C}$ for T time, last $N^\circ\text{C}$ for T time as 1 cycle. Go through 20 cycles.  從 -40°C 作用T分鐘,然後溫度衝擊到 125°C 作用T分鐘,作為一個循環,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)
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°C 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°C 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. $\Delta L/L \leq 10\%$ or 15% 3. $\Delta Q/Q \leq 30\%$ 4. $\Delta DCR/DCR \leq 10\%$ 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°C 1. 參照下頁回流焊曲線過三次 2. 峰值溫度為: 260+0/-5°C
Vibration test Reference documents: MIL-STD-202G Method 201A 振動測試	1. No case deformation or change in appearance. 2. $\Delta L/L \leq 10\%$ 3. $\Delta Q/Q \leq 30\%$ 4. $\Delta DCR/DCR \leq 10\%$ 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, 振動周期為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. $\Delta L/L \leq 10\%$ 3. $\Delta Q/Q \leq 30\%$ 4. $\Delta DCR/DCR \leq 10\%$ 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稜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.

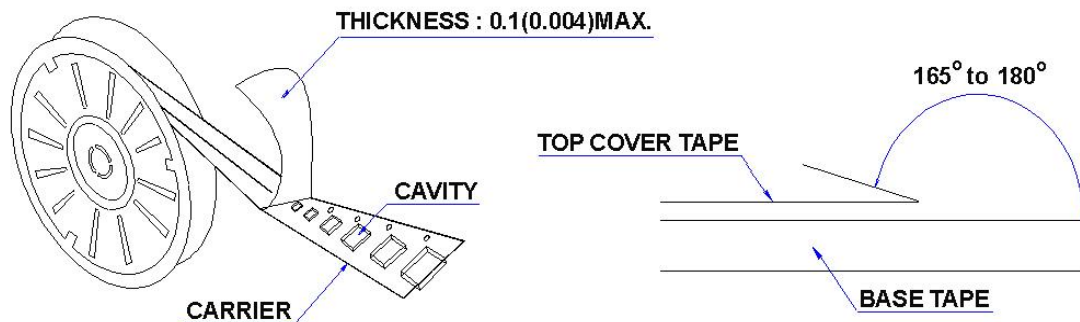
Physical characteristic tests (物理特性試驗)

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

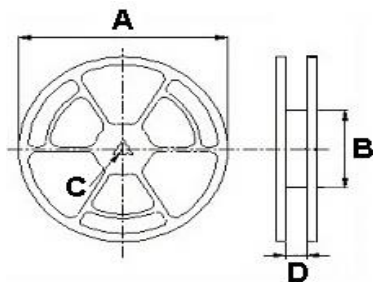
Packaging -Cover tape



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

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