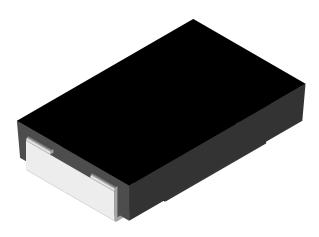
Vishay Dale



Power Metal Strip® Resistors, Low Value (down to 0.001 Ω), Surface Mount



FEATURES





· Ideal for all types of current sensing, voltage division and pulse applications including switching and linear power supplies, instruments, power amplifiers



GREEN (5-2008)**

- Proprietary processing technique produces RoHS³ extremely low resistance values (down to COMPLIANT $0.001 \Omega)$
- · All welded construction
- Solid metal Nickel-Chrome or Manganese-Copper alloy resistive element with low TCR (< 20 ppm/°C)
- Solderable terminations
- Very low inductance 0.5 nH to 5 nH
- Excellent frequency response to 50 MHz
- Low thermal EMF (< 3 μV/°C)
- Compliant to RoHS directive 2002/95/EC

STANDARD ELECTRICAL SPECIFICATIONS				
GLOBAL MODEL	SIZE	POWER RATING P _{70 °C} W	RESISTANCE RANGE Ω	
			± 0.5 %	± 1.0 %
WSR2	4527	2.0	0.01 to 1.0	0.001 to 1.0
WSR3	4527	3.0 ⁽¹⁾	0.01 to 0.2	0.001 to 0.2

Note

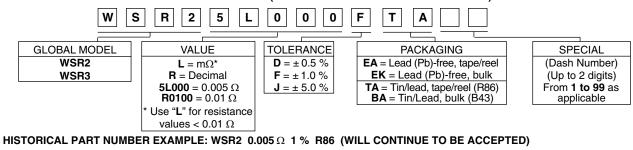
(1) The WSR3 requires a minimum of 1050 sq. mil. circuit traces connecting to the recommended solder pad

Part Marking: DALE, Model, Value, Tolerance, Date Code

TECHNICAL SPECIFICATIONS				
PARAMETER	UNIT	WSR2 & WSR3		
Temperature Coefficient	ppm/°C	$0.005~\Omega$ to $0.0099~\Omega$ = ± 110 $0.010~\Omega$ to 1.0 Ω = ± 75		
Dielectric Withstanding Voltage	V _{AC}	> 500		
Insulation Resistance	Ω	> 10 ⁹		
Operating Temperature Range	°C	- 65 to + 275		
Maximum Working Voltage	V	(P x R) ^{1/2}		
Weight/1000 pieces (typical)	g	440		

GLOBAL PART NUMBER INFORMATION

NEW GLOBAL PART NUMBERING: WSR25L000FTA (PREFERRED PART NUMBERING FORMAT)





^{*} Pb containing terminations are not RoHS compliant, exemptions may apply

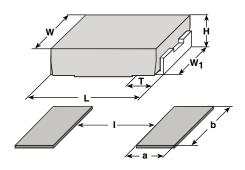
^{**} Please see document "Vishay Material Category Policy": www.vishay.com/doc?99902



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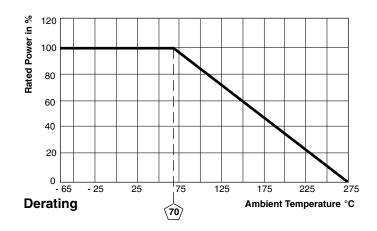
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DIMENSIONS



MODEL	DIMENSIONS in inches [millimeters]				
WODEL	L	Н	Т	W	W_1
WSR2	0.455 ± 0.032	0.095 ± 0.005	0.100 ± 0.010	0.275 ± 0.005	0.215 ± 0.005
WSR3	$[11.56 \pm 0.813]$	$[2.41 \pm 0.127]$	$[2.54 \pm 0.254]$	$[6.98 \pm 0.127]$	$[5.46 \pm 0.127]$

MODEL	SOLDER PAD DIMENSIONS in inches [millimeters]			
WIODEL	а	b	I	
WSR2	0.155	0.230	0.205	
WSR3	[3.94]	[5.84]	[5.21]	



PERFORMANCE				
TEST	CONDITIONS OF TEST	TEST LIMITS		
	CONDITIONS OF TEST	WSR2	WSR3	
Thermal Shock	- 55 °C to + 150 °C, 1000 cycles, 15 min at each extreme	$\pm (0.5 \% + 0.0005 \Omega) \Delta R$	\pm (0.5 % + 0.0005 Ω) ΔR	
Short Time Overload	WSR2: 5 x rated power for 5 s WSR3: 4 x rated power for 5 s	$\pm (0.5 \% + 0.0005 \Omega) \Delta R$	$\pm (2.0 \% + 0.0005 \Omega) \Delta R$	
Low Temperature Storage	- 65 °C for 24 h	$\pm (0.5 \% + 0.0005 \Omega) \Delta R$	$\pm (0.5 \% + 0.0005 \Omega) \Delta R$	
High Temperature Exposure	1000 h at + 275 °C	$\pm (1.0 \% + 0.0005 \Omega) \Delta R$	$\pm (1.0 \% + 0.0005 \Omega) \Delta R$	
Bias Humidity	+ 85 °C, 85 % RH, 10 % Bias, 1000 h	$\pm (0.5 \% + 0.0005 \Omega) \Delta R$	$\pm (0.5 \% + 0.0005 \Omega) \Delta R$	
Mechanical Shock	100 g's for 6 ms, 5 pulses	$\pm (0.5 \% + 0.0005 \Omega) \Delta R$	$\pm (0.5 \% + 0.0005 \Omega) \Delta R$	
Vibration	Frequency varied 10 Hz to 2000 Hz in 1 min, 3 directions, 12 h	$\pm (0.5 \% + 0.0005 \Omega) \Delta R$	\pm (0.5 % + 0.0005 Ω) ΔR	
Load Life	1000 h at rated power, + 70 °C, 1.5 h "ON", 0.5 h "OFF"	\pm (1.0 % + 0.0005 Ω) ΔR	\pm (2.0 % + 0.0005 Ω) ΔR	
Resistance to Solder Heat	+ 260 °C Solder, 10 s to 12 s dwell, 25 mm/s emergence	± (0.5 % + 0.0005 Ω) ΔR	$\pm (0.5 \% + 0.0005 \Omega) \Delta R$	
Moisture Resistance	MIL-STD-202 Method 106, 0 % power, 7a and 7b not required	$\pm (0.5 \% + 0.0005 \Omega) \Delta R$	\pm (0.5 % + 0.0005 Ω) ΔR	

PACKAGING				
MODEL	REEL			
	TAPE WIDTH	DIAMETER	PIECES/REEL	CODE
WSR2 and WSR3	24 mm/Embossed Plastic	330 mm/13"	1500	EA

Note

• Embossed Carrier Tape per EIA-481-2



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