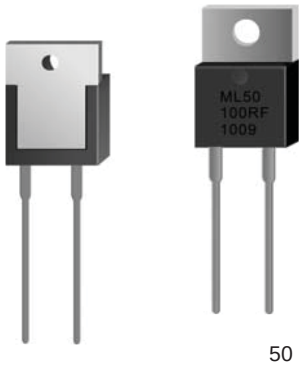
TO220 功率電阻

ML50 (50W)

TO-220 Power Resistor

Features:

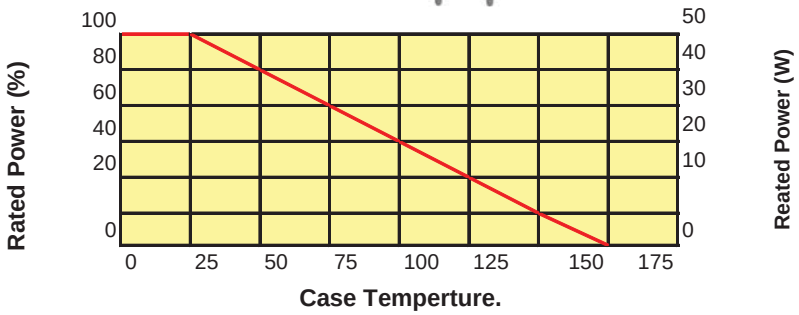
- 50 Watt at 25°C Case Temperature Heat Sink Mounted
- TO-220 Style Power Package
- Single Screw Mounting to Heat Sink.
- Molded Case for Protection and Easy to Mount.
- Isolated Case.
- Non Inductive



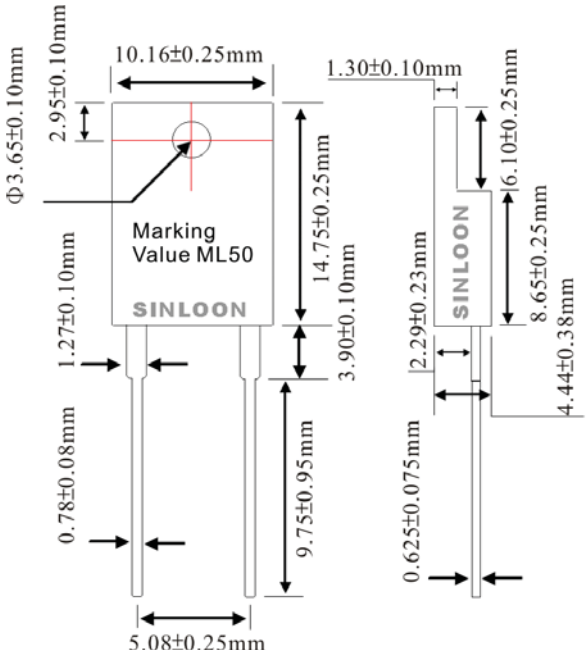
Application

- Gate Resistors in Power Supplies.
- Snubbers.
- Load and Dumping Resistors in CRT Monitors.
- Terminal Resistance in RF Power Amplifiers.
- Voltage Regulation.
- Low Energy Pulse Loading.
- UPS

Derating curve:



Dimension: ML50



ORDERING PROCEDURE:

Example: ML50JE100R0P

Type	Power:	Part No.	Tol.	T.C.R/℃	Resistance	Package
TO220	20W	ML20	K = ±10%	B=±10ppm	R010=0.01Ω	TB = T/Box.
TO220	25W	ML25	J = ±5%	C=±25ppm	R100=0.1Ω	B = Bulk
TO220	30W	ML30	F = ±1%	D=±50ppm	1R00=1Ω	R=Reel Type
TO220	35W	ML35	D = ±0.5%	E=±100ppm	10R0=10Ω	P=Plastic Fistulous
TO220	50W	ML50	C = ±0.25%	K=±150ppm	100R0=100Ω	
TO247	100W	ML100	B = ±0.1%	F=±200ppm	102=1KΩ	

RoHS Compliant
品質承諾標誌
QUALITY COMMITMENT

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Electrical Characteristics Specification

