

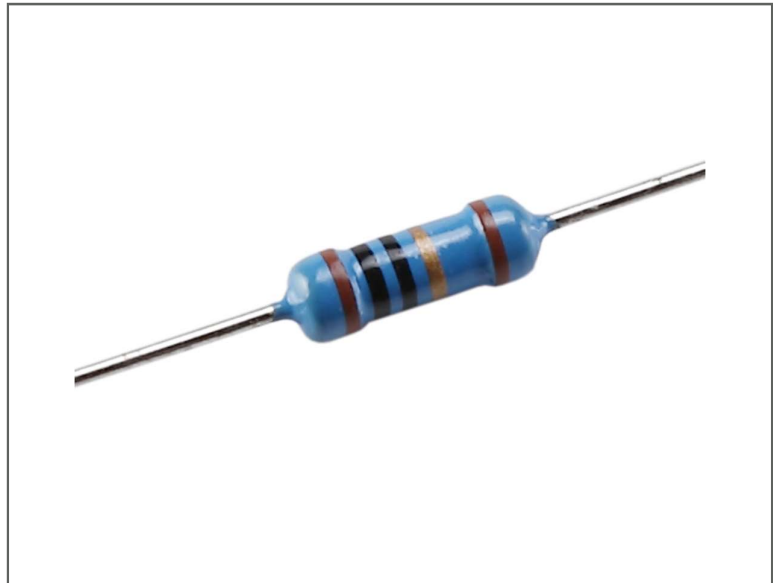
Features

- Excellent overall stability
- Very tight tolerance down to $\pm 0.05\%$
- Extremely low TCR down to $\pm 5 \text{ PPM}/^\circ\text{C}$
- High power rating up to 3 Watts
- Excellent ohmic contact

RS PRO Metal Film Leaded Precision Resistor

RS Stock No.:

0327886, 0327887, 0327889, 0327890, 0327892, 0327893, 0327895, 0327896, 0327898, 0327899, 0327900, 0327902, 0327903, 0327905, 0327906, 0327907, 0327909, 0327911, 0327912, 0327913, 0327915, 0327916, 0327918, 0327919



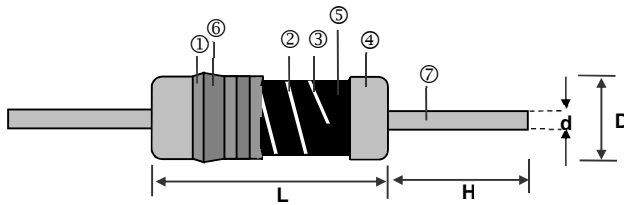
RS PRO is the own brand of RS. The RS PRO Seal of Approval is your assurance of professional quality, a guarantee that every part is rigorously tested, inspected, and audited against demanding standards. Making RS PRO the Smart Choice for our customers.

Product Description

Applications Include:

