

- Features:
- Lower-cost alternative to carbon comps and wirewounds
 - Coating meets UL 94V-0
 - Meets solvent test of Mil Standard 202, Method 215
 - Cut and formed product is available on select sizes; contact factory for details
 - Higher or lower resistance values may be possible; contact factory
 - Flameproof
 - RoHS compliant / lead-free

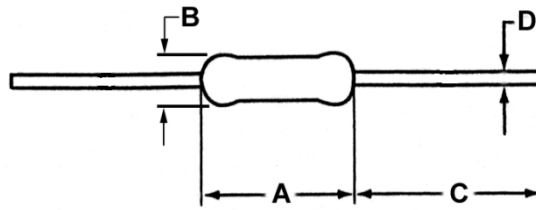


| Electrical Specifications | | | | | | | | |
|---------------------------|-----------------------------|-----------------------------|--------------------------|---------------------------------|------------------------------------|-------------------------------|------------|------------|
| Type / Code | Power Rating (Watts) @ 70°C | Maximum Working Voltage (1) | Maximum Overload Voltage | Dielectric Withstanding Voltage | Resistance Temperature Coefficient | Ohmic Range (Ω) and Tolerance | | |
| | | | | | | 1% | 2% | 5% |
| RSF12 | 0.5W | 250V | 400V | 350V | ±200 ppm/°C | 0.1 - 150K | 0.1 - 75K | 0.1 - 1M |
| RSF1 | 1W | 350V | 600V | 600V | ±200 ppm/°C | 0.1 - 100K | | |
| RSF2 | 2W | 350V | 600V | 600V | ±200 ppm/°C | 0.1 - 120K | | |
| RSF3 | 3W | 800V | 1,000V | 750V | ±200 ppm/°C | 0.1 - 470K | 0.1 - 560K | |
| RSF5 | 5W | 1,000V | 1,000V | 750V | ±200 ppm/°C | | | |
| RSMF12 | 0.5W | 250V | 400V | 350V | ±200 ppm/°C | 0.1 - 46.4K | 0.1 - 47K | 0.1 - 470K |
| RSMF1 | 1W | 350V | 600V | 500V | ±200 ppm/°C | 0.1 - 75K | | |
| RSMF2 | 2W | 350V | 600V | 500V | ±200 ppm/°C | 0.1 - 100K | | |
| RSMF3 | 3W | 500V | 800V | 600V | ±200 ppm/°C | 0.1 - 118K | 0.1 - 120K | |
| RSMF5 | 5W | 1,000V | 1,000V | 750V | ±200 ppm/°C | 0.1 - 470K | 0.1 - 560K | 0.1 - 1M |

