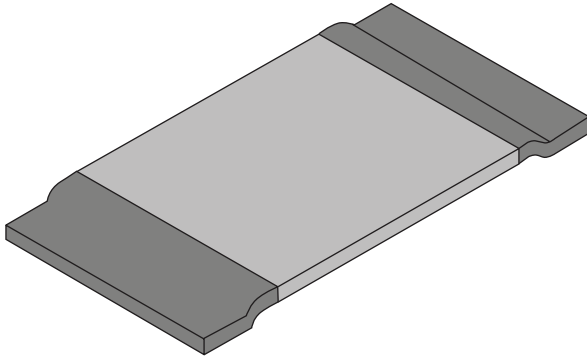


## Power Metal Strip® Resistors, Low Value, Surface Mount



### FEATURES

- Ideal for all types of current sensing, voltage division and pulse applications including switching and linear power supplies, instruments and power amplifiers
- Proprietary processing technique produces extremely low resistance values down to 0.002  $\Omega$
- All welded construction
- Solid metal Manganese-Copper alloy resistive element with low TCR ( $< 20 \text{ ppm}/^\circ\text{C}$ )
- Solderable terminations
- Low Thermal EMF ( $< 3 \text{ } \mu\text{V}/^\circ\text{C}$ )
- Very low inductance 0.5  $\eta\text{H}$  to 5  $\eta\text{H}$
- Excellent frequency response to 50 MHz

### STANDARD ELECTRICAL SPECIFICATIONS

MODEL	POWER RATING $P_{70^\circ\text{C}}$ W	TOLERANCE %	RESISTANCE RANGE $\Omega$
WSR2-3	3.0	1.0	0.002 to 0.005

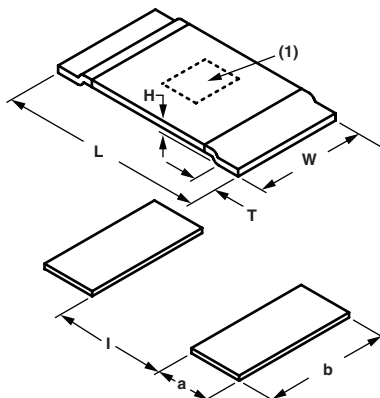
### TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	WSR2-3
Temperature Coefficient	ppm/ $^\circ\text{C}$	$\pm 175$
Inductance	$\eta\text{H}$	$< 3$
Operating Temperature Range	$^\circ\text{C}$	- 65 to + 170
Maximum Working Voltage	V	$(P \times R)^{1/2}$
Weight/1000 pieces	g	169

### GLOBAL PART NUMBER INFORMATION

GLOBAL PART NUMBERING: WSR23L000FEA3

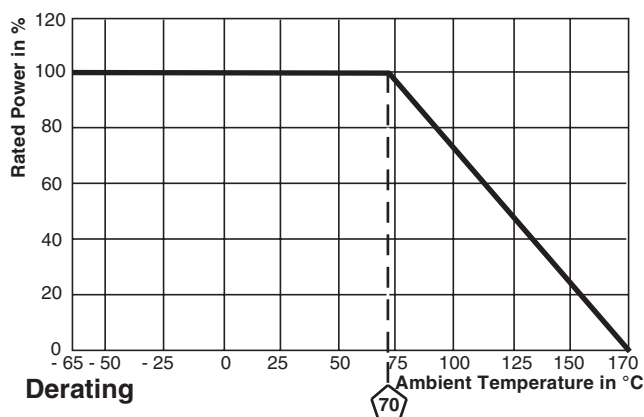
W	S	R	2	3	L	0	0	0	F	E	A	3
GLOBAL MODEL		RESISTANCE VALUE			TOLERANCE CODE			PACKAGING CODE			SPECIAL	
WSR2		L = m $\Omega$ 2L000 = 0.002 $\Omega$ 5L000 = 0.005 $\Omega$			D = $\pm 0.5 \%$ F = $\pm 1.0 \%$ J = $\pm 5.0 \%$			EA = Lead (Pb)-free, tape/reel EK = Lead (Pb)-free, bulk TA = Tin/lead, tape/reel (R86) BA = Tin/lead bulk (B43)			3 for special design with no mold compound	

**DIMENSIONS** in inches [millimeters]


MODEL	DIMENSIONS				SOLDER PAD DIMENSIONS		
	L	W	H	T	a	b	l
WSR2-3	0.400 ± 0.010 [10.16 ± 0.254]	0.215 ± 0.010 [5.46 ± 0.254]	0.029 ± 0.005 [0.737 ± 0.127]	0.075 ± 0.010 [1.91 ± 0.254]	0.100 [2.540]	0.235 [5.969]	0.240 [5.080]

**Note**

(1) 0.1" x 0.1" area in the center of the resistor will be flat and free of any trim cuts to facilitate pick & place nozzle.



PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Thermal Shock	- 55 °C to + 150 °C, 1000 cycles, 15 min at each extreme	± (0.5 % + 0.0005 Ω) ΔR
Short Time Overload	5 x rated power for 5 s for WSL2512 size and smaller	± (1.0 % + 0.0005 Ω) ΔR
Low Temperature Operation	- 65 °C for 24 h	± (0.5 % + 0.0005 Ω) ΔR
High Temperature Exposure	1000 h at + 170 °C	± (1.0 % + 0.0005 Ω) ΔR
Bias Humidity	+ 85 °C, 85 % RH, 10 % Bias, 1000 h	± (0.5 % + 0.0005 Ω) ΔR
Mechanical Shock	100 g's for 6 ms, 5 pulses	± (0.5 % + 0.0005 Ω) ΔR
Vibration	Frequency varied 10 to 2000 Hz in 1 min 3 directions, 12 h	± (0.5 % + 0.0005 Ω) ΔR
Load Life	1000 h at 70 °C, 1.5 h "ON", 0.5 h "OFF"	± (2.0 % + 0.0005 Ω) ΔR

PACKAGING				
MODEL	REEL			
	TAPE WIDTH	DIAMETER	PIECES/REEL	CODE
WSR2-3	24 mm/Embossed Plastic	330 mm/13"	5000	EA

**Note**

- Embossed Carrier Tape per EIA-481-2



### Disclaimer

All product specifications and data are subject to change without notice.

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