RSF, RSS

LEADFREE
RoHS Compliant

ELECTRICAL SPECIFICATIONS

All measurements are taken at +25° at 1KHz and 65% relative humidity, unless otherwise stated.

INTRODUCTION

RSF Series is a group of electric power type highly reliable fixed resistors with special metal oxide film thermochemically burned on the high heat conductive base material. They include those of flame-resisting coating type and nonflammable coating type and are of uniform quality produced through the most modern production and quality control system. They are most reliable products easily used for various kinds of electronic devices and instruments.

RSS is a group of small-sized metal oxide film resistor, apply high aluminum content ceramic cores with performance for compact sizes.

FEATURES

- Low cost, prompt delivery.
- High power-to-size ratio for significant space savings.
- Excellent long-term stability.
- Complete flameproof construction.
- High surge/overload capability.
- Controlled temperature coefficient.
- Non-inductive design.
- Wide resistance range.
- Standard tolerance: ±1%, ±2%, ±5%
- Coating and marking resist Trichlorethelyne, and other cleaning agents.
- Improved stability, dissipations, TCR available.
- 1/4 - 3W apply color code, 4 - 7W apply graphic marking.

DESCRIPTION

MEGASTAR-OHM Metal Oxide Resistors offer excellent performance in applications where stability and uniformity of characteristics are desired. They provide lower cost alternatives to Carbon Composition Resistors and General Purpose Metal Films. Metal Oxides also can replace many lower power General Purpose wirewound applications, saving both money and time, with shorter delivery cycles. These Metal Oxides meet overload tests in accordance with UL specification #1412 without producing a fire hazard. (UL #1412 is the industry standard for fusing resistors and temperature limited resistors.) These Metal Oxides withstand solvents test in accordance with article MIL-STD-202E wothout producing mechanical or electrical damage.

Part Numbering system

RSF

Type
RSF RSS

1

Rated Power
1/4W ↓ 10W

5%

Resistance tolerance
±5%
±2%
±1%

2K2

Nominal Resistance	
Code	Description
2R2	2.2 OHMs
22R	22 OHMs
2K2	$2.2x10^3$ OHMs
22K	$22x10^3$ OHMs
22M	$22x10^6$ OHMs

TR

Packaging	
Code	Description
B	Bulk
TR	Tape & Reel
MF	Forms
MK	Forms
FK	Forms
PATR	Avisert T/R
PNTR	Panasert T/R

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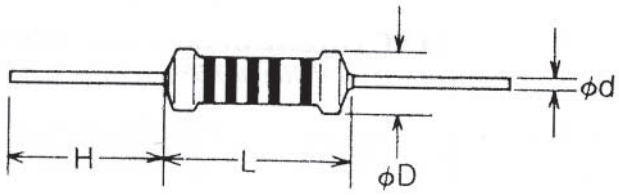
Dimensions



GENERAL SPECIFICATIONS

Type		Dimensions				Max. Working V.	Max. Overload V.	Resistance Range
RSS	RSF	L	D	d	H (MIN)			±5% (J)
1/2W	1/4W	6.5±1	2.3±0.5	0.50±0.05	25	250V	500V	0.1Ω -1MΩ
1W	1/2W	9±1	3.5±0.5	0.65±.02	25	300V	600V	0.1Ω -1MΩ
2WS	1/2W	9±1	3±0.5	0.8±.03	27	350V	700V	0.1Ω -1MΩ
2W	1W	12±1	4.5±0.5	0.8±.03	27	350V	700V	0.1Ω -1MΩ
3W	2W	16±1	5.5±0.5	0.8±.03	27	350V	700V	0.1Ω -1MΩ
5W	3W	25±1	8.5±0.5	0.8±.03	27	500V	1000V	0.5Ω -1MΩ
6W	4W	32±1	8.5±0.5	0.8±.03	27	500V	1000V	10Ω -1Ω
7W	5W	41±1	8.5±0.5	0.8±.03	27	750V	1000V	10Ω -150KΩ
10W	7W	53±1	8.5±0.5	0.8±.03	27	750V	1000V	10Ω -150KΩ

CHARACTERISTICS

Requirements	Performance	Test Method	
		JIS-C-5202	MIL-STD-202
Operating Temp. Range	-55°C ~ +200°C	----------	----------
Temp. Coefficient (ppm/°C)	±350*	5.2	Method 304
Short Time Overload	³Rmax <= ±(1% + 0.05Ω)	5.5-A	----------
Resistance to Soldering Heat	³Rmax <= ±(1% + 0.05Ω)	6.4. 350°C 3 sec	Method 210
Temp. Cycling	³Rmax <= ±(1% + 0.05Ω)	7.4. -55°C/85°C, 5 cycles	Method 107
Moisture Resistance	³Rmax <= ±5%	7.9 95%RH on-off 1,000hrs.	Method 106
Load Life	³Rmax <= ±5%	7.10 70°C on-off 1,000hrs.	Method 108
Dielectric Withstanding Voltage	³Rmax <= ±(.5% + 0.05Ω)	5.7-A	Method 301
Insulation Resistance	>10⁴MΩ	5.6-A	----------
Non-Combustibility	The resistor shall withstand Overload test in accordance with Article UL 492.2.13 without causing a fire hazard.		