- Telecommunications
- Medical Equipment

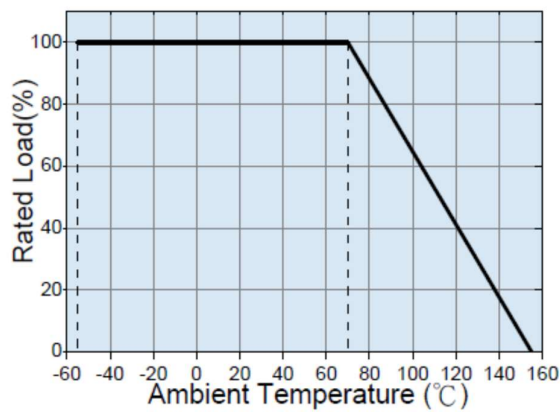
Construction



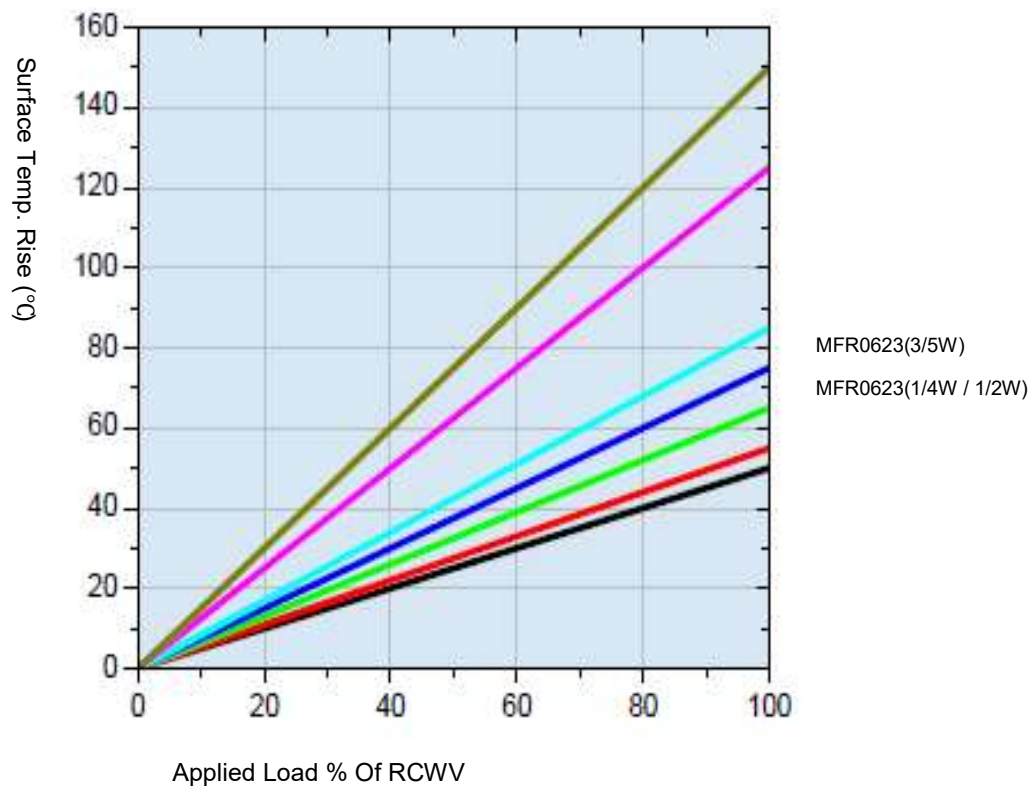
① Insulation Coating	⑤ Resistor Layer
② Trimming Line	⑥ Marking
③ Ceramic Core	⑦ Lead Wire
④ Electrode Cap	

Type	RS Article	L	D	H	d	Weight (g) (1000pcs)
RSPMFR0623	0327886	6.3±0.5	2.3±0.3	28±3.0	0.55±0.03	150
	0327887					
	0327889					
	0327890					
	0327892					
	0327893					
	0327895					
	0327896					
	0327898					
	0327899					
	0327900					
	0327902					
	0327903					
	0327905					
	0327906					
	0327907					
	0327909					
	0327911					
	0327912					
	0327913					
	0327915					
	0327916					
	0327918					
	0327919					
	0327921					

Derating Curve



Hot-Spot Temperature



Part Number Make Up

RSPMFR	0318	B	T	C	W	1001
Product Type	Dimensions (L×D)	Resistance Tolerance	Packaging Code	TCR (PPM/°C)	Power Rating	Resistance
	0623: 6.3x2.3	F: ±1%	A: Ammo	D: ±50	F: 3/5W	R100: 0.1Ω 0010: 1Ω 1000: 100Ω 2201: 2200Ω 1001: 1KΩ 1004: 1MΩ

