高精密薄膜晶圓電阻

MELF Type
Thin Film Precision Melf Resistor

FEATURE

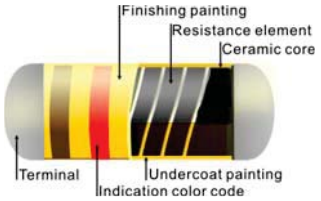
- Advanced thin film technology.
- Excellent overall stability: Class 0.25.
- Force fitted steel caps, tin plated on nickel barrier.
- Pure Sn termination on Ni barrier layer.
- Compatible with lead (Pb)-free and lead containing soldering processes.
- Lead (Pb)-free and RoHS compliant .

FIGURE

Applications

- Military
- Automotive
- Telecommunication
- Medical equipment.
- Avionics
- Space

CONSTRUCTION



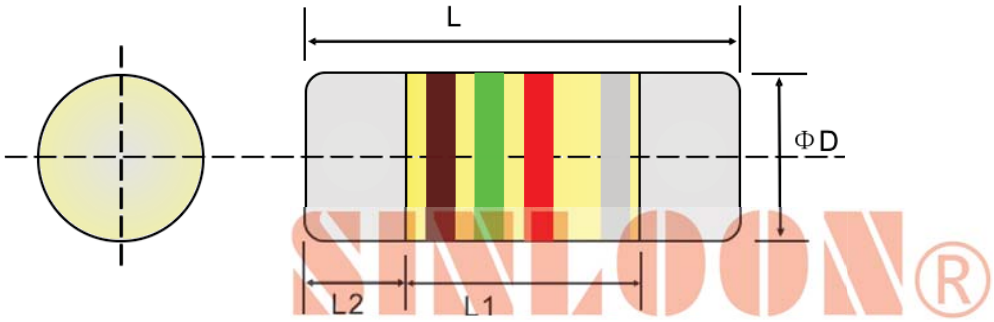
ORDERING INFORMATION

Example: VCSR04FD1R00

Power	Size	Type	Tolerance	TCR(℃)	Resistance	Packing
0.25W	0204	VCSR04	J = ±5%	S=±5ppm	1R = 1R00	3K Reel
0.5W	0204	UCSR04	G = ±2%	B=±10ppm	10R=10R0	3K Reel
0.5W	0207	UCSR07	F = ±1%	N=±15ppm	100R=100R	2K Reel
1W	0207	SCSR07	D = ±0.5%	C=±25ppm	1K = 1001	2K Reel
			C = ±0.25%	D=±50ppm	10K = 1002	
			B = ±0.1%	E=±100ppm	100K=1003	
			T = ±0.01%		1M=1-004	

DIMENSION

Power	Size	Type	L	Φ D	L1	L2
0.25W	0204	VCSR04	3.45 ±0.10	1.35 ±0.05	2.00 ±0.05	0.60 ±0.10
0.5W	0204	UCSR04	3.45 ±0.10	1.35 ±0.05	2.00 ±0.05	0.60 ±0.10
0.5W	0207	UCSR07	5.90 ±0.20	2.20 ±0.15	3.40 ±0.10	1.00 ±0.10
1W	0207	SCSR07	5.90 ±0.20	2.20 ±0.15	3.40 ±0.10	1.00 ±0.10



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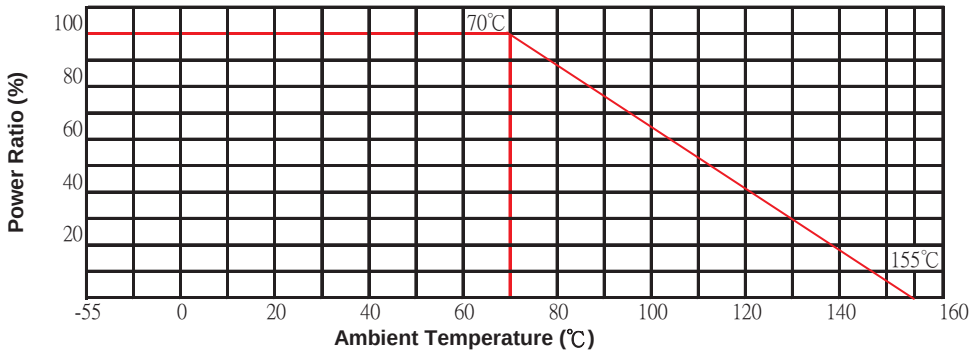
GENERAL ELECTRICAL SPECIFICATION

Type	Size	Power	Maximum Operating Voltage	Resistance (Ω)	Tolerance Range	T.C.R. (ppm/℃)	Operating Temp.Range
0.25W	0204	VCSR04	200V	0.1R~10M	±1%, ±5%.	50,100	-55 ~ +155℃
				1R~1M	±0.5%, ±1%, ±5%.	50	
				50R~200K	±0.1%, ±0.25%, ±0.5%.±1%	10,15,25,50.	
0.5W	0204	UCSR04	300V	0.1R~10M	±1%, ±5%.	50,100	
				1R~1M	±0.5%, ±1%, ±5%.	50	
				50R~200K	±0.1%, ±0.25%, ±0.5%.±1%	10,15,25,50.	
0.5W	0207	UCSR07	300V	0.1R~10M	±1%, ±5%.	50,100	
				1R~1M	±0.5%, ±1%, ±5%.	50	
				50R~200K	±0.1%, ±0.25%, ±0.5%.±1%	10,15,25,50.	
				201K~300K	±0.1%, ±0.25%, ±0.5%.±1%	15,25,50.	
1W	0207	UCSR07	500V	0.1R~10M	±1%, ±5%.	50,100	
				1R~1M	±0.5%, ±1%, ±5%.	50	
				50R~200K	±0.1%, ±0.25%, ±0.5%.±1%	10,15,25,50.	
				201K~300K	±0.1%, ±0.25%, ±0.5%.±1%	15,25,50.	

