

Power Metal Strip® Resistors, Low Value, Surface Mount



Enlarged

FEATURES

- Molded high temperature encapsulation.
- Ideal for all types of current sensing, voltage division and pulse applications including switching and linear power supplies, instruments, power amplifiers.
- Proprietary processing technique produces extremely low resistance values.
- All welded construction.
- Solid metal Nickel-chrome or Manganese-copper alloy resistive element.
- 60/40 tin/lead copper terminations.
- Very low inductance 0.5nH to 5nH.
- Excellent frequency response.
- Low thermal EMF.

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	SIZE	P _{70°C} W	RATED VOLTAGE V	RESISTANCE RANGE (Ohms)		
				± 0.5%	± 1.0%	± 5.0%
WSR2	4527	2.0	(P X R) ^{1/2}	0.01 - 1.0	0.003 - 1.0	0.001 - 0.0029
WSR3	4527	3.0*	(P X R) ^{1/2}	0.01 - 0.2	0.003 - 0.2	0.001 - 0.0029

*The WSR3 requires 1050 sq. mil. circuit traces connecting to the recommended solder pad.

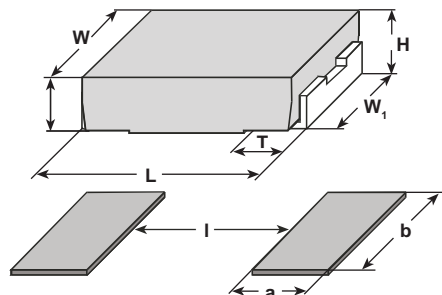
TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	WSR2 & WSR3
Temperature Coefficient	ppm/°C	0.005Ω - 0.0099Ω = ± 110 0.010Ω - 1.0Ω = ± 75
Dielectric Withstanding Volts	V _{ac/dc peak}	> 500
Insulation Resistance	Ω	> 10 ⁹
Operating Temperature Range	°C	- 65/+ 275
Weight/1000 pieces	g	440

ORDERING INFORMATION

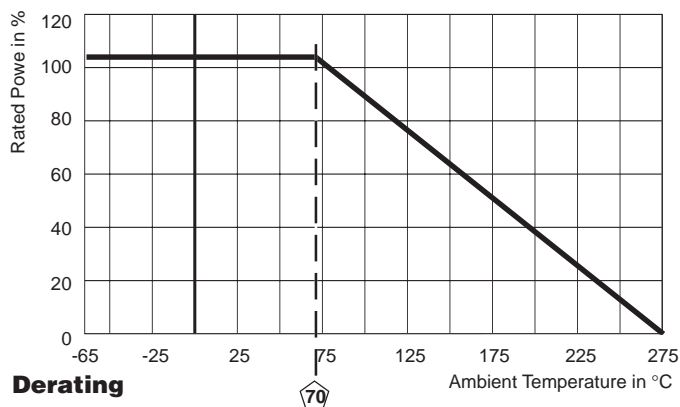
WSR2 MODEL	0.01Ω RESISTANCE	1.0% TOLERANCE VALUE	R86 PACKAGING
	Ω	± %	R86 - Embossed Plastic - 1500 pieces

DIMENSIONS



MODEL	DIMENSIONS in inches [millimeters]				
	L	H	T	W	W ₁
WSR2	.455 ± .032	.095 ± .005	.100 ± .010	.275 ± .005	.215 ± .005
WSR3	[11.56 ± .813]	[2.41 ± .127]	[2.54 ± .254]	[6.98 ± .127]	[5.46 ± .127]

MODEL	SOLDER PAD DIMENSIONS in inches [millimeters]		
	a	b	l
WSR2	0.155	0.230	0.205
WSR3	[3.94]	[5.84]	[5.21]



PERFORMANCE

TEST	CONDITIONS OF TEST	TEST LIMITS	
		WSR2	WSR3
Thermal Shock	- 55°C to + 150°C, 1000 cycles, 15 minutes at each extreme	± (0.5% + 0.0005Ω) ΔR	± (0.5% + 0.0005Ω) ΔR
Short Time Overload	WSR2: 5x Rated Power for 5 sec. WSR3: 4x Rated Power for 5 sec.	± (0.5% + 0.0005Ω) ΔR	± (2% + 0.0005Ω) ΔR
Low Temperature Storage	- 65°C for 24 hours	± (0.5% + 0.0005Ω) ΔR	± (0.5% + 0.0005Ω) ΔR
High Temperature Exposure	1000 hours @ + 275°C	± (1% + 0.0005Ω) ΔR	± (1% + 0.0005Ω) ΔR
Bias Humidity	+ 85°C, 85% RH, 10% Bias, 1000 hours	± (0.5% + 0.0005Ω) ΔR	± (0.5% + 0.0005Ω) ΔR
Mechanical Shock	100 grams for 11 milliseconds, 5 pulses	± (0.5% + 0.0005Ω) ΔR	± (0.5% + 0.0005Ω) ΔR
Vibration	Frequency varied 10 to 500Hz in 1 minute, 3 directions, 9 hours	± (0.5% + 0.0005Ω) ΔR	± (0.5% + 0.0005Ω) ΔR
Load Life	1000 hours @ Rated Power, + 70°C. 1.5 hours "ON", 0.5 hours "OFF"	± (1% + 0.0005Ω) ΔR	± (2% + 0.0005Ω) ΔR
Solder Heat	+ 260°C Solder, 10 -12 second dwell. 25mm/second emergence	± (0.5% + 0.0005Ω) ΔR	± (0.5% + 0.0005Ω) ΔR
Moisture Resistance	MIL-STD-202 Method 106, 0% Power	± (0.5% + 0.0005Ω) ΔR	± (0.5% + 0.0005Ω) ΔR

PACKAGING

MODEL	REEL			
	TAPE WIDTH	DIAMETER	PIECES/REEL	CODE
WSR2 & WSR3	24mm/Embossed Plastic	330mm/13"	1500	R86

Embossed Carrier Tape per EIA-481-2