TO247 功率電阻

Resistance : 0.2R ~ 1M ohm

ML100 (100W)

TO247 Power Resistor

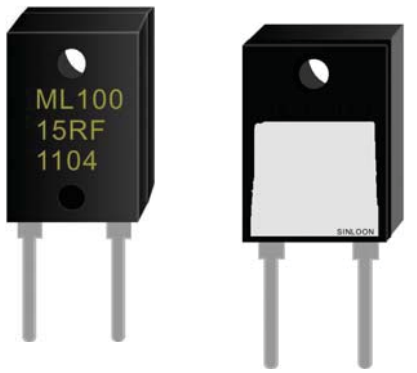
☐ Features:

- 100 Watt at 25°C Case Temperature Heat Sink Mounted
- TO-247 Style Power Package.
- Single M3 Screw Mounting to Heat Sink.
- Molded Case for Protection and Easy to Mount.
- Isolated Case.
- Non Inductive.

☐ Applications:

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

Figure:

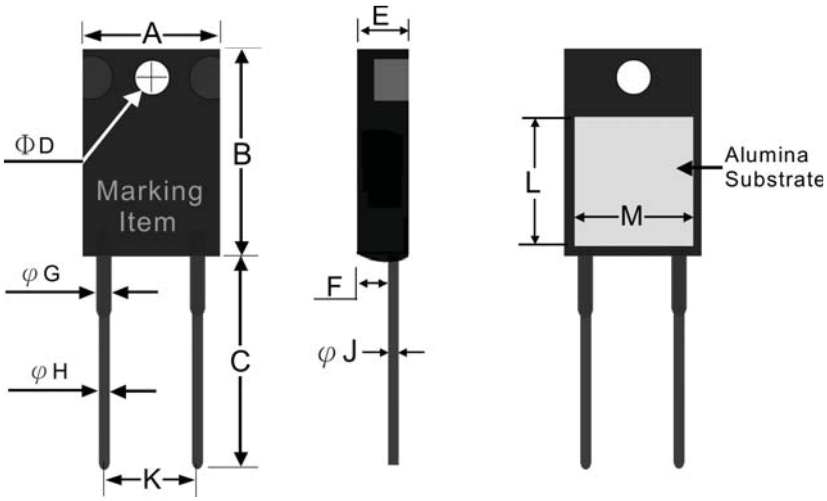


Front Side

Back Side

Dimension: ML100

Dim	inch	mm
A	0.62	15.75±0.2
B	0.815	20.70±0.2
C	0.571	14.50±0.50
ΦD	0.143	3.63±0.15
E	0.196	4.95±0.25
φF	0.094	2.40±0.25
φG	0.145	3.63±0.15
φH	0.06	1.52±0.15
φJ	0.031	0.81±0.15
K	0.401	10.18±0.2
L	0.473	12.00±0.5
M	0.48	12.15±0.5



☐ ORDERING PROCEDURE:

Example: ML100JE22R0B

Type	Power:	Part No.	Tol.	T.C.R/℃	Resistance	Package
TO247	100W	ML100	K = ±10% J = ±5% F = ±1%	D=±50ppm E=±100ppm F=±200ppm G=±300ppm	R100=0.1Ω 1R00=1Ω 10R0=10Ω 100R=100Ω	TB = T/Box. B = Bulk P=Plastic Fistulous

※美隆電子產品規格特性參數的改變或更新,將不會另行通知。

※Mayloon characteristic parameters of electronic product specification changes or updates without prior notice。

品質承諾標誌
QUALITY COMMITMENT

TO247 功率電阻 — ML100 (100W)

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☐ **Electrical Characteristics Specification**

Type	TO247 ML100		
Power Rating (25℃)	100W		
Tolerance	±1%, ±5%.		
Resistance value range	Resistance	Tolerance	T.C.R/℃
	0.2R ~ 1R Ω	±1%	±200~300ppm
		±5%	±200~300ppm
	1R ~ 3R0 Ω	±1%	±100~200ppm
		±5%	±100~200ppm
	3R3 ~ 10R Ω	±1%	±50~100ppm
		±5%	±50~100ppm
	11R ~ 1M Ω	±1%	±50~100ppm
		±5%	±50~100ppm
Max.Working voltage:	700V		
Temperature Range:	25℃ ~ 105℃		
Medium Withstanding Voltage	1.8KV		
Insulation Resistance	≧ 10G Ω		