(1) Lesser of \sqrt{PR} or maximum working voltage

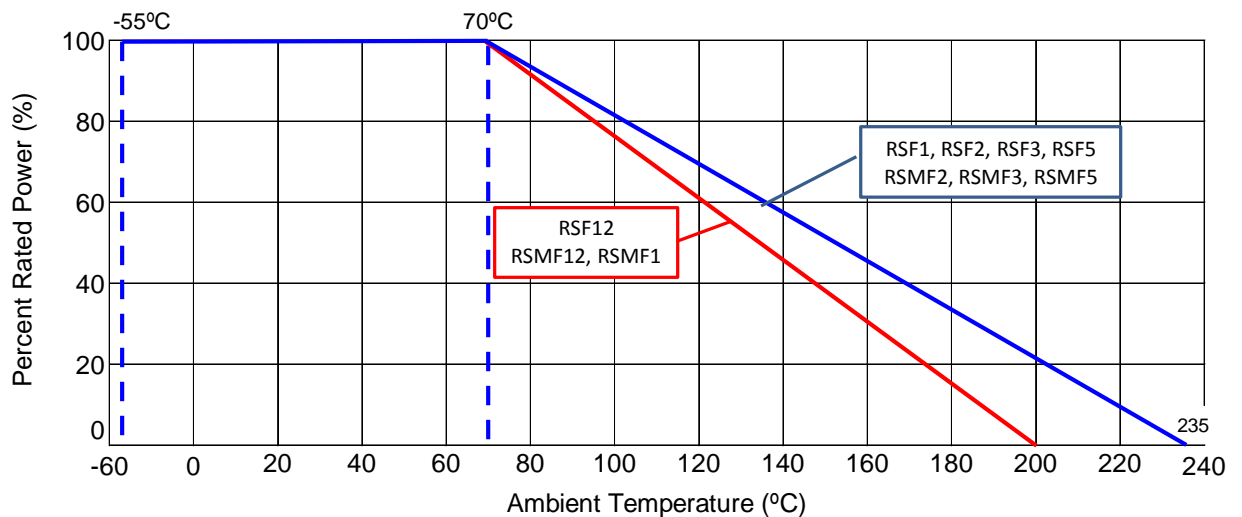
| Performance Characteristics | | | |
|----------------------------------------|---------------------------------|-----------------|-----------------------------------------------|
| Test | Standard / Method | Typical Results | Test Limits |
| Insulation Resistance | JIS C5201-1, IEC60115-1, 4.6 | ≥ 1GΩ | ≥ 1GΩ |
| Voltage Proof | JIS C5201-1, IEC60115-1, 4.7 | <± 0.25% | ≤ ± (0.5% + 0.05Ω) No mechanical damage. |
| Short Time Overload | JIS C5201-1, IEC60115-1, 4.13 | <± 0.1% | ≤ ± (0.75% + 0.05Ω) |
| Resistance to Solder Heat | JIS C5201-1, IEC60115-1, 4.18 | <± 1.0% | ≤ ± (2.0% + 0.05Ω) |
| Endurance at 70°C | JIS C5201-1, IEC60115-1, 4.25.1 | <± 2.0% | ≤ ± (5.0% + 0.05Ω) |
| Robustness of Terminations | JIS C5201-1, IEC60115-1, 4.16 | <± 0.10% | ≤ ± (1.0% + 0.05Ω) |
| Damp Heat (Steady state) | JIS C5201-1, IEC60115-1, 4.24 | <± 1.5% | ≤ ± (5% + 0.05Ω) |
| Rapid Change of Temperature | JIS C5201-1, IEC60115-1, 4.19 | <± 0.2% | ≤ ± (1% + 0.05Ω) |
| Resistance to Solvents | JIS C5201-1, IEC60115-1, 4.29 | Pass | No damage to component or removal of marking. |
| Intermittent Overload | JIS C5201-1, IEC60115-1, 4.39 | <± 0.3% | ≤ ± (2% + 0.05Ω) |
| Accidental Overload (Flame resistance) | JIS C5201-1, IEC60115-1, 4.26 | Pass | No flaming of gauze. |

Operating Temperature Range: -55°C to +200°C (RSF12, RSMF12, RSMF1)
-55°C to +235°C (All others)