Electrical Specifications

Item Type	Power Rating at 70°C	Operating Temp. Range	Max. Operating Voltage	Max. Overload Voltage	Voltage Proof	Resistance Range					TCR (PPM/°C)
						±0.05%	±0.1%	±0.25%	±0.5%	±1%	
0623	1/4W	-55 ~ +155°C	250V	500V	500V	10Ω-1MΩ				-	±5
						10Ω-1MΩ				100Ω-22KΩ	±10
						10Ω-1MΩ	10Ω-1MΩ	10Ω-499KΩ			±15
						10Ω-1MΩ	10Ω-1MΩ				±25
						-	10Ω-1MΩ		10Ω-4.99MΩ	10Ω-10MΩ	±50
						-	-	10Ω-1MΩ	10Ω-4.99MΩ	0.1Ω-10MΩ	±100

Operating Voltage= $\sqrt{P \times R}$ or Max. operating voltage listed above, whichever is lower.

Overload Voltage= $2.5 \times \sqrt{P \times R}$ or Max. overload voltage listed above, whichever is lower.

Value Range for standard resistance · below or over this resistance on request.

High Power & Ultra High Power Rating Electrical Specifications

Item Type	Power Rating at 70°C	Operating Temp. Range	Max. Operatin g Voltage	Max. Overloa d Voltage	Voltage Proof	Resistance Range					TCR (PPM/°C)
						±0.05%	±0.1%	±0.25%	±0.5%	±1%	
0623	1/2W	-55 ~ +155°C	300V	500V	500V	10Ω-1MΩ				-	±5
						10Ω-1MΩ				100Ω- 22KΩ	±10
						10Ω-1MΩ		10Ω-499KΩ			±15
						10Ω-1MΩ					±25
						-	10Ω-1MΩ		10Ω- 4.99MΩ	10Ω- 10MΩ	±50

						-	10Ω-1MΩ	10Ω-4.99MΩ	0.1Ω-10MΩ	±100
						-	100Ω-22KΩ			±10
						-	10Ω-499KΩ			±15
						-	10Ω-1MΩ			±25
	3/5W		350V	500V	500V	-	10Ω-1MΩ	10Ω-4.99MΩ	10Ω-10MΩ	±50
						-	10Ω-1MΩ	10Ω-4.99MΩ	0.1Ω-10MΩ	±100

Operating Voltage= $\sqrt{P \cdot R}$ or Max. operating voltage listed above, whichever is lower.
 Overload Voltage= $2.5 \cdot \sqrt{P \cdot R}$ or Max. overload voltage listed above, whichever is lower.
 Value Range for standard resistance : below or over this resistance on request.

Environmental Specifications

Item	Requirement	Test Method
Resistance Value	1Ω-10MΩ	IEC-60115-1 4.5 Measure at a distance of 10mm from the cap end
Short Time Overload	±(0.25%+0.05Ω)	IEC-60115-1 4.13 2.5 times RCWV for 5 seconds
Insulation Resistance	> 1000MΩ	IEC-60115-1 4.6 The measure was executed by V-Block methods
Endurance	±(1.5%+0.05Ω)	IEC-60115-1 4.25 70±2°C, at RCWV (or Umax., whichever less) for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Damp Heat, Steady State	±(1.5%+0.05Ω)	IEC-60115-1 4.24 40±2°C, 90~95% R.H., for 56 days, loaded with 0.1 times RCWV (or Umax. whichever less)
Solderability	95% min. Coverage	IEC-60115-1 4.17 245±5°C for 3±0.5 seconds
Voltage Proof	By Type	IEC-60115-1 4.7 In V-Block for 60 seconds
Temperature Coefficient	By Type	IEC-60115-1 4.8 Resistance value at room temperature and room Temperature(+100°C)
Periodic-Pulse Overload Test	±(0.75%+0.05Ω)	IEC-60115-1 4.39 4 times RCWV(or Umax., whichever less) for 10000 cycles with 1sec "ON" and 25 sec "OFF"
Solvent Resistance of Marking	No obvious deterioration of coatings and markings	IEC-60115-1 4.30 IPA for 5±0.5 min. with ultrasonic
Robustness of Terminations	Tensile: ≥ 2.5kg(24.5N)	IEC-60115-1 4.16 Direct Load for 10 sec. In the direction off the terminal leads
Resistance to Soldering Heat	0318: ±(0.75%+0.05Ω) 0623&0932: ±(0.5%+0.05Ω) 1145&1550: ±(0.25%+0.05Ω)	IEC-60115-1 4.18 The solder iron heated to 260°C±5°C and applied to the termination for a duration of 10±1 seconds
Temperature Cycling	±(0.75%+0.05Ω)	IEC-60115-1 4.19 -55°C/125°C with 5 cycles. the duration at each temperature 30 min

