

METAL FOIL HIGH POWER CURRENT SENSING RESISTORS

(RMFP SERIES)

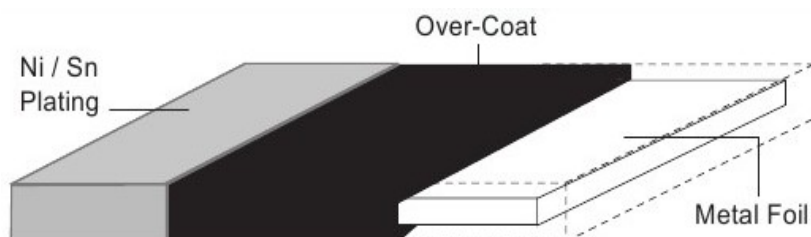
Features

- ⊙ Ultra low resistance, suitable for large current detecting.
- ⊙ Ultra low device surface temperature
- ⊙ Extremely low TCR
- ⊙ Over coating: Molding compound UL-94 V-0 grade
- ⊙ AEC-Q 200

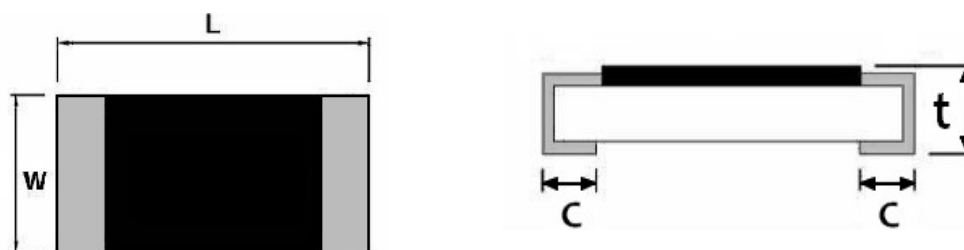
Application

- ⊙ Power module (VRM) for CPU
- ⊙ Battery chargers
- ⊙ DC / DC converter
- ⊙ Power supply

Construction



Dimensional Specifications



Style	Dimensions : mm				Material
	L	w	c	t	
RMFP-24 (2512)	6.4 ±0.2	3.2 ±0.2	0.9 ±0.2(>4mΩ) 2.0 ±0.2(≤4mΩ)	0.9 ±0.20	Strip: Alloy Over Coating: Polymer Compound UL-94 V-0 Grade

Performance

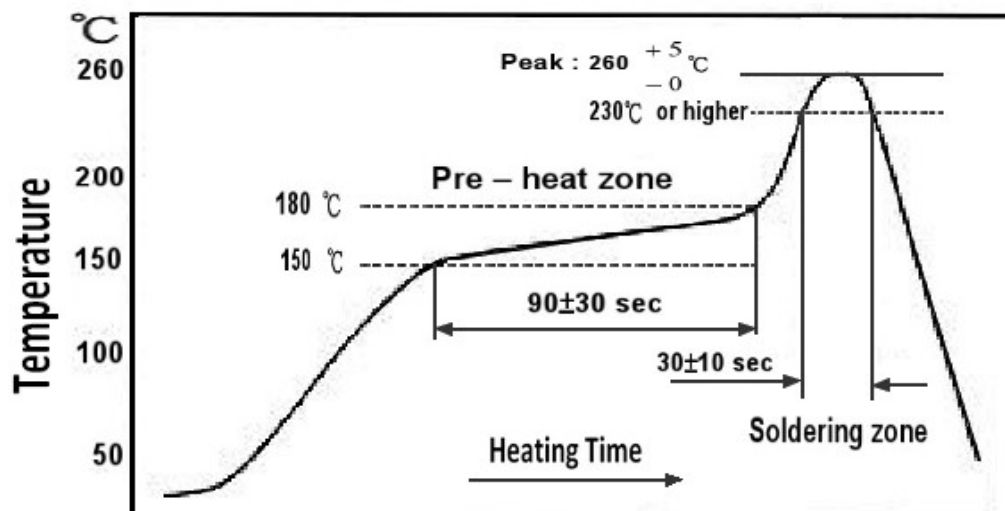
Type	Power Rating	Resistance Range (mΩ)	Operation Temperature Range (°C)	T.C.R (PPM/°C)	Tolerance (%)	Insulation Resistance	Maximum Working Voltage(V)
RMFP-24	1W 2W 3W	1~100	-55~+170	±50	±1% ±2% ±5%	Over 100MΩ	(P*R) ^{1/2}



