

SINLOON®

超小型貼片電阻  
CRM-01005 (0402)

CRM-01005 Type  
Ultra-small Chip Resistor

Application

- ◆ Entertainment: Stereo, TV tuners, Tape recorder.
- ◆ Appliance: Air conditioner, Refrigerator
- ◆ Computer & relative products: Main board, PDA.
- ◆ Communication equipment: Cell phone, Fax machine
- ◆ Power equipment: Power supply, illumination equipment.
- ◆ Measuring instrument: Electric meter, Navigation equipment.

FEATURE

- ◆ Small size and light weight.
- ◆ Reliability high quality and fast delivery
- ◆ Products with lead free termination meet RoHS requirements.
- ◆ Reduction of assembly costs matching with placement machines

ORDERING INFORMATION

Example: CRM01FF1001 ( 1/32W 0402 ±1% ±200ppm 1K ohm )

Power	Size	Type	Tolerance	TCR(°C)	Resistance*		Packing
1/32W	0402	CRM01	J = ±5% F = ±1%	F=±200ppm G=±300ppm	E96 (±1%) Series	E24 (±5%) Series	7"/Reel 10K Reel

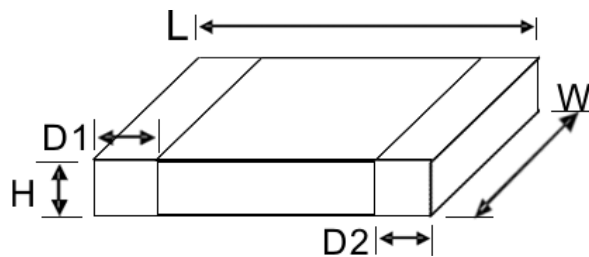
\* Resistor Series Ordering Information See Page-3

DIMENSION

Unit: mm

Power	Size	Type	L	W	H	D1	D2	Figure
1/32W	0402	CRM01	0.4±0.03	0.2±0.03	0.13±0.03	0.1±0.05	0.1±0.05	Fig-3

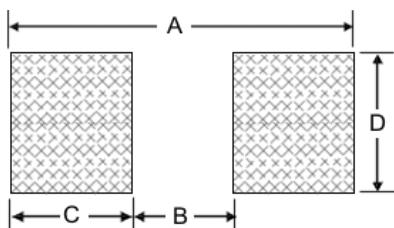
Fig-3



RECOMMEND LAND PATTERN DESIGN (For Reflow Soldering)

Power	Size	Type	A	B	C	D	Figure
1/32W	0402	CRM01	0.48±0.02	0.12	0.18	0.18~0.13	Fig-4

Fig-4



MARKING

Fig-5



Body no marking

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**GENERAL ELECTRICAL SPECIFICATION**

Type	Size	Rated Power at 70°C	Rated Voltage	Maximum Voltage		Tolerance	Resistance (Ω)	T.C.R. (ppm/°C)	Jumper Rated Current	
				Working	Overload					
CRM01	0402 (01005)	1/32W	Refer 5.2	15V	30V	±1%	10 ~ >100	±300	1A	
							101 ~ >1M	±200		
							±5%	10 ~ >100	±300	Jumper
								101 ~ >1M	±200	
Operating Temperature Range:			-55°C ~ 125°C							
Jumper Rated Current:			0.5A		Max Overload Current:		1A			

**VOLTAGE RATING OR CURRENT RATING**

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:

