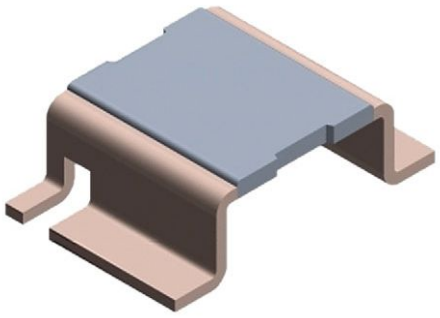
Power Metal Strip® Resistors, High Temperature (275 °C), High Power, Low Value, Surface Mount, 4-Terminal



FEATURES

- 4-terminal design allows for 1 % tolerance down to 0.002 Ω
- High power-to-footprint size ratio
- All welded construction of the Power Metal Strip resistors are ideal for all types of current sensing, voltage division, and pulse applications
- Proprietary processing technique produces extremely low resistance values, down to 0.0005 Ω
- Solid metal nickel-chrome resistive element with low TCR (< 20 ppm/°C)
- Very low inductance 0.5 nH to 5 nH
- Low thermal EMF (< 3 µV/°C)
- AEC-Q200 qualified (1)
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

DESIGN TOOLS (click logo to get started)

3D Models Available

Notes

- Follow link to Overview of Automotive Grade Products for more details: www.vishay.com/doc?49924

(1) Flame retardance test may not be applicable to some resistor technologies

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	SIZE	POWER RATING $P_{70\,°C}$ W	TOLERANCE ± %	RESISTANCE VALUE RANGE Ω	RESISTANCE VALUES CURRENTLY AVAILABLE (1) Ω	WEIGHT (typical) g/1000 pieces
WSLT4026	4026	3.0	1.0	0.3m to 5m	2m, 3m, 4m, 5m	420

Notes

- Power rating depends on the max. temperature at the solder point, component placement density and the substrate material
- Part marking: Model, value, tolerance, date code

(1) Other values may be available, contact factory

GLOBAL PART NUMBER INFORMATION

Global Part Numbering: WSLT40265L000FEA (WSLT4026, 0.005 Ω, ± 1 %)

W	S	L	T	4	0	2	6	5	L	0	0	0	F	E	A		

GLOBAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING CODE (1)	SPECIAL
WSLT4026	**L** = mΩ **2L000** = 0.002 Ω **3L000** = 0.003 Ω **4L000** = 0.004 Ω **5L000** = 0.005 Ω	**F** = ± 1.0 %	**EA** = lead (Pb)-free, tape/reel **EK** = lead (Pb)-free, bulk	(dash number) (up to 2 digits) from **1** to **99** as applicable

Note

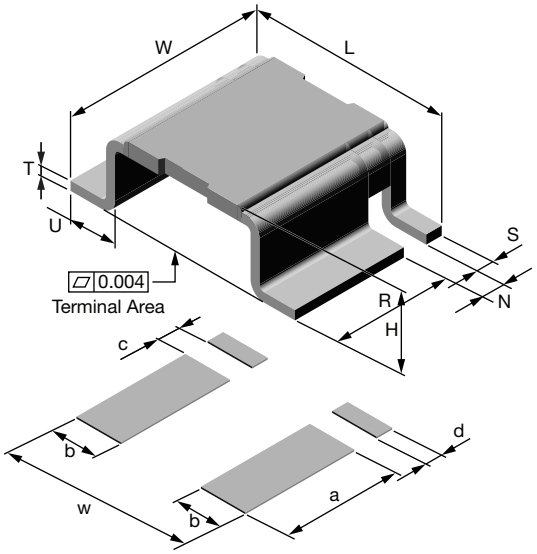
(1) Packaging code: EB (lead (Pb)-free) and TB (tin / lead) are non-standard packaging codes designating 1000 piece reels. These non-standard packaging codes are identical to our standard EA (lead (Pb)-free) and TA (tin / lead), except that they have a package quantity of 1000 pieces

TECHNICAL SPECIFICATIONS		
PARAMETER	**UNIT**	**RESISTOR CHARACTERISTICS**
Component temperature coefficient (including terminal) (1)	ppm/°C	± 75 over temperature of +20 °C to +60 °C
Element TCR (2)	ppm/°C	< 20
Operating temperature range	°C	-65 to +275
Maximum working voltage (3)	V	$(P/R)^{1/2}$

Notes

(1) Component TCR - total TCR that includes the TCR effects of the resistor element and the copper terminal
(2) Element TCR - only applies to the alloy used for the resistor element
(3) Maximum working voltage - the WSHM is not voltage sensitive, but is limited by power / energy dissipation and is also not ESD sensitive

DIMENSIONS



Notes

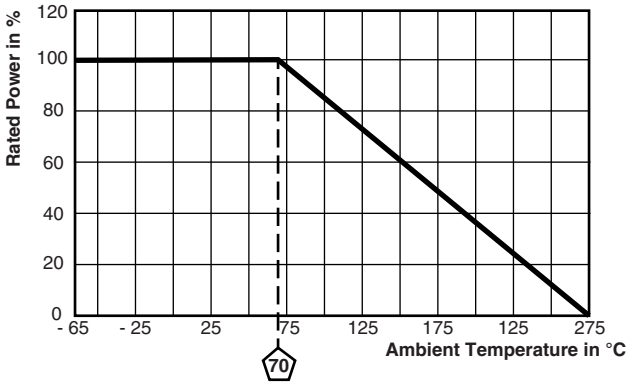
- 3D models available: www.vishay.com/doc?30320
- Surface mount solder profile recommendations: www.vishay.com/doc?31052

MODEL	DIMENSIONS in inches (millimeters)							
	L	**W**	**H**	**R (REF.)**	**S**	**T**	**U**	**N**
WSLT4026	0.400 ± 0.008 (10.1 ± 0.2)	0.260 + 0.012/- 0.008 (6.6 + 0.3/- 0.2)	0.117 ± 0.008 (3.0 ± 0.2)	0.198 (5.0)	0.028 ± 0.004 (0.7 ± 0.1)	0.016 ± 0.002 (0.4 ± 0.05)	0.078 ± 0.004 (2.0 ± 0.1)	0.039 ± 0.006 (0.99 ± 0.15)

MODEL	SOLDER PAD DIMENSIONS in inches (millimeters)				
	a	**b**	**c**	**d**	**w**
WSLT4026	0.220 (5.6)	0.096 (2.44)	0.035 (0.89)	0.035 (0.89)	0.420 (10.6)

MODEL	RESISTANCE VALUE (mΩ)	ELEMENT MATERIAL
WSLT4026	2.0	Ni-Cr
	3.0	Ni-Cr
	4.0	Ni-Cr
	5.0	Ni-Cr

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	0.3 mΩ, 0.5 mΩ, 2 mΩ and 3 mΩ - 5x rated power for 5 s 4 mΩ and 5 mΩ - 3x rated power for 5 s	± 0.5 %
Low temperature operation	-65 °C for 24 h	± 0.5 %
High temperature exposure	1000 h at +275 °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**
WSLT4026	16 mm/embossed plastic	330 mm/13"	1500	EA

Notes

- Embossed Carrier Tape per EIA-481
- Additional packaging details at www.vishay.com/doc?20051

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