Plan front side

Plant back side

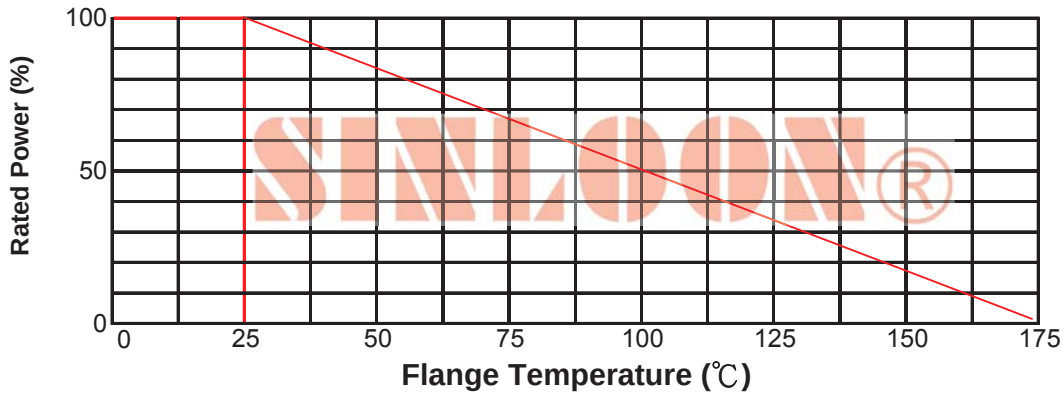
※Other requirements not specified in the specifications sent by e-mail inquiries welcome。

- ◆ Maximum Torque: 0.9Nm
- ◆ Operating Voltage:350V Max.
- ◆ Dielectric Strength: 1800VAC
- ◆ Working Temperature Range:-65°C to +150°C
- ◆ Resistance Value <1Ωis Available

Test Item	Specification	Test Method
Temperature Coefficient of Resistanc	As specification	Referenced to 25°C, ΔR taken at +105°C
Momentary Overload	ΔR±0.5 %	1.5 times rated power and V(dc)≦1.5Vmax for 5 seconds
Dielectric strength	ΔR±0.15%	MIL-STD-202F Method 301(1800v AC,60s)
Load Life	ΔR ± 1.0%	MIL–PRF–39009D,4.8.13 Rated power, 2,000 hours
Moisture resistance	ΔR± 0.5%	-10℃~+65℃,RH>90%,cycle 240hours
Thermal Shock	ΔR ± 0.5%	MIL–STD–202F, Method 107G. -65℃~150℃, 100 cycle
Terminal Strength	ΔR ±0.2%	MIL–STD–202F, Method 211, Cond. A (Pull Test) 2.4N.
Vibration, High Frequency	ΔR ± 0.4%	MIL–STD–202F, Method 204, Cond. D.

- ☐ Lead Material: Tinned Copper.
- ☐ When in Free Air at 25°C, the ML100 is Rated for 3.5W.
- ☐ 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.

Power Derating Data



品質承諾標誌
QUALITY COMMITMENT

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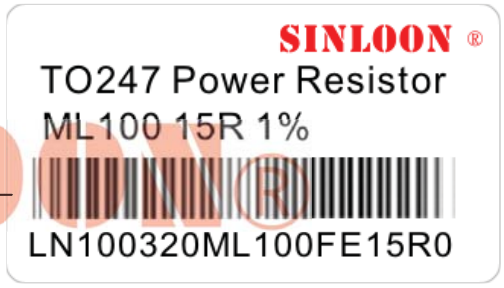
Resistance : 0.2R ~ 1M ohm — TO247 Power Resistor

☐ **Packing:**

Type:		Power	Fistulous	In Box	Carton
TO247	ML100	100W	Bulk	Box	2K/Ctn

Brand Label:SINLOON®



RoHS Compliant
品質承諾標誌
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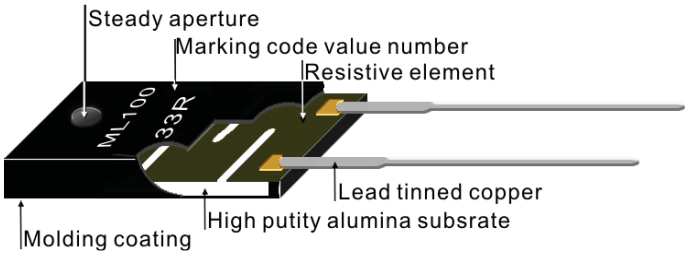
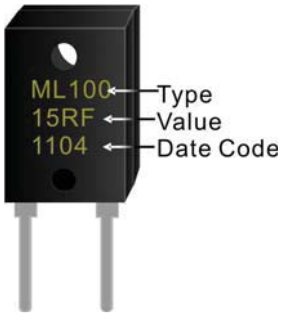
TO247 Power Resistor