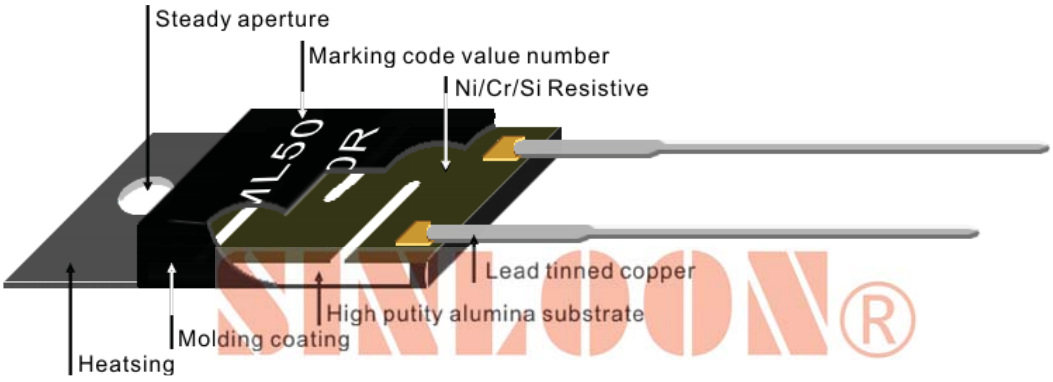
Resistance (Ω)	Tolerance	TCR (ppm)	Packing
0.05R ~ 1R	±5%,±10%.	±200ppm ~ ±500ppm	Bulk
2R ~ 5R	±1%,±5%.±10%.	±200ppm	Bulk
5.1R ~ 10R	±1%,±5%.±10%.	±100ppm ~ ±200ppm	Bulk
11R ~ 10K	±0.5%,±1%,±5%.±10%.	±50ppm ~ ±200ppm	Bulk

- Operating Voltage:350V Max.
- Dielectric Strength: 1800VAC
- Insulation Resistance: 10GΩmin.
- Working Temperature Range:-65°C to +150°C
- Resistance Value <1Ωis Available

Test Item	Specification	Test Method
Temperature Coefficient of	30m ~ 999mΩ ±100ppm 1R ~ 1KΩ ±200ppm	Referenced to 25℃ △R taken qt +105℃
Short Time Overload	△R ±0.3%	2 times rated power with applied voltage not to excel 1.5 times maximum continuous operating voltage for 5
Load Life	△R ±1.0%	MIL-R-39009, 2,000 hours at rated power.
Humidity (Steady State)	△R ±0.5%	MIL-STD-202F, Method 103B, 40℃, 90-95 RH, RCWV 105 hours NO, 0.5 hours OFF, total 1000-1048 hours.
Thermal Shock	△R ±0.3%	MIL-STD-202, Method 107G, - 65℃ ~ 150℃ cycle
Terminal Strenght	△R ±0.2%	MIL-STD-202, Method 211, Cond. A (Pull Test) 2.4N
Vibration, High Frequency	△R ±0.2%	MIL-STD-202, Method 204, Cond. D.

- Lead Material: Tinned Copper.
- Maximum Torque: 0.9 Nm.
- When in Free Air at 25°C, the ML50 is Rated for 2.25W.
- The Case Temperature is to be used for the Definition of the Applied Power Limit.
- The Case Temperature Measurement Must be Made with a Thermocouple Contacting the Center of the Component Mounted on the
- Designed Heat Sink.
- Thermal Grease Should be Applied Properly.

CONSTRUCTION:

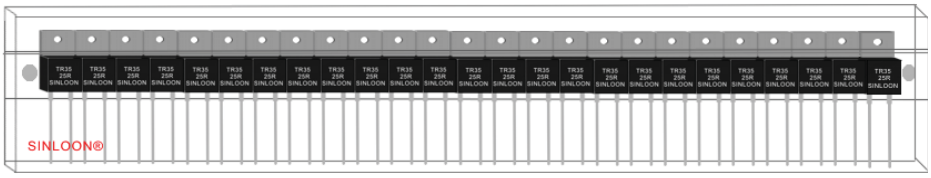


TO220 功率電阻

ML35 (35W)
TO-220 Power Resistor

PACKING

Type:		Power	Fistulous	In Box	Carton
TO-220	ML20	20W	25 pcs	10 Fistulous	2.5K/Ctn
TO-220	ML25	25W	25 pcs	10 Fistulous	2.5K/Ctn
TO-220	ML30	30W	25 pcs	10 Fistulous	2.5K/Ctn
TO-220	ML35	35W	25 pcs	10 Fistulous	2.5K/Ctn
TO-220	ML50	50W	25 pcs	10 Fistulous	2.5K/Ctn
TO-247	ML100	100W	20 pcs	Bulk	2K/Ctn



Plastic Fistulous :
25 Pcs
Size:
520x33x7.0mm

Inside Box 10 Plastic Fistulous
In box Size:561x83x72mm

Carton : 10 / In Box
Carton Size: 580x450x175mm

Brand Label:SINLOON®

External Heatsink and PCB Leads Alignment Guidelines (Continued)

TO-220 Power Resistor

Package Mounting Guide (Continued)

It is important that the packages are correctly mounted if full functionality is to be achieved. Mounting of the package to a heat sink must be done such that there is sufficient pressure from the mounting screws to insure good contact with the heat sink for efficient heat flow. Incorrect mounting may lead to both thermal and mechanical problems. Over tightening the mounting screws will cause the package to warp reducing the contact area with the heat sink and increasing the thermal resistance from the package case to the heat sink, resulting in higher operating die temperatures. Extreme over tightening of the mounting screws beyond the recommended torque force will cause severe physical stress resulting in cracked die and catastrophic IC failure. Though the reliability of the package is excellent, the use of inappropriate techniques or unsuitable the long tools during the mounting process can affect term reliability of the device and even damage it.

