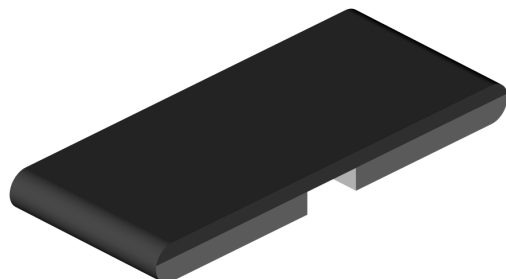


Power Metal Strip® Resistors, High Power (5 W) Low Value (down to 0.001 Ω), Surface Mount



FEATURES

- Improved thermal management incorporated into design
- 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 with low TCR (< 20 ppm/°C)
- Lead (Pb)-free construction
- Very low inductance (< 5 nH)
- Excellent frequency response to 50 MHz
- Low thermal EMF (< 3 μV/°C)



RoHS
COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS			
GLOBAL MODEL	POWER RATING $P_{70\text{ }^\circ\text{C}}$ W	TOLERANCE %	RESISTANCE RANGE Ω
WSH2818	5 ⁽¹⁾	1.0	0.001 - 0.1

Note

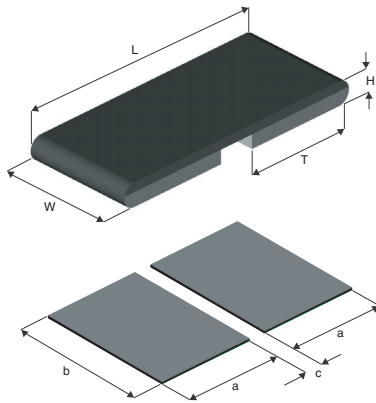
⁽¹⁾ The WSH2818 is rated at 5 W with maximum surface temperature of 200 °C

TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	WSH2818
Temperature Coefficient	ppm/°C	± 200 for 1 mΩ to 5.99 mΩ ± 75 for 6 mΩ to 100 mΩ
Inductance	nH	< 5
Operating Temperature Range	°C	- 65 to + 170
Maximum Continuous Current	A	$(P/R)^{1/2}$
Weight/1000 pieces	g	126

GLOBAL PART NUMBER INFORMATION				
GLOBAL PART NUMBERING: WSH2818R1000FEA				
W	S	H	2	8
1	8	R	1	0
0	0	0	F	E
A				
GLOBAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING CODE	SPECIAL
WSH2818	L = mΩ* R = Decimal 4L000 = 0.004 Ω R0100 = 0.01 Ω * use "L" for resistance values < 0.01 Ω	F = ± 1.0 % J = ± 5.0 %	EA = Lead (Pb)-free, tape/reel EK = Lead (Pb)-free, bulk	(Dash number up to 2 digits) From 1 - 99 as applicable

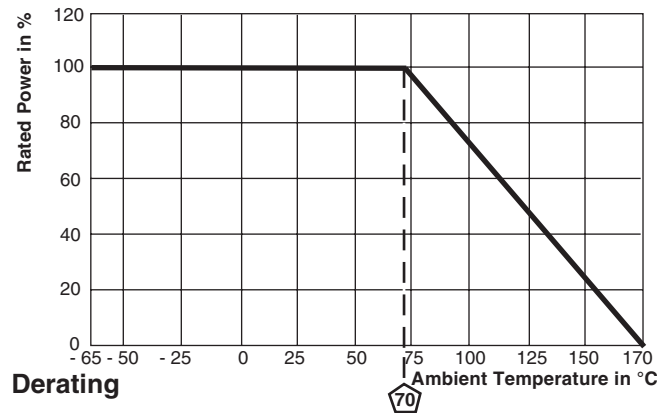


DIMENSIONS



MODEL	DIMENSIONS in inches [millimeters]				
	RESISTANCE RANGE Ω	L	W	H	T
WSH2818	0.006 - 0.1	0.280 ± 0.010 [7.1 ± 0.25]	0.180 ± 0.010 [4.6 ± 0.25]	0.032 ± 0.010 [0.813 ± 0.25]	0.125 ± 0.010 [3.18 ± 0.25]
	0.001 - 0.0059	0.280 ± 0.010 [7.1 ± 0.25]	0.180 ± 0.010 [4.6 ± 0.25]	0.045 ± 0.010 [1.143 ± 0.25]	0.125 ± 0.010 [3.18 ± 0.25]

MODEL	SOLDER PAD DIMENSIONS in inches [millimeters]		
	a	b	c
WSH2818	0.138 [3.5]	0.200 [5.1]	0.024 [0.61]



PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Thermal Shock	- 55 °C to + 150 °C, 1000 cycles, 15 min at each extreme	± 0.5 % ΔR
Short Time Overload	4 x rated power for 5 s	± 1.0 % ΔR
Low Temperature Operation	- 65 °C for 45 min	± 0.5 % ΔR
High Temperature Exposure	1000 h at + 170 °C	± 1.0 % ΔR
Bias Humidity	+ 85 °C, 85 % RH, 10 % Bias, 1000 h	± 0.5 % ΔR
Mechanical Shock	100 g's for 6 ms, 5 pulses	± 0.5 % ΔR
Vibration	Frequency varied 10 to 2000 Hz in 1 min, 3 directions, 12 h	± 0.5 % ΔR
Load Life	1000 h at + 70 °C, 1.5 h "ON", 0.5 h "OFF"	± 1.0 % ΔR
Resistance to Solder Heat	+ 260 °C Solder, 10 - 12 s dwell, 25 mm/s emergence	± 0.5 % ΔR
Moisture Resistance	MIL-STD-202, Method 106, 0 % power, 7b not required	± 0.5 % ΔR

PACKAGING				
MODEL	REEL			
	TAPE WIDTH	DIAMETER	PIECES/REEL	CODE
WSH2818	16 mm/Embossed Plastic	330 mm/13"	3500	EA

Note
• Embossed carrier tape per EIA-481-2



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

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