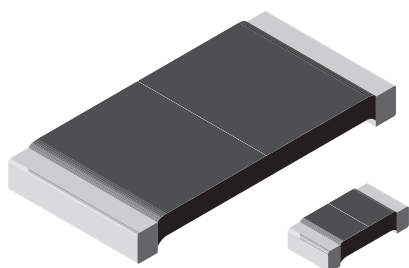


Power Metal Strip® Resistors, Low Value, Surface Mount



FEATURES

- 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
- 60/40 tin/lead copper terminations
- Very low inductance 0.5nH to 5nH
- Excellent frequency response
- Low thermal EMF

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	POWER RATING $P_{70^{\circ}\text{C}}$ W	RESISTANCE RANGE Ω	
		$\pm 0.5\%$	$\pm 1.0\%$
WSL0805	0.125	0.01 - 0.2	0.01 - 0.2
WSL1206	0.25	0.01 - 0.2	0.002 - 0.2
WSL2010	0.5	0.01 - 0.5	0.001 - 0.5
WSL2512	1.0*	0.01 - 0.5	0.001 - 0.5

*For values above 0.1 Ω derate linearly to 80% rated power at 0.5 Ω

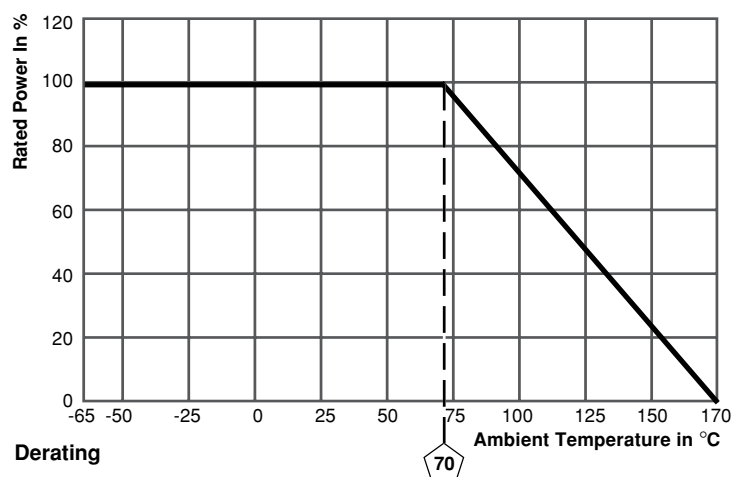
• Part Marking: DALE, Model, Value, Tolerance; due to resistor size limitations some resistors will be marked with only the resistance value

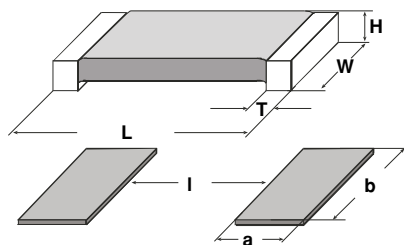
TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	WSL0805	WSL1206	WSL2010	WSL2512
Temperature Coefficient	ppm/ $^{\circ}\text{C}$	± 75	0.002 Ω - 0.0029 Ω = ± 275 0.003 Ω - 0.0049 Ω = ± 150 0.005 Ω - 0.0069 Ω = ± 110 0.007 Ω - 0.2 Ω = ± 75	0.001 Ω - 0.0029 Ω = ± 275 0.003 Ω - 0.0049 Ω = ± 150 0.005 Ω - 0.0069 Ω = ± 110 0.007 Ω - 0.5 Ω = ± 75	0.001 Ω - 0.0029 Ω = ± 275 0.003 Ω - 0.0049 Ω = ± 150 0.005 Ω - 0.0069 Ω = ± 110 0.007 Ω - 0.5 Ω = ± 75
Operating Temperature Range	$^{\circ}\text{C}$	- 65 / + 170			
Maximum Working Voltage	V	$(P \times R)^{1/2}$			
Weight/1000 pieces (typical)	g	4.8	16.2	38.9	63.6

ORDERING INFORMATION

WSL2010 **0.01 Ω** **1.0%** **R86**
 MODEL RESISTANCE TOLERANCE PACKAGING
 Ω $\pm \%$ B43 = Bulk Pack
 R86 = Tape and Reel