Figure (1)

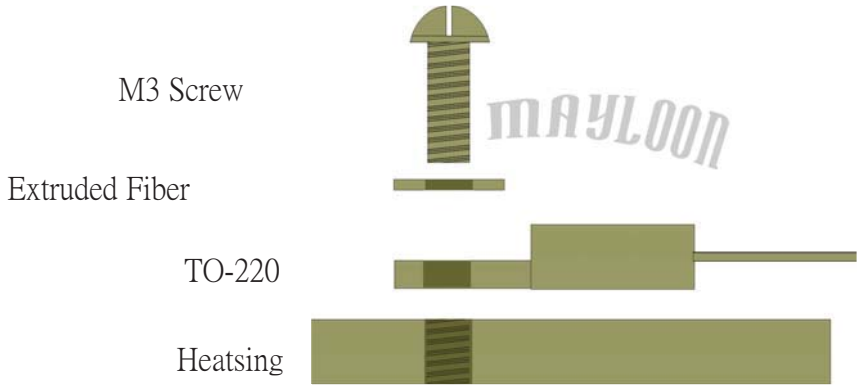


Figure (2)

External Heatsink and PCB Leads Alignment Guidelines (Continued)

TO-220 Power Resistor

Figure (3)

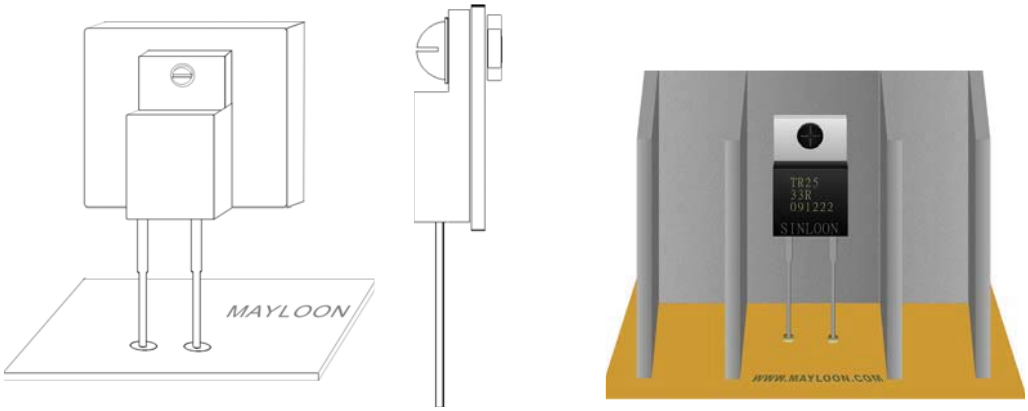
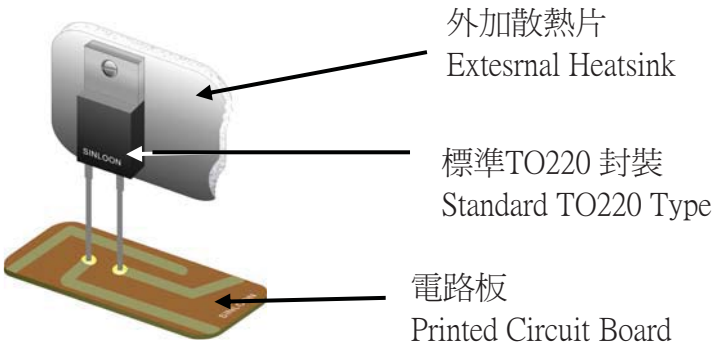


Figure (4)



TO220 功率電阻使用指南及其重要性的說明:

要得到更好的特性功能和效率,正确完整的安裝散熱器是必須做的。要有配合外加散熱器來共同使用,上緊螺絲以保證本體部件和散熱片有良好的接觸面達致有高效的熱流量。不正确的使用可能會導致部件產生的熱量影響整體部件的功效。收緊螺絲不當將導致本體部件和散熱片接觸面積減少,熱電阻的增加導致更高的工作環境溫度。過度的收緊螺絲而超出了承受的壓力會導致零部件的失效。雖然該部件的可靠性非常好,使用不當或選擇不適合的外加散熱器,在使用過程中可能會影響長期使用壽命,甚至破壞。