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

**Reliability Tests:**

Test Items	Reference standard	Condition of Test	Test Limits
Temperature Coefficient of Resistance	IEC60115-1-4.8 ; JIS-C5201-4.8	+25 ~ +125 °C	Refer 5.0
Short Time Overload	IEC60115-1-4.13 JIS-C5201-4.13	2.5 X rated voltage for 5 sec	± (3% + 0.1Ω) 0Ω : 50mΩ or less
Endurance (Load Life)	IEC60115-1-4.25.1 JIS-C5201-4.25.1	1000 hours at rated voltage, 70°C "ON", 0.5hour "OFF"	± (5.0% + 0.1Ω) 0Ω : 100mΩ or less
Load Life with Humidity	IEC60115-1-4.24 JIS-C5201-4.24	1000 hours at rated voltage, 40± 90~95% RH 1.5hours "ON", 0.5hour "OFF"	± (5.0% + 0.1Ω) 0Ω : 100mΩ or less
Rapid Change of Temperature	IEC60115-1-4.19 JIS-C5201-4.19	-55°C (30 min.) / +155 °C (30 min.) 5 cycles	±(3.0%+0.1Ω) 0Ω : 50mΩ or less
Solder ability	IEC60115-1-4.17 JIS-C5201-4.17	245±5°C solder, 2±0.5 sec dwell. Solder : Sn96.5 / Ag3.0 / Cu0.5	At least 95% of surface of electrode shall be covered with new
Robustness of Termination (Bending)	IEC60115-1-4.33 JIS-C5201-4.33	3mm deflection	±(1.0%+0.1Ω) 0Ω : 50mΩ or less
Dielectric Withstanding Voltage (Voltage Proof)	IEC60115-1-4.7 JIS-C5201-4.7	Applying voltage : 50V for a minute .	No abnormalities such as flashover, burning dielectric breakdown
Insulation Resistance	IEC60115-1-4.6 JIS-C5201-4.6	Applying voltage 50V for 1 minute.	≥ 100MΩ
Resistance to Dry Heat	IEC60115-1-4.23.2 JIS-C5201-4.23.2	125±5°C for 96±4Hrs	±(3.0%+0.1Ω) 0Ω : 50mΩ or less
Resistance to Solder Heat	IEC60115-1-4.18 JIS-C5201-4.18	270 ±5°C solder , 10 ±1 sec dwell .	±(3.0%+0.05Ω) 0Ω : 50mΩ or less

MAYLOON ELECTRONIC CO., LTD.,



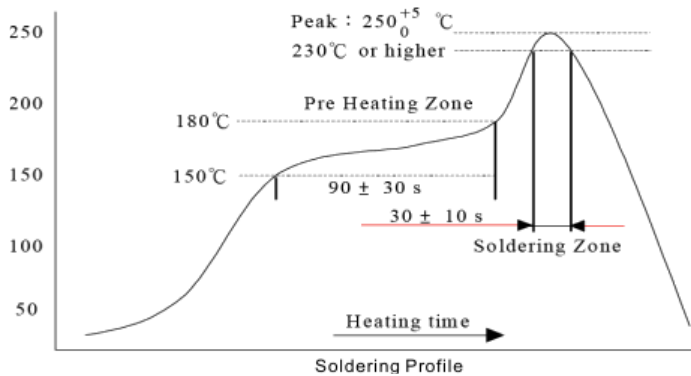
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RECOMMEND IR - REFLOW PROFILE ( solder : Sn96.5 / Ag3 / Cu0.5)

Fig-6

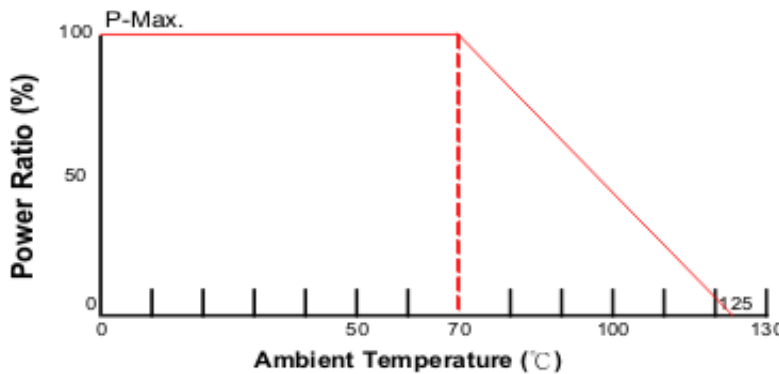


- ◆ Storage Condition: Temperature 5 to 35°C  
Related Humidity 40 to 75% RH
- ◆ Shelf Life: 2 Tears form manufacturing date.
- ◆ ENC: Engineering change notice  
The customer will be informed with ENC if there is significant modification on the characteristics and materials described in Approval sheet.