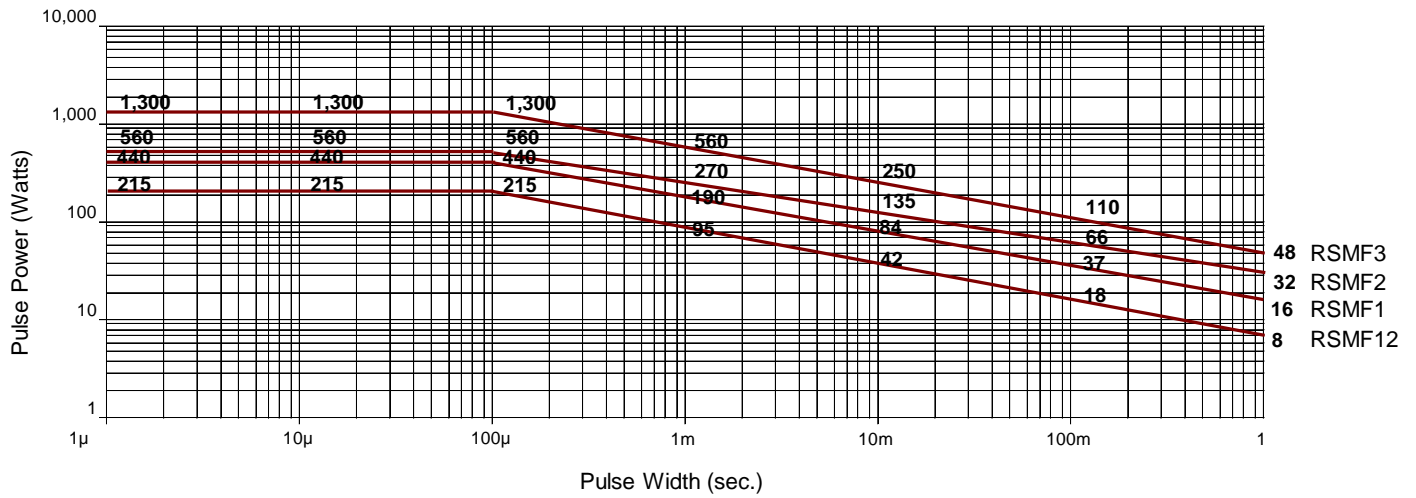


| Mechanical Specifications | | | | | | |
|---------------------------|------------------|--------------------|-------------------------|--------------------|----------------------------|--------|
| Type / Code | A Body Length | B Body Diameter | C Lead Length (Bulk) | D Lead Diameter | Lead-Tape Specification | Unit |
| RSF12 | 0.35 ± 0.04 | 0.13 ± 0.03 | 1.10 ± 0.12 | 0.03 ± 0.003 | 0.250 | inches |
| | 9.00 ± 1.00 | 3.20 ± 0.80 | 28.00 ± 3.00 | 0.70 ± 0.08 | 6.35 | mm |
| RSF1 | 0.43 ± 0.06 | 0.18 ± 0.04 | 1.10 ± 0.20 | 0.03 ± 0.002 | 0.250 | inches |
| | 11.00 ± 1.50 | 4.50 ± 1.00 | 28.00 ± 5.00 | 0.80 ± 0.05 | 6.35 | mm |
| RSF2 | 0.59 ± 0.06 | 0.22 ± 0.04 | 1.18 ± 0.20 | 0.03 ± 0.004 | 0.250 | inches |
| | 15.00 ± 1.50 | 5.50 ± 1.00 | 30.00 ± 5.00 | 0.75 ± 0.10 | 6.35 | mm |
| RSF3 | 0.69 ± 0.04 | 0.24 ± 0.02 | 1.38 ± 0.12 | 0.03 ± 0.002 | 0.250 | inches |
| | 17.50 ± 1.00 | 6.00 ± 0.50 | 35.00 ± 3.00 | 0.80 ± 0.05 | 6.35 | mm |
| RSF5 | 0.96 ± 0.04 | 0.31 ± 0.02 | 1.38 ± 0.12 | 0.03 ± 0.002 | 0.250 | inches |
| | 24.50 ± 1.00 | 8.00 ± 0.50 | 35.00 ± 3.00 | 0.80 ± 0.05 | 6.35 | mm |
| RSMF12 | 0.24 ± 0.03 | 0.09 ± 0.01 | 1.10 ± 0.12 | 0.02 ± 0.003 | 0.250 | inches |
| | 6.00 ± 0.80 | 2.30 ± 0.30 | 28.00 ± 3.00 | 0.55 ± 0.07 | 6.35 | mm |
| RSMF1 | 0.35 ± 0.04 | 0.13 ± 0.03 | 1.10 ± 0.12 | 0.03 ± 0.003 | 0.250 | inches |
| | 9.00 ± 1.00 | 3.20 ± 0.80 | 28.00 ± 3.00 | 0.70 ± 0.08 | 6.35 | mm |
| RSMF2 | 0.43 ± 0.06 | 0.18 ± 0.04 | 1.18 ± 0.20 | 0.03 ± 0.002 | 0.250 | inches |
| | 11.00 ± 1.50 | 4.50 ± 1.00 | 30.00 ± 5.00 | 0.80 ± 0.05 | 6.35 | mm |
| RSMF3 | 0.59 ± 0.06 | 0.22 ± 0.04 | 1.18 ± 0.20 | 0.03 ± 0.004 | 0.250 | inches |
| | 15.00 ± 1.50 | 5.50 ± 1.00 | 30.00 ± 5.00 | 0.75 ± 0.10 | 6.35 | mm |
| RSMF5 | 0.69 ± 0.04 | 0.24 ± 0.02 | 1.38 ± 0.08 | 0.03 ± 0.002 | 0.250 | inches |
| | 17.50 ± 1.00 | 6.00 ± 0.50 | 35.00 ± 2.00 | 0.80 ± 0.05 | 6.35 | mm |