DIMENSIONS


MODEL	DIMENSIONS - in inches [millimeters]				
	RESISTANCE RANGE Ω	L	W	H	T
WSL0805	0.01 - 0.2	0.080 ± 0.010 [2.03 $\pm$ 0.254]	0.050 ± 0.010 [1.27 $\pm$ 0.254]	0.013 ± 0.005 [0.330 $\pm$ 0.127]	0.015 ± 0.010 [0.381 $\pm$ 0.254]
WSL1206	0.002 - 0.2	0.126 ± 0.010 [3.20 $\pm$ 0.254]	0.063 ± 0.010 [1.60 $\pm$ 0.254]	0.025 ± 0.010 [0.635 $\pm$ 0.254]	0.020 ± 0.010 [0.508 $\pm$ 0.254]
WSL2010	0.001 - 0.0069	0.200 ± 0.010 [5.08 $\pm$ 0.254]	0.100 ± 0.010 [2.54 $\pm$ 0.254]	0.025 ± 0.010 [0.635 $\pm$ 0.254]	0.058 ± 0.010 [1.47 $\pm$ 0.254]
	0.007 - 0.5	0.200 ± 0.010 [5.08 $\pm$ 0.254]	0.100 ± 0.010 [2.54 $\pm$ 0.254]	0.025 ± 0.010 [0.635 $\pm$ 0.254]	0.020 ± 0.010 [0.508 $\pm$ 0.254]
WSL2512	0.001 - 0.0049	0.250 ± 0.010 [6.35 $\pm$ 0.254]	0.125 ± 0.010 [3.18 $\pm$ 0.254]	0.025 ± 0.010 [0.635 $\pm$ 0.254]	0.087 ± 0.010 [2.21 $\pm$ 0.254]
	0.005 - 0.0069	0.250 ± 0.010 [6.35 $\pm$ 0.254]	0.125 ± 0.010 [3.18 $\pm$ 0.254]	0.025 ± 0.010 [0.635 $\pm$ 0.254]	0.047 ± 0.010 [1.19 $\pm$ 0.254]
	0.007 - 0.5	0.250 ± 0.010 [6.35 $\pm$ 0.254]	0.125 ± 0.010 [3.18 $\pm$ 0.254]	0.025 ± 0.010 [0.635 $\pm$ 0.254]	0.030 ± 0.010 [0.762 $\pm$ 0.254]

MODEL	SOLDER PAD DIMENSIONS - in inches [millimeters]			
	RESISTANCE RANGE Ω	a	b	l
WSL0805	0.01 - 0.2	0.040 [1.02]	0.050 [1.27]	0.020 [0.50]
WSL1206	0.002 - 0.2	0.050 [1.27]	0.070 [1.78]	0.055 [1.40]
WSL2010	0.001 - 0.0069	0.093 [2.36]	0.120 [3.05]	0.055 [1.40]
	0.007 - 0.5	0.055 [1.40]	0.120 [3.05]	0.130 [3.30]
WSL2512	0.001 - 0.0049	0.120 [3.05]	0.145 [3.68]	0.050 [1.27]
	0.005 - 0.0069	0.083 [2.11]	0.145 [3.68]	0.125 [3.18]
	0.007 - 0.5	0.065 [1.65]	0.145 [3.68]	0.160 [4.06]

PERFORMANCE

TEST	CONDITIONS OF TEST	TEST LIMITS
Thermal Shock	- 55°C to + 150°C, 1000 cycles, 15 minutes at each extreme	$\pm (0.5\% + 0.0005\Omega) \Delta R$
Short Time Overload	5 x rated power for 5 seconds	$\pm (0.5\% + 0.0005\Omega) \Delta R$
Low Temperature Storage	- 65°C for 24 hours	$\pm (0.5\% + 0.0005\Omega) \Delta R$
High Temperature Exposure	1000 hours @ + 170°C	$\pm (1.0\% + 0.0005\Omega) \Delta R$
Bias Humidity	+ 85°C, 85% RH, 10% Bias, 1000 hours	$\pm (0.5\% + 0.0005\Omega) \Delta R$
Mechanical Shock	100g's for 6 milliseconds, 5 pulses	$\pm (0.5\% + 0.0005\Omega) \Delta R$
Vibration	Frequency varied 10 to 2000Hz in one minute, 3 directions, 12 hours	$\pm (0.5\% + 0.0005\Omega) \Delta R$
Load Life	1000 hours @ rated power, + 70°C, 1.5 hours "ON", 0.5 hours "OFF"	$\pm (1.0\% + 0.0005\Omega) \Delta R$
Resistance to Solder Heat	+ 260°C Solder, 10 - 12 second dwell, 25mm/second emergence	$\pm (0.5\% + 0.0005\Omega) \Delta R$
Moisture Resistance	MIL-STD-202, Method 106, 0% power, 7a and 7b not required	$\pm (0.5\% + 0.0005\Omega) \Delta R$

PACKAGING

MODEL	REEL			
	TAPE WIDTH	DIAMETER	PIECES/REEL	CODE
WSL0805	8mm/Punched Paper	178mm/7"	5000	RT1
WSL1206	8mm/Embossed Plastic	178mm/7"	4000	R86
WSL2010	12mm/Embossed Plastic	178mm/7"	4000	R86
WSL2512	12mm/Embossed Plastic	178mm/7"	2000	R86

Embossed carrier tape per EIA-481-1A