*NOTE: TCR±200ppm is also available; consult the factory.

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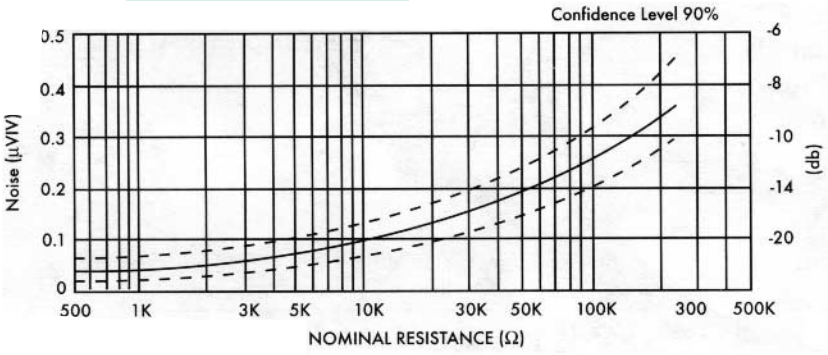
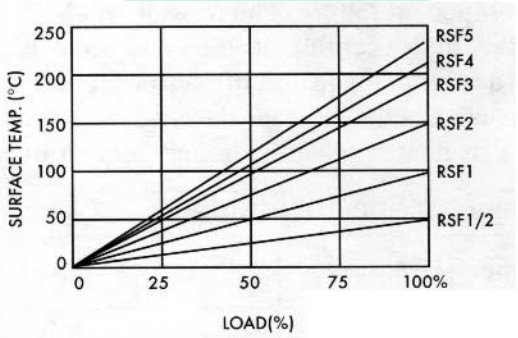
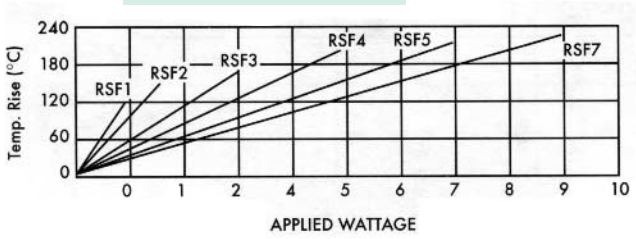
CURRENT NOISE



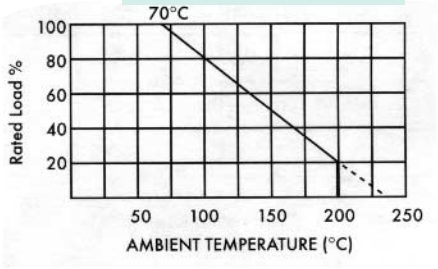
SURFACE TEMP. RISE



TEMPERATURE RISE

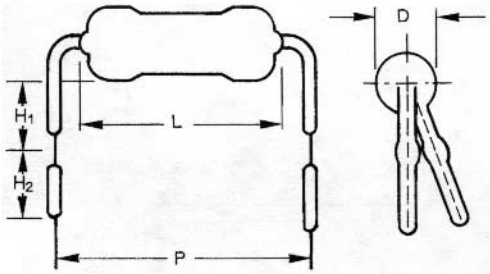


DERATING CURVE



PACKAGING STYLES UPON REQUEST

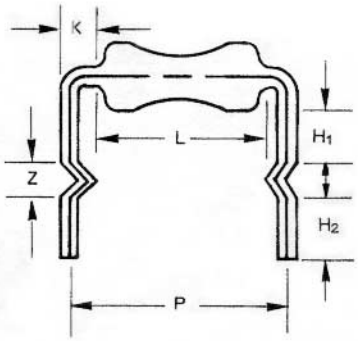
MF FORM



Unit: mm

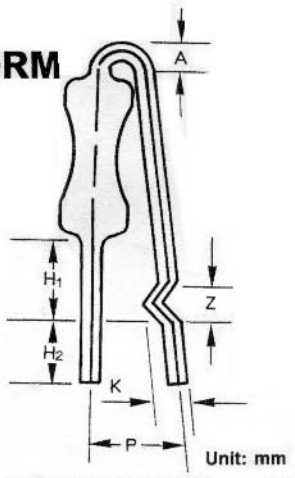
RSS	RSF	L±1	D±0.5	P	H1	H2±1
1W	1/2W	9	3.5	15±1.5	7±1	4.5
2W	1W	11	4.5	15±1.5	7±1	4.5
3W	2W	15	5.5	20±2	10±2	4.5
5W	3W	24	8.5	30±2	13±2	4.5

MK FORM



RSS	RSF	D±0.5	L±1	H±3	d±0.02	P+0.5	H1±1	H2±1	Z±1	K±0.5	A±0.5
1W	1/2W	3	9	30	0.7	15	5	5	3	2	3
2W	1W	4	11	33	0.8	15	5	5	3	2	3
3W	2W	4.5	15	33	0.8	20	5	5	3	2	3
5W	3W	8.5	24	38	0.8						

FK FORM



Unit: mm