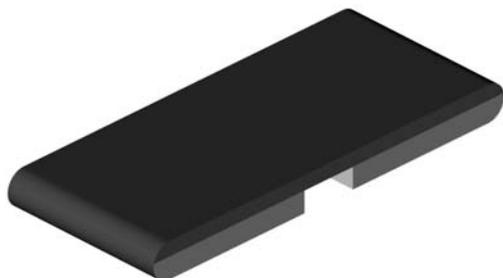


Power Metal Strip® Resistors, High Power Low Value, Surface Mount



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
- Excellent frequency response
- Low thermal EMF



RoHS
COMPLIANT

| STANDARD ELECTRICAL SPECIFICATIONS | | | |
|------------------------------------|---|----------------|-----------------------|
| GLOBAL MODEL | POWER RATING P _{70 °C} W | TOLERANCE % | RESISTANCE RANGE Ω |
| WSH2818 | 5* | 1.0 | 0.001 - 0.1 |

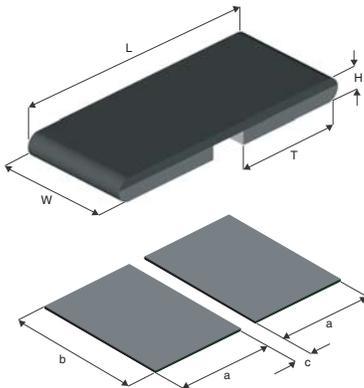
* The WSH2818 is rated at 5 watts with maximum surface temperature of 200 °C

| 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 / + 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 | F | E | A | | |
| GLOBAL MODEL WSH2818 | | | RESISTANCE VALUE L = Milliohm* R = Decimal 4L000 = 0.004 Ω R0100 = 0.01 Ω *use "L" for resistance values < 0.01 Ω | | | TOLERANCE CODE F = ± 1.0 % J = ± 5.0 % | | PACKING CODE EA = Lead (Pb)-free, Tape/Reel EK = Lead (Pb)-free, Bulk | | | SPECIAL (Dash number up to 2 digits) From 1 - 99 as applicable | | | | | |

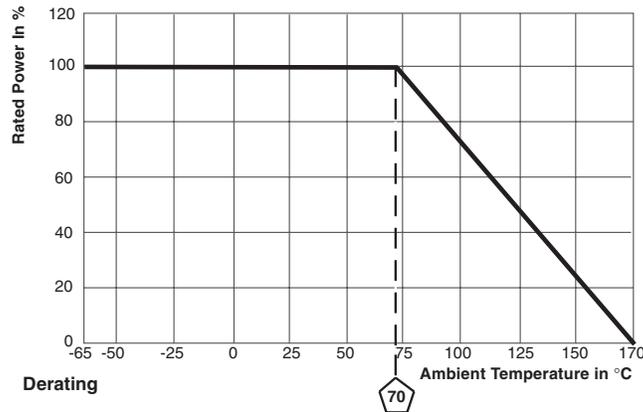


DIMENSIONS



| MODEL | DIMENSIONS in inches [millimeters] | | | | |
|---------|------------------------------------|------------------------------|------------------------------|--------------------------------|-------------------------------|
| | RESISTANCE RANGE Ω | L | W | H | T |
| WSH2818 | 0.006 - 0.1 | 0.280 ± 0.10 [7.1 ± 0.25] | 0.180 ± 0.10 [4.6 ± 0.25] | 0.032 ± 0.10 [0.813 ± 0.25] | 0.125 ± 0.10 [3.18 ± 0.25] |
| | 0.001 - 0.0059 | 0.280 ± 0.10 [7.1 ± 0.25] | 0.180 ± 0.10 [4.6 ± 0.25] | 0.045 ± 0.10 [1.143 ± 0.25] | 0.125 ± 0.10 [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 minutes at each extreme | ± 0.5 % ΔR |
| Short Time Overload | 4 x rated power for 5 seconds | ± 1.0 % ΔR |
| Low Temperature Operation | - 65 °C for 45 minutes | ± 0.5 % ΔR |
| High Temperature Exposure | 1000 hours at + 170 °C | ± 1.0 % ΔR |
| Bias Humidity | + 85 °C, 85 % RH, 10 % Bias, 1000 hours | ± 0.5 % ΔR |
| Mechanical Shock | 100 g's for 6 milliseconds, 5 pulses | ± 0.5 % ΔR |
| Vibration | Frequency varied 10 to 2000 Hz in one minute, 3 directions, 12 hours | ± 0.5 % ΔR |
| Load Life | 1000 hours at + 70 °C, 1.5 hours "ON", 0.5 hours "OFF" | ± 1.0 % ΔR |
| Resistance to Solder Heat | + 260 °C Solder, 10 - 12 second dwell, 25 mm/second emergence | ± 0.5 % ΔR |
| Moisture Resistance | MIL-STD-202, Method 106, 0 % power, 7b not required | ± 0.5 % ΔR |

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

Embossed carrier tape per EIA-481-2



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