POWER DERATING CURVE

For resistor operated at ambient temperature over 70°C, power rating shall be derated in accordance with fig-7

Fig-7



STANDARD RESISTANCE VALUE IN A DECARD

◆ Resistor Series Ordering Information :

±1%: Ex.	Marking Code please refer to E96 data form as below : 121K the marking code is 1213 in E96 10R ohm the marking code is 1009 E96 1R ohm the marking code is 1008 E96 0.1R ohm the marking code is 0R10 E96	±5%: Ex.	Marking Code please refer to E24 data form as below : 100K the marking code is 104 in E24 10R ohm the marking code is 100 E24 1R ohm the marking code is 1R0 E24 0.1R ohm the marking code is 0R1 E24
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◆ Part Number

Resistance	Ordering Park	
	Value	±5% (E24)    ±1% (E96)
1M	105	1004
100K	104	1003
10K	103	1002
1K	102	1001
100R	101	1000
10R	100	1009
1R0	1R0	1008
0R1	0R1	0R10

Value	E24 Resistance Value:
10	Example: 1Ω, 10Ω, 100Ω, 1KΩ, 10KΩ, 100KΩ, 1MΩ.
15	Example: 1.5Ω, 15Ω, 150Ω, 1.5KΩ, 150KΩ, 1.5MΩ.

Value	E96 Resistance Value:
102	Example: 1.02Ω, 10.2Ω, 102Ω, 1.02KΩ, 10.2KΩ, 102KΩ.
909	Example: 9.09Ω, 90.9Ω, 909Ω, 9.09KΩ, 90.9KΩ.



**SINLOON®**

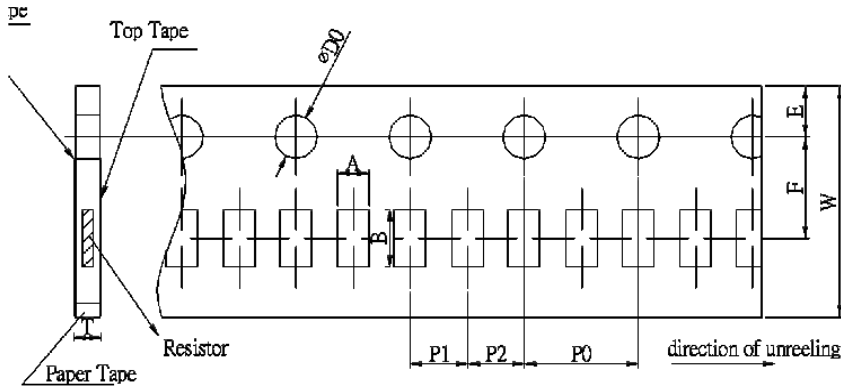
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□ **PACKAGE SPECIFICATION**

Packing	Type	A	B	W	F	E	P <sub>1</sub>	P <sub>2</sub>	P <sub>0</sub>	D <sub>0</sub>	T
Paper	RM01	0.24±0.05	0.45±0.1	8.0±0.2	3.5±0.05	1.75±0.1	2.0±0.1	2.0±0.05	4.0±0.1	0.1	
										φ 1.5	0.40±0.1
										0	

Fig-8



Power	Size	Type	Quantity(ea)			<b>SINLOON®</b>
			Paper Reel Tape	In Box	Carton	
1/32W	01005(0402)	CR01	20,000 Pcs 7" Reel(178mm)	200K pcs	1200K	

Reel Tape: Quantity: 20K / Reel

Inner Box: Quantity 200K PCS

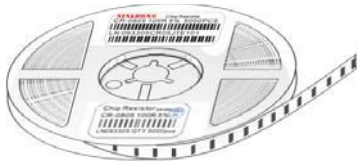


Fig-9



Fig-10

Carton: Quantity 1200K Pcs

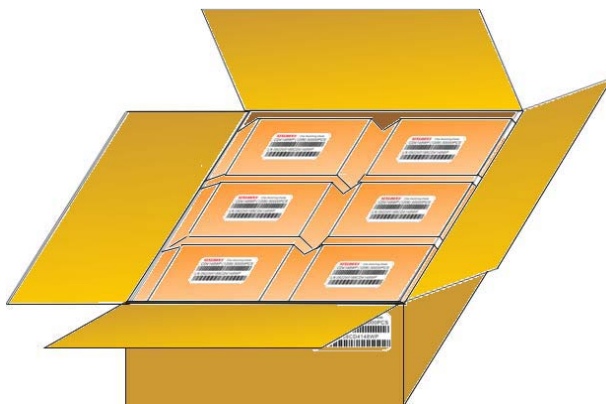


Fig-11

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