☐ CONSTRUCTION



☐ Body Marking Code



☐ RESISTANCE STANDARD VALUE

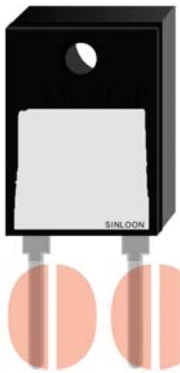
E3	10				22						47						
E6	10		15		22		33		47		68						
E12	10	12	15	18	22	27	33	39	47	56	68	82					
E24	10	11	12	13	15	16	18	20	22	24	27	30	33	36	39	43	47
	51	56	62	68	75	82	91										
E96	100	102	105	107	110	113	115	118	121	124	127	130	133	137	140	143	147
	150	154	158	162	165	169	174	178	182	187	191	196	200	205	210	215	221
	226	232	237	243	249	255	261	267	274	280	287	294	301	309	316	324	332
	340	348	357	365	374	383	392	402	412	422	432	442	453	464	475	487	499
	511	523	536	549	562	576	590	604	619	634	649	665	681	698	715	732	750
	768	787	806	825	845	866	887	909	931	953	976						

☐ Application Notes:

1. Insulating material is unnecessary between the heat sink and the tab, as the resistor film is isolated by the internal alumina substrate
2. When mounting with a fastener, thermal grease is recommended
3. Thermal design should satisfy the following equation: Case Temperature(Tc)+[Thermal Resistance(RθJC)x Power applied(Watts)]≦155℃ over the full operating temperature of the application
4. Resistor film temperature is not to exceed 155℃ during operation
5. This product is RoHS compliant by exemption according to RoHS directive 2002/95/EC exemptions 5&7 , as they apply to lead in glass and internal solder connections.

Plan front side

Plant back side



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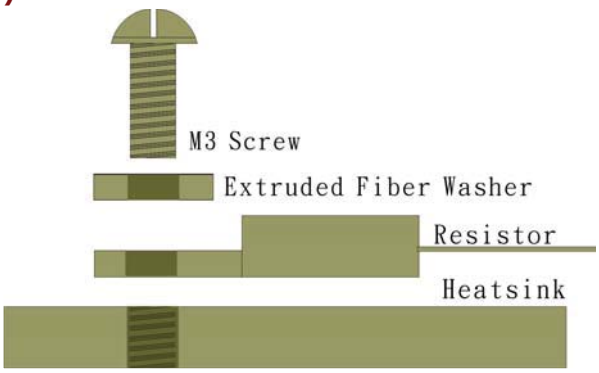
☐ Package Mounting Guide

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 tools during the mounting process can affect the long term reliability of the device and even damage it.

Figure (1)



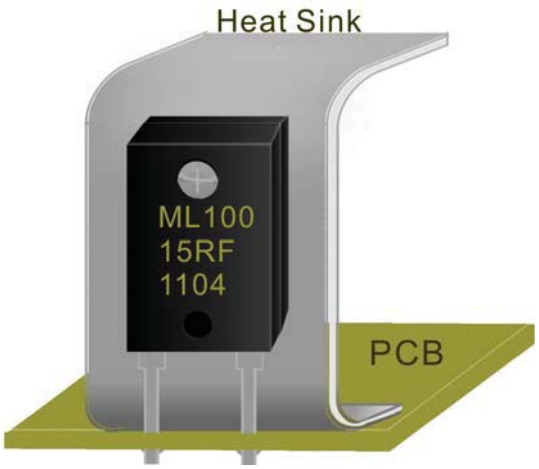
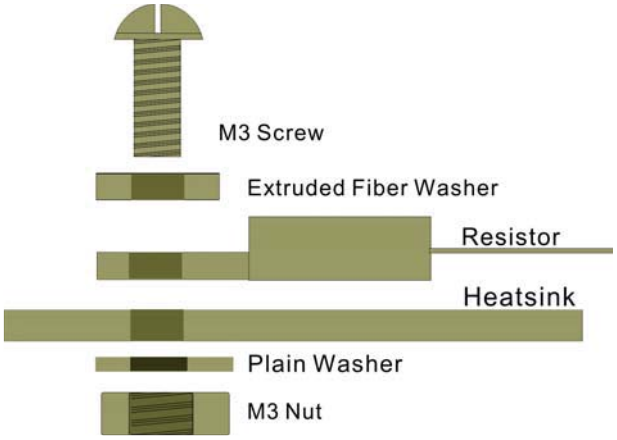


Figure (2)



☐ TO220/TO247 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。