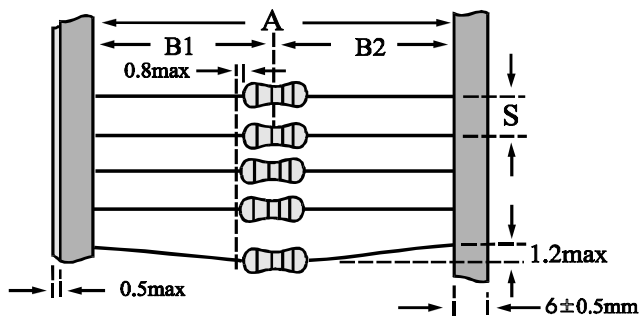
RCWV(Rated continuous working voltage)= $\sqrt{P \cdot R}$ or Max. Operating voltage whichever is lower

■ Storage Temperature: 25±10°C; Humidity < 80%RH

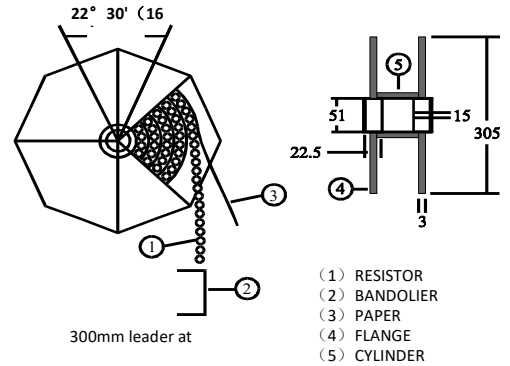
Taping/Packing Specification

1. Standard Type (Reel & Ammo)

Packing Methods

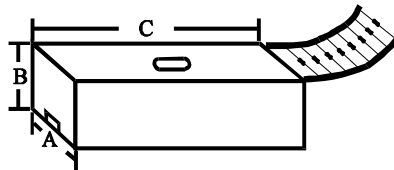


Reel Packing



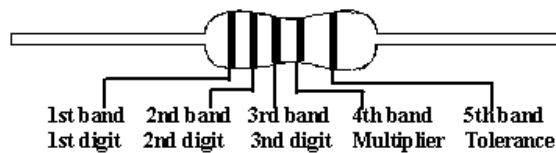
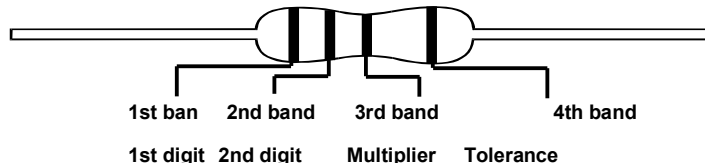
Packaging Type	Packing Methods			Reel Packing	
	A	B1-B2 Max	S	Across Flange (A)	Qty
0623	52+1/-0	1.2	5±0.3	72	5,000
	26+0.5/-0	1.0			
	52+1/-0				

Ammo Packing



Packaging Type	Packing Methods			Ammo Packing			
	A	B1-B2 Max	S	A	B	C	Qty
0623	52+1/-0	1.2	5±0.3	79±2	100±3	257±5	5,000
	26+0.5/-0	1.0		52±2	109±3	252±5	

