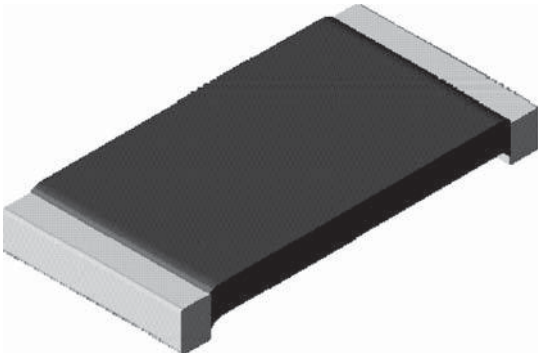
Power Metal Strip® Resistors, Very High Power (1 W), Low Value (down to 0.005 Ω), Surface Mount



FEATURES

- Very high power to foot print size ratio (1 W in 0805 package)
- Ideal for all types of current sensing and pulse applications including switching and linear power supplies, instruments, power amplifiers and shunts
- Proprietary processing technique produces extremely low resistance values (down to 0.005 Ω)
- All welded construction
- Solid metal nickel-chrome or manganese- copper alloy resistive element with low TCR (< 20 ppm/°C)
- Very low inductance 0.5 nH to 5 nH
- Excellent frequency response to 50 MHz
- Low thermal EMF (< 3 µV/°C)
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free

e3

RoHS COMPLIANT

HALOGEN FREE GREEN (5-2008)

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	SIZE	POWER RATING $P_{70\,°C}$ W	TOLERANCE ± %	RESISTANCE VALUE RANGE Ω	WEIGHT (typical) g/1000 pieces
WSLP0805...18	0805	1.0	1.0, 5.0	0.005 to 0.01	4.8

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Temperature coefficient	ppm/°C	± 110 for 5 mΩ to 6.9 mΩ, ± 75 for 7 mΩ to 10 mΩ
Element TCR	ppm/°C	< 20
Operating temperature range	°C	-65 to +170
Maximum working voltage	V	$(P \times R)^{1/2}$

GLOBAL PART NUMBER INFORMATION

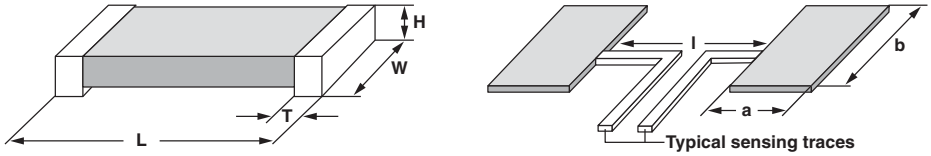
Global Part Numbering example: WSLP0805R0100FEA18

W	S	L	P	0	8	0	5	R	0	1	0	0	F	E	A	1	8

GLOBAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING CODE	SPECIAL
WSLP0805	**L** = mΩ* **R** = Decimal **5L000** = 0.005 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 pack	**18** = "High power" option

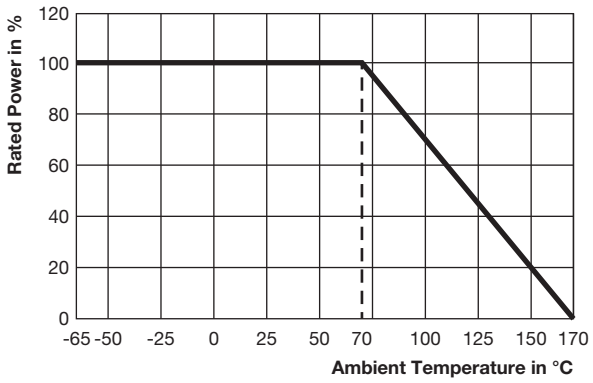
For technical questions, contact: ww2bresistors@vishay.com

DIMENSIONS



MODEL	DIMENSIONS in inches (millimeters)				SOLDER PAD DIMENSIONS in inches (millimeters)		
	L	W	H	T	a	b	l
WSLP0805...18	0.080 ± 0.010 (2.03 ± 0.254)	0.050 ± 0.010 (1.27 ± 0.254)	0.013 ± 0.010 (0.330 ± 0.254)	0.015 ± 0.010 (0.381 ± 0.254)	0.040 (1.02)	0.050 (1.27)	0.020 (0.50)

DERATING



PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Thermal shock	-55 °C to +150 °C, 1000 cycles, 15 min at each extreme	± 0.5 %
Short time overload	5x rated power for 5 s	± 1.0 %
Low temperature operation	-65 °C for 45 min	± 0.5 %
High temperature exposure	1000 h at +170 °C	± 1.0 %
Bias humidity	+85 °C, 85 % RH, 10 % bias, 1000 h	± 0.5 %
Mechanical shock	100 *g*'s for 6 ms, 5 pulses	± 0.5 %
Vibration	Frequency varied 10 Hz to 2000 Hz in 1 min, 3 directions, 12 h	± 0.5 %
Load life	1000 h at 70 °C, 1.5 h "ON", 0.5 h "OFF"	± 1.0 %
Resistance to solder heat	+260 °C solder, 10 s to 12 s dwell, 25 mm/s emergence	± 0.5 %
Moisture resistance	MIL-STD-202, method 106, 0 % power, 7b not required	± 0.5 %

PACKAGING				
MODEL	REEL			
	TAPE WIDTH	DIAMETER	PIECES/REEL	CODE
WSLP0805...18	8 mm/punched paper	178 mm/7"	5000	EA

Note

- Embossed Carrier Tape per EIA-481.

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