* Mayloon is capable of manufacture the following option based on customer's requirement.

POWER DERATING CURVE



In case resistors operating ambient temperature in excess of the temperature range -55℃ ~+155℃ power ratio will be derated in accordance with the figure as shown on the right.

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BELIABILITY TEST

Test Item	Requirements Permissible Change (△R)			Test Method
Stability for product types	0.25%	0.50%	0.50%	
VCSR0204 UCSR0207	50Ω～220KΩ	10Ω～<50Ω	>220KΩ	
UCSR0204 SCSR0204	50Ω～1MΩ	10Ω～<50Ω	>1MΩ	
Temperature Coefficient of Resistance	As Spec			MIL-STD-202F Method 304 +25/-55/+25/+125/+25℃
Short Time Overload	△R±0.1% no visible damage			JIS-C-5202-5.5 RCWV*2.5 or Max Overloading Voltage， 5 seconds
Thermal Shock	△R±0.1%	△R±0.25%	△R±0.1%	MIL-STD-202F Method 107G -55℃~150℃,100 cycles
	no visible damage			
Load Life	△R±0.25%	△R±0.25%	△R±0.50%	MIL-STD-202F Method 108A RCWV，70℃，1.5 hours ON，0.5 hours OFF, total1000~1048 hours
Humidity（Steady State）	△R±0.25%	△R±0.50%	△R±0.50%	MIL-STD-202F Method 103B 40℃, 90~95%RH,RCWV 1.5 hours ON,0.5 hoursOFF, total 1000~1048 hours
	no visible damage			
Resistance to Dry Heat	△R±0.50%	△R±1.00%	△R±1.00%	JIS-C-5202-7.2 96 hours @ +155℃ without load
Low Temperature Operation	△R±0.25%	△R±0.50%	△R±0.50%	JIS-C-5202-7.1 1 hours,-65℃,followed by 45minutes of RCWV
	no visible damage			
Solderability	95%min coverage			MIL-STD-202F Method 208H 245℃±5℃, 2±0.5 (sec)
Resistance to Soldering Heat	△R±0.10%	△R±0.25%	△R±0.10%	MIL-STD-202F Method 210E 260±5℃, 10±1 seconds
	no visible damage			

* Storage Temperature: 25±3℃; Humidy <80% RH

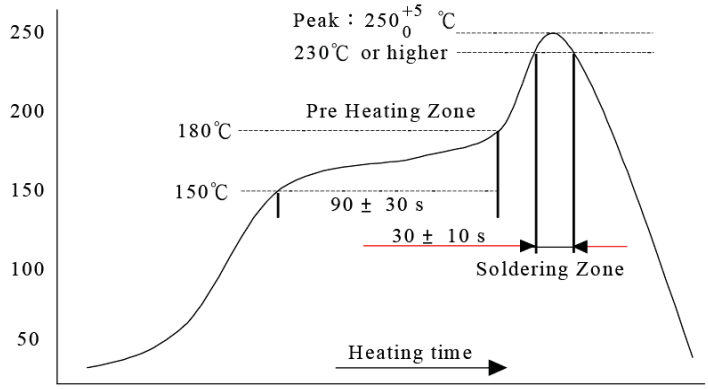
VOLTAGE RATING OR CURRENT RATING

Resistance Range: ≧1Ω

Rated Voltage: The resistor shall have a DC continuous working voltage or a RMS AC continuous working voltage at commercial-line frequency and wave form corresponding to the power rating, as determined formula as following:

E=Rated voltage(V) $E=\sqrt{R\times P}$ P=Power rating(W) R=Nominal resistance(Ω)

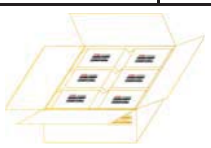
SOLDERING PROFILE



PACKAGE SPECIFICATION

Power	Size	Type	Quantity(ea)			SINLOON®
			Paper Reel Tape	In Box	Carton	
0.25W	0204	VCSR04	3000 pcs 7" Reel	30K	180K pcs	
0.5W	0204	UCSR04	3000 pcs 7" Reel	30K	180K pcs	
0.5W	0207	UCSR07	2000 pcs 7" Reel	20K	120K pcs	
1W	0207	SCSR07	2000 pcs 7" Reel	20K	120K pcs	





RoHS Compliant
品質承諾標誌
QUALITY COMMITMENT

RoHS 品質承諾標誌 QUALITY COMMITMENT