Marking & Resistance Tolerance



Color	Digit	Multiplier	Tolerance	
Without	-	-	±20%	M
Silver	-	10 ⁻²	±10%	K
Gold	-	10 ⁻¹	±5.0%	J
Black	0	10 ⁰	-	-
Brown	1	10 ¹	±1.0%	F
Red	2	10 ²	±2.0%	G
Orange	3	10 ³	-	-
Yellow	4	10 ⁴	-	-
Green	5	10 ⁵	±0.50%	D
Blue	6	10 ⁶	±0.25%	C
Violet	7	10 ⁷	±0.10%	B
Grey	8	10 ⁸	±0.05%	A
White	9	10 ⁹	-	-

±1.00%	±0.50%	±0.25%	±0.10%	E-24	1.0	1.1	1.2	1.3	1.5	1.6	1.8	2.0	2.2	2.4	2.7	3.0	3.3	3.6	3.9	4.3	4.7	5.1	5.6	6.2	6.8	7.5	8.2	9.1
±1.00%	±0.50%			E-96	1.00	1.02	1.05	1.07	1.10	1.13	1.15	1.18	1.21	1.24	1.27	1.30	1.33	1.37	1.40	1.43	1.47	1.50	1.54	1.58	1.62	1.65	1.69	1.74
					1.78	1.82	1.87	1.91	1.96	2.00	2.05	2.10	2.15	2.21	2.26	2.32	2.37	2.43	2.49	2.55	2.61	2.67	2.74	2.80	2.87	2.94	3.01	3.09
					3.16	3.24	3.32	3.40	3.48	3.57	3.65	3.74	3.83	3.92	4.02	4.12	4.22	4.32	4.42	4.53	4.64	4.75	4.87	4.99	5.11	5.23	5.36	5.49
					5.62	5.76	5.90	6.04	6.19	6.34	6.49	6.65	6.81	6.98	7.15	7.32	7.50	7.68	7.87	8.06	8.25	8.45	8.66	8.87	9.09	9.31	9.53	9.76
±0.25%	±0.10%			E-192	10.0	10.1	10.2	10.4	10.5	10.6	10.7	10.9	11.0	11.1	11.3	11.4	11.5	11.7	11.8	12.0	12.1	12.3	12.4	12.6	12.7	12.9	13.0	13.2
					13.3	13.5	13.7	13.8	14.0	14.2	14.3	14.5	14.7	14.9	15.0	15.2	15.4	15.6	15.8	16.0	16.2	16.4	16.5	16.7	16.9	17.2	17.4	17.6
					17.8	18.0	18.2	18.4	18.7	18.9	19.1	19.3	19.6	19.8	20.0	20.3	20.5	20.8	21.0	21.3	21.5	21.8	22.1	22.3	22.6	22.9	23.2	23.4
					23.7	24.0	24.3	24.6	24.9	25.2	25.5	25.8	26.1	26.4	26.7	27.1	27.4	27.7	28.0	28.4	28.7	29.1	29.4	29.8	30.1	30.5	30.9	31.2
					31.6	32.0	32.4	32.8	33.2	33.6	34.0	34.4	34.8	35.2	35.7	36.1	36.5	37.0	37.4	37.9	38.3	38.8	39.2	39.7	40.2	40.7	41.2	41.7
					42.2	42.7	43.2	43.7	44.2	44.8	45.3	45.9	46.4	47.0	47.5	48.1	48.7	49.3	49.9	50.5	51.1	51.7	52.3	53.0	53.6	54.2	54.9	55.6
					56.2	56.9	57.6	58.3	59.0	59.7	60.4	61.2	61.9	62.6	63.4	64.2	64.9	65.7	66.5	67.3	68.1	69.0	69.8	70.6	71.5	72.3	73.2	74.1
					75.0	75.9	76.8	77.7	78.7	79.6	80.6	81.6	82.5	83.5	84.5	85.6	86.6	87.6	88.7	89.8	90.9	92.0	93.1	94.2	95.3	96.5	97.6	98.8