

# Metal Oxide Film Resistors

**Power Rating: 1/4W-10W**  
**Resistance Value: 1Ω-820KΩ**  
**Resistance Tolerance: ±5%**

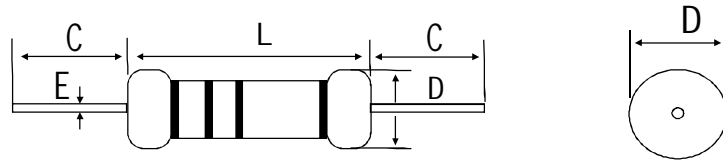


## ● Preview:

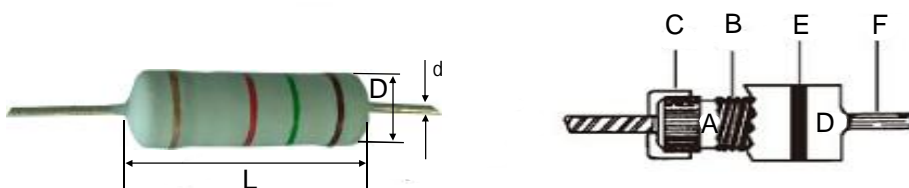
1. Good performance in moisture resistance, anti-oxidization, good thermal stability, nonflammability, overload stability.
2. Operating ambient temperature: -55℃ to +155℃.
3. The surface is nonflammable, the normal size coating is gray.
4. For resistors to show long-term stability under high temperature, the unit area of resistance film must withstand larger loads. The small-sized, high-performance metal oxide film resistors are made of high-quality ceramic core. Nonflammable insulating paint which is resistance cleaning agents and high temperature.
5. Power: 1/4W, 1/2Ws, 1/2W, 1Ws, 1W, 2Ws, 2W, 3Ws, 3W, 5Ws, 5W, 6W, 7W, 8W, 10W

## ● Features:

1. Small size, convenient in application, able to withstand overload without tripping.
2. Excellent electrical and mechanical stability and high reliability.
3. Minimal annual shift with excellent film strength.
4. Low noise, able to produce high resistance value unobtainable by wire wound resistors.
5. Widely used in circuit.
6. Delivery: 5-7 days.
7. Conforms to the ROHS standard and the LEAD-FREE non-lead standard.

**● Dimensions**


POWER RATING	DIMENSIONS (mm)				MAX WORKING V.	MAX OVERLOAD V.
	$L \pm 1$	$D \pm 0.5$	$E \pm 0.05$	$C \pm 3$		
1/4W	6	2.3	0.45	26	250V	350V
1/2W	9	3.2	0.55	26		
1WS	9	3.2	0.55	26		
1W	11	4.5	0.65	35	350V	600V
2WS	11	4.5	0.65	35		
2W	15	5	0.75	35	350V	600V
3WS	15	5	0.75	35		
3W	17	6	0.75	35		
5WS	17	6	0.75	35	500V	1000V
5W	24	8	0.75	30		
6W	24	8	0.75	30	750V	1000V
7W	31	8	0.75	30		
8W	41	8	0.75	30	750V	1000V
10W	51	8	0.75	30		

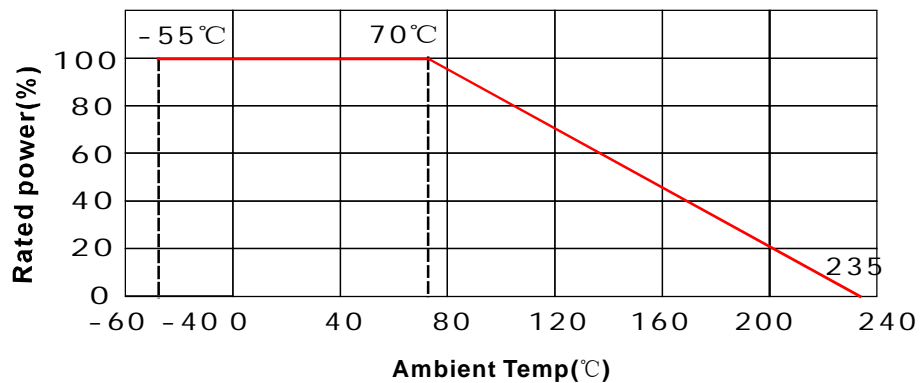
**● Construction Drawing:**


- A.High heat exchanged Ceramic Core .
- B.High stability Electric conduction film
- C.Iron Cap
- D.Silicon resin coating
- E.Color Ring
- F.Tinned copper lead wire or CP lead wire

## ● Performance Specifications

Test Item	Test Condition	Performance
Temperature coefficient	Test the resistance value at normal temperature and normal temperature added 100℃,calculated per 1℃ resistance value change rate	350PPM/℃
Pulse overload	At 4×rated voltage or Max.pulse overload voltage(get the lower)cycle 1000±200 times(1 second on,25seconds off)	$\Delta R \leq \pm(2\%R_0 + 0.05\Omega)$
Temp.Range	\	-55℃~200℃
Short Time Overload	2.5×rated voltage or Max.overload voltage(get the lower)for 5seconds	$\Delta R \leq \pm(1\%R_0 + 0.05\Omega)$
Resistance to soldering heat	Immerge into the 350±10℃ tin stove for 2-3seconds	$\Delta R \leq \pm(1\%R_0 + 0.05\Omega)$
Solderability	Immerge into the 245±5℃ tin stove for 2-3 seconds	The soldering area is over 95%
Load Life in humidity	Overload rated voltage or Max.working voltage(get the lower)for 1000hours (1.5 hours on and half-hour off)at the 40±2℃ and 90%-95% relative humidity.	$\Delta R \leq \pm(5\%R_0 + 0.1\Omega)$
Load Life in heat	Overload rated voltage or Max.working voltage(get the lower)for 1000hours (1.5 hours on and half-hour off)at the 70±2℃.	$\Delta R \leq \pm(5\%R_0 + 0.05\Omega)$
Insulation Voltage	DC 1/4W 1/2W :250V 1W 2WS:350V 2W 3WS~10W:500V	no breakdown,no flashover
Nonflammability	Respectively load AC voltage by 5,10,16times rated power for 5 minutes	No visible flame
Temperature Cycle	At -55℃ for 30min,then at+25℃ for 10-15 min,then at+155% for 30 min, then at+25℃ for 10-15 min,total 5 cycles.	$\Delta R \leq \pm(5\%R_0 + 0.05\Omega)$

## ● Derating



## ● How To Order

MO	1W	10Ω	J	T/B
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- ① Type:MO
- ② Rated Power(W):1/4W-10W
- ③ Resistance Value(Ω):0.1Ω-22MΩ
- ④ Tolerance(%):±2%~±5%
- ⑤ Packing(T/R:tape&reel,T/B:tape in box,bulk)