Metal Film Leadless Fixed Resistors

Performance Specification

Temperature Coefficient	±15, ±25, ±50, ±100 PPM/°C
Short Time Overload	±(0.5% + 0.05Ω)Max, with no evidence of mechanical damage.
Resistance to Soldering	±(0.5% + 0.05Ω)Max, with no evidence of mechanical damage.
Pulse Overload	±(1.0% + 0.05Ω)Max, with no evidence of mechanical damage.
Load Life	±(3.0% + 0.05Ω)Max, with no evidence of mechanical damage.
Load Life in Humidity	±(2.0% + 0.05Ω)Max, with no evidence of mechanical damage.
Solderability	95% Coverage Min.

Ordering Procedure: Ex.: MELF Metal Film type 0204 1/4W-S +/-0.1% 15PPM 100Ω Tape/Reel 3000

M 2 4 S 4 B B 1 0 0 0 T 3 0

Type:
M12 = Metal Film 0102
M24 = Metal Film 0204
M27 = Metal Film 0207
M39 = Metal Film 0309

Wattage:
Small size:
S8 = 1/8W-S
S4 = 1/4W-S
S2 = 1/2W-S
1S = 1W-S
Extra Small size:
1U = 1W-SS
2U = 2W-SS

Tolerance:
B = ±0.1%
C = ±0.25%
D = ±0.5%
F = ±1%
G = ±2%
J = ±5%

Resistance Value:
- E-24 series:
  1st digit is "0"
  2nd & 3rd digits are the significant figures of the resistance
  4th indicates the number of zeros
  "J" ~0.1, "K" ~ 0.01
  Ex. 4.7Ω ~ 47J, 4.7KΩ ~ 472
- E-96 series:
  1st to 3rd digits are the significant figures of the resistance and the 4th digit indicates the number of zeros.
  Ex.: 1.33KΩ = 1331

Packing Type:
T = Tape/Reel

Packing Qty:
2 = 2,000 pcs.
3 = 3,000 pcs.
B = 2,500 pcs.

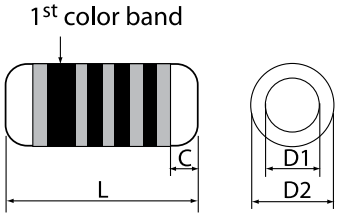
Additional Information:
0 = NIL

TCR:
B = 15PPM
C = 25PPM
F = 50PPM
G = 100PPM

Features

- SMD metal film resistor
- High terminal strength
- High stability and Low temperature coefficient
- Excellent solderability
- Suitable for Flow, Reftow and hand soldering

Part No.	Power Rating at 70°C	Dimension (mm)			
		D1	D2(Max)	L±0.2	C(Min)
M12S8	1/8W(0.125W)	1.2±0.05	1.4	2±0.1	0.4
M24S4	1/4W (0.25W)	1.4±0.15	1.55	3.5	0.5
M27S2	1/2W (0.50W)	2.2±0.2	2.4	5.9	0.5
M271U	1W	2.2±0.1	2.4	5.9	0.5
M391S	1W	3.2±0.2	3.4	8.5	0.5
M392U	2W	3.2±0.2	3.4	8.5	0.5



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General Specification

Part No.	Power Rating at 70 °C	Tolerance %	T.C.R.	Resistance Range	Max Working Voltage	Max Overload Voltage	Std Packing (Reel)
M12S8	1/8W (0.125W)	± 1%	± 100PPM/°C	1Ω~4.7Ω	150	300	3,000
		± 1%	± 50PPM/°C	4.7Ω~560KΩ			
M24S4	1/4W (0.25W)	± 1%	± 100PPM/°C	5.11MΩ~10MΩ	200	400	3,000
		± 5%	± 100PPM/°C	0.1Ω~0.99Ω			
		± 1%	± 50PPM/°C	1Ω~5.1MΩ			
		± 2%	± 50PPM/°C	1Ω~5.1MΩ			
		± 1%	± 25PPM/°C	10Ω~560KΩ			
M27S2	1/2W (0.50W)	± 1%	± 100PPM/°C	5.11MΩ~10MΩ	250	500	2,000
		± 5%	± 100PPM/°C	0.1Ω~0.99Ω			
		± 1%	± 50PPM/°C	1Ω~5.1MΩ			
		± 2%	± 50PPM/°C	1Ω~5.1MΩ			
		± 1%	± 25PPM/°C	10Ω~560KΩ			
M271U	1W	± 1%	± 100PPM/°C	0.1Ω~0.99Ω	350	700	2,000
				5.11MΩ~10MΩ			
		± 5%	± 100PPM/°C	0.1Ω~0.99Ω			
		± 1%	± 50PPM/°C	1Ω~5.1MΩ			
		± 2%	± 50PPM/°C	1Ω~5.1MΩ			
		± 1%	± 25PPM/°C	10Ω~560KΩ			
M391S	1W	± 1%	± 50PPM/°C	1Ω~1MΩ	350	700	2,500
		± 2%	± 50PPM/°C	1Ω~1MΩ			
M392U	2W	± 1%	± 50PPM/°C	1Ω~5.1MΩ	350	700	2,500
		± 2%	± 50PPM/°C	1Ω~5.1MΩ			
		± 1%	± 25PPM/°C	10Ω~1MΩ			

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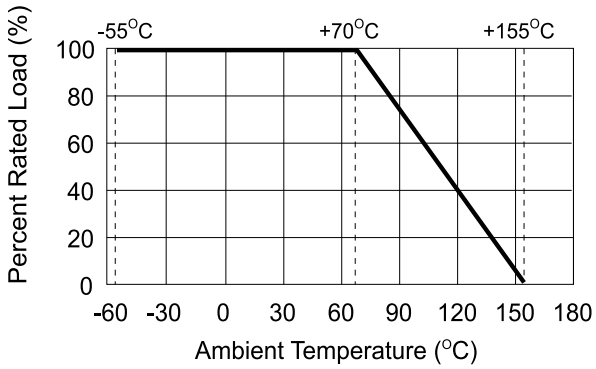
Special Tolerance & T.C.R.

Part No.	Power Rating at 70°C	Tolerance %	T.C.R.	Resistance Range	Max Working Voltage	Max Overload Voltage	Std Packing (Reel)
M12S8	1/8W (0.125W)	± 0.1%	± 50PPM/°C	100Ω ~ 560KΩ	150	300	3,000
		± 0.1%	± 25PPM/°C	100Ω ~ 100KΩ			
		± 0.25%	± 25PPM/°C	100Ω ~ 300KΩ			
		± 0.5%	± 25PPM/°C	100Ω ~ 500KΩ			
M24S4	1/4W (0.25W)	± 0.1%	± 50PPM/°C	100Ω ~ 560KΩ	200	400	3,000
		± 0.25%	± 50PPM/°C	10Ω ~ 1MΩ			
		± 0.5%	± 50PPM/°C	10Ω ~ 1MΩ			
M27S2	1/2W (0.50W)	± 0.1%	± 25PPM/°C	100Ω ~ 560KΩ	250	500	2,000
		± 0.25%	± 25PPM/°C	100Ω ~ 560KΩ			
		± 0.5%	± 25PPM/°C	100Ω ~ 560KΩ			
M271U	1W	± 0.1%	± 15PPM/°C	100Ω ~ 100KΩ	350	700	2,500
		± 0.25%	± 15PPM/°C	100Ω ~ 330KΩ			

Derating Curve



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