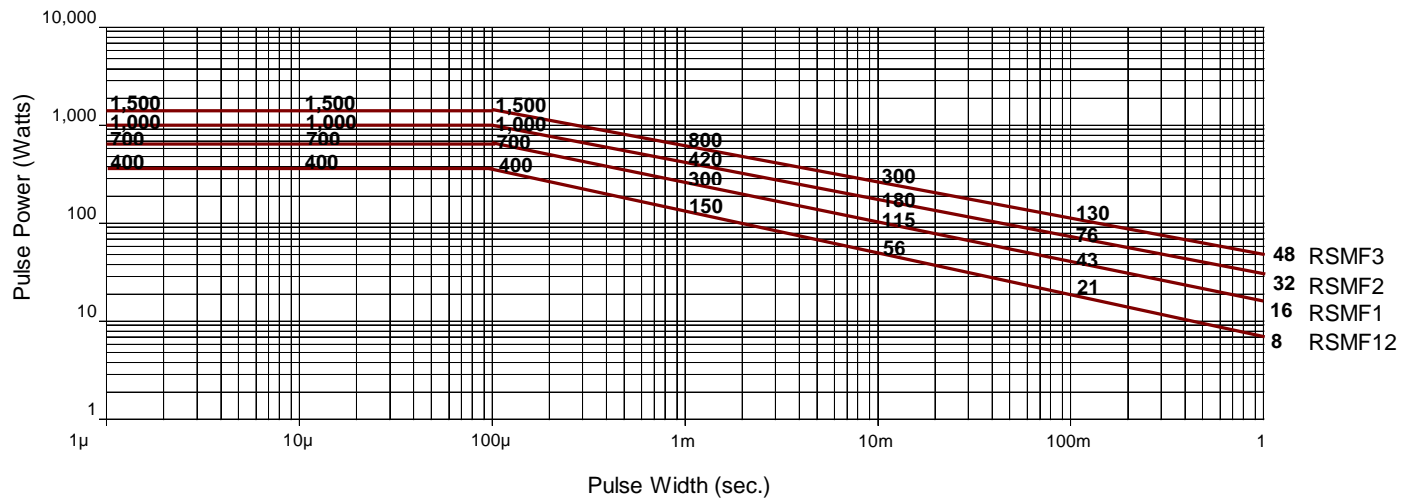
Power Derating Curve:



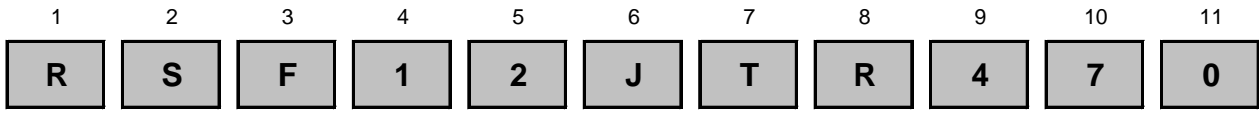
Pulse Limiting Power (One Pulse) / RSMF Series $\leq 5\Omega$



Pulse Limiting Power (One Pulse) / RSMF Series $\geq 5\Omega$



How to Order



| Product Series | |
|---------------------|---------------|
| RSF | Metal Oxide |
| RSMF | Mini |
| PRSF ⁽¹⁾ | Panasert |
| PRSM ⁽¹⁾ | Panasert Mini |

| Size | Power |
|------|-------|
| 12 | 0.5W |
| 1 | 1W |
| 2 | 2W |
| 3 | 3W |
| 5 | 5W |

| Tolerance | | |
|-----------|-----|-------|
| Code | Tol | Value |
| F | 1% | E96 |
| G | 2% | E24 |
| J | 5% | |

| Packaging | | | |
|-----------|---------------|---------------------------------|----------|
| Code | Description | Size | Quantity |
| T | Tape and Reel | RSMF12 | 5,000 |
| | | RSF12, RSF1 | 2,500 |
| | | RSMF1, RSMF2, PRSM2 | |
| | | RSF2, RSMF3 | 1,000 |
| | | RSF3, RSMF5 | |
| A | Ammo | RSF5 | 500 |
| | | RSMF12 | 5,000 |
| | | RSF12; RSMF1 | 2,000 |
| | | RSF1, RSF2, RSMF2, PRSM2, RSMF3 | 1,000 |
| | | RSF3, RSF5, RSMF5 | |
| B | Bulk | All Sizes | 1,000 |

| Resistance Value |
|-----------------------------------------------------------------|
| Four characters with the multiplier used as the decimal holder. |
| 0.22 ohm = R220 |
| 33.2 ohm = 33R2 |
| 10.2 Kohm = 10K2 |
| 1 Mohm = 1M00 |

(1) For packaging information see Radial Leaded Packaging Spec page

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