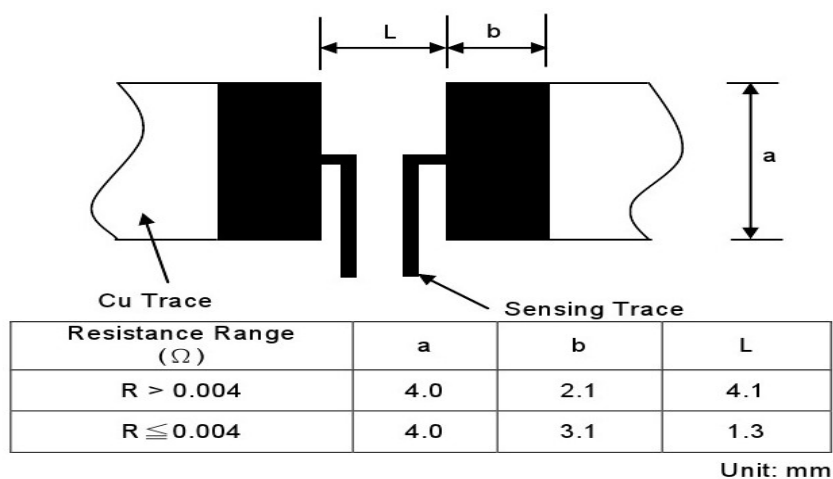
Characteristics

Performance test	Reference	test method	Test Limits
Temperature Coefficient of Resistance	IEC60115-1 4.8	+25 °C to +125 °C	Refer 4.0
High Temperature Exposure (Storage)	MIL-STD-202 Method 108	T=125 °C, 1000hrs, Measurement at 24 hrs after test conclusion.	< ± 1%
Low Temperature operation	IEC60115-1 4.23.4	-55 °C to 45 min	< ± 0.5%
Temperature Cycling	JESD22 Method JA-104	1000 Cycle (-55 °C to +125 °C), Measurement at 24hrs after test conclusion.	< ± 0.5%
Short time overload	IEC60115-1 4.13	5 x rated power for 5s	< ± 0.5%
Biased Humidity	MIL-STD-202 Method 103	10% rated voltage at 85 °C, HR:85%, 1000hrs, Measurement at 24hrs after test conclusion	< ± 0.5%
Operation life	MIL-STD-202 Method 108	1000 h at +70 °C, 1.5h "ON". 0.5 h " OFF"	< ± 1%
Resistance to Soldering heat	IEC60115-1 4.18	T=260 ±5 °C, solder, 10 ±1 sec dwell	< ± 0.5%
Mechanical Shock	MIL-STD-202 Method 213	100g's, Normal duration is 6ms, half sine shock pulse	< ± 0.5%
Resistance to vibration	MIL-STD-202 Method 204	5g's for 20min. 12 cycles, 10-2000Hz	< ± 0.5%
Board Flex	ACE-Q200-005	Min 2mm deflection, 60 sec.	< ± 0.5%
Flammability	UL-94	V-0 or V1 are acceptable, Electrical test not required	

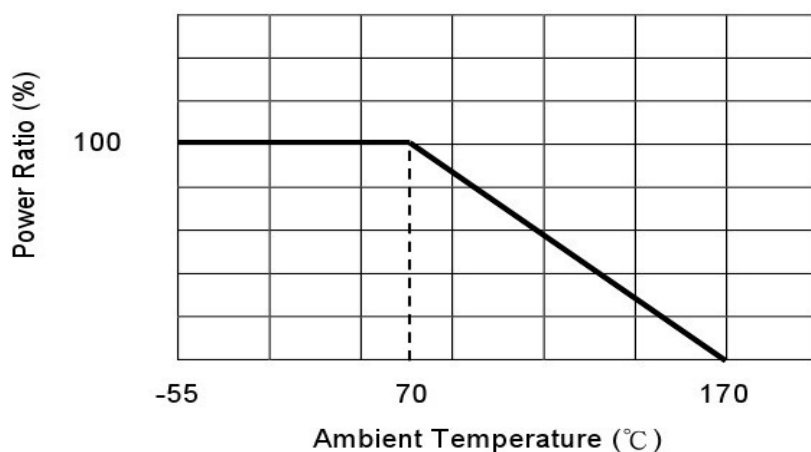
Recommend IR - Reflow Profile (solder: Sn96.5/Ag3/Cu0.5)



Recommend IR - Solder Pad Dimension



Derating Curve



Parts Number System

RMFP -24	T -	R470	F	K
Type RMFP-24 Series Metal Foil High Power Current Sensing Resistors (AEC-Q 200) 24=2512	Wattage T = 1W K = 2W H = 3W	Resistance R047 = 47m Ω R470 = 470m Ω R500 = 500m Ω	Tolerance J = $\pm 5\%$ G = $\pm 2\%$ F = $\pm 1\%$	Standard Packing K=Embossed plastic tape reel

