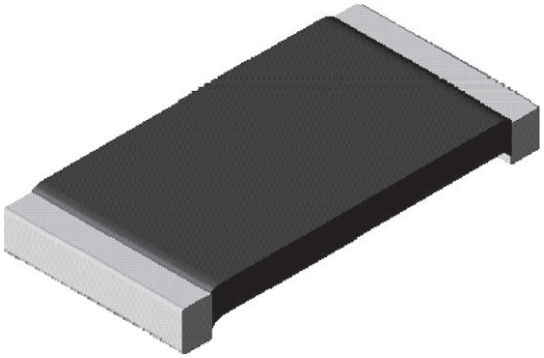
Power Metal Strip® Resistors High Temperature (275 °C), High Power (1 W), Low Value (down to 0.01 Ω), Surface Mount



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
- Specially selected and stabilized materials allow for high temperature derating (to + 275 °C) and high power ratings (2 x standard WSL rating)
- All welded construction
- Solid metal nickel-chrome alloy resistive element with low TCR (< 20 ppm/°C)
- Very low inductance (< 5 nH)
- Excellent frequency response to 50 MHz
- Low thermal EMF (< 3 µV/°C)
- Compliant to RoHS directive 2002/95/EC

Pb-free
e3
RoHS COMPLIANT
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
WSLT2010...18	2010	1.0	± 0.5 and ± 1.0	0.01 to 0.50	38.9

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Temperature coefficient	ppm/°C	± 75
Inductance	nH	< 5
Operating temperature range	°C	- 65 to + 275
Maximum continuous current	A	$(P/R)^{1/2}$

GLOBAL PART NUMBER INFORMATION

Global Part Numbering: WSLT2010R0100FEA18

W	S	L	T	2	0	1	0	R	0	1	0	0	F	E	A	1	8

GLOBAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING CODE	SPECIAL
WSLT2010	**R** = Decimal **R0100** = 0.01 Ω	**D** = ± 0.5 % **F** = ± 1.0 %	**EA** = Lead (Pb)-free, tape/reel **EK** = Lead (Pb)-free, bulk	**18** = "High power" option

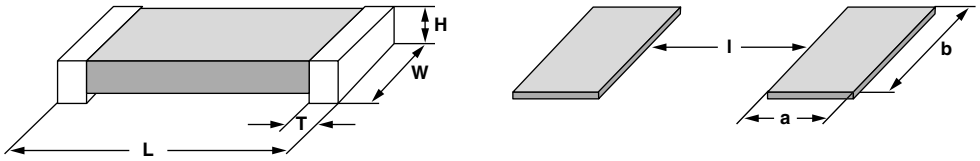
** Please see document "Vishay Material Category Policy": www.vishay.com/doc?99902

For technical questions, contact: ww2bresistors@vishay.com
Document Number: 30138
Revision: 02-Aug-10

Power Metal Strip® Resistors
High Temperature (275 °C), High Power (1 W),
Low Value (down to 0.01 Ω), Surface Mount

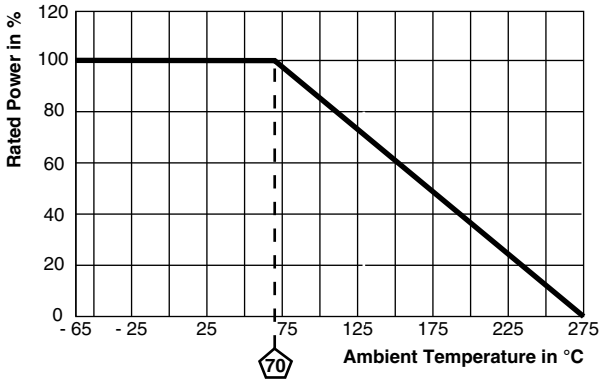
Vishay Dale

DIMENSIONS in inches (millimeters)



MODEL	DIMENSIONS				SOLDER PAD DIMENSIONS		
	L	W	H	T	a	b	l
WSLT2010...18	0.200 ± 0.010 (5.08 ± 0.254)	0.100 ± 0.010 (2.54 ± 0.254)	0.025 ± 0.010 (0.635 ± 0.254)	0.020 ± 0.010 (0.508 ± 0.254)	0.055 (1.40)	0.120 (3.05)	0.130 (3.30)

DERATING



PERFORMANCE		
TEST	**CONDITIONS OF TEST**	**TEST LIMITS**
Thermal shock	- 55 °C to + 150 °C, 1000 cycles, 15 min at each extreme	± 0.5 % Δ*R*
Short time overload	5 x rated power for 5 s	± 0.5 % Δ*R*
Low temperature operation	- 65 °C for 45 min	± 0.5 % Δ*R*
High temperature exposure	1000 h at + 275 °C	± 2.0 % Δ*R*
Bias humidity	+ 85 °C, 85 % RH, 10 % bias, 1000 h	± 0.5 % Δ*R*
Mechanical shock	100 *g*'s for 6 ms, 5 pulses	± 0.5 % Δ*R*
Vibration	Frequency varied 10 Hz to 2000 Hz in 1 min, 3 directions, 12 h	± 0.5 % Δ*R*
Load life at 70 °C	1000 h, 1.5 h "ON", 0.5 h "OFF"	± 1.0 % Δ*R*
Load life at 150 °C	1000 h, 1.5 h "ON", 0.5 h "OFF"	± 1.0 % Δ*R*
Resistance to solder heat	260 °C solder, 10 s to 12 s dwell, 25 mm/s emergence	± 0.5 % Δ*R*
Moisture resistance	MIL-STD-202, method 106, 0 % power, 7b not required	± 1.0 % Δ*R*

PACKAGING				
MODEL	**REEL**			
	TAPE WIDTH	**DIAMETER**	**PIECES/REEL**	**CODE**
WSLT2010...18	12 mm/embossed plastic	178 mm/7"	4000	EA

Note

- Embossed carrier tape per EIA-481-2.

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