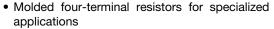


Vishay Dale

Wirewound Resistors, Molded Style, Current Shunts, Very Low Value, Four Terminal



FEATURES





 Extremely low resistance values for current sensing applications



FREE

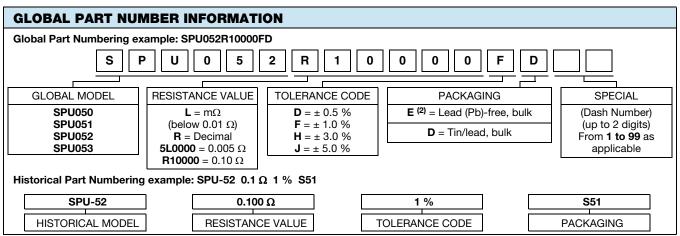
- Precision resistance tolerance
- Low temperature coefficients
- Complete welded construction
- Material categorization: For definitions of compliance please see <u>www.vishav.com/doc?99912</u>

STANDARD ELECTRICAL SPECIFICATIONS								
GLOBAL MODEL	HISTORICAL MODEL	POWER RATING ⁽¹⁾ P _{25°C} W	RESISTANCE RANGE Ω	TOLERANCE ± %	WEIGHT (typical) g			
SPU050	SPU-50	1	0.001 to 0.060	1	2.5			
SPU051	SPU-51	2	0.001 to 0.060	1	3.7			
SPU052	SPU-52	4	0.001 to 0.200	1	4.8			
SPU053	SPU-53	5	0.010 to 0.500	1	10.8			

Notes

- Standard resistance tolerances available are 0.5 %, 1.0 %, 3.0 %, and 5.0 %.
- (1) Wattage rating is limited to 25 A maximum

TECHNICAL SPECIFICATIONS						
PARAMETER	UNIT	SPU MOLDED STYLE RESISTOR CHARACTERISTICS				
Temperature Coefficient	ppm/°C	± 100 (- 10 °C to + 80 °C)				
Dielectric Withstanding Voltage	V _{AC}	500 minimum				
Short Time Overload	-	5 x power for 5 s, limited to 25 A maximum				
Maximum Working Voltage	V	$(P \times R)^{1/2}$				
Insulation Resistance	Ω	10 000 M Ω minimum dry				
Operating Temperature Range	°C	SPU050 and SPU051 = - 55 to + 175, SPU052 and SPU053 = - 55 to + 275				



Note

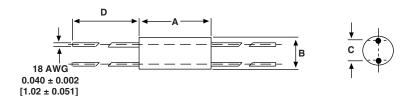
(2) Lead (Pb)-free termination



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DIMENSIONS in inches [millimeters]



GLOBAL	DIMENSIONS in inches [millimeters]					
MODEL	Α	В	С	D		
SPU050	0.660 ± 0.010	0.312 ± 0.010	0.200 ± 0.015	1.000 + 0.25 - 0.125		
	[16.76 ± 0.25]	[7.92 ± 0.25]	[5.08 ± 0.38]	[25.40 + 6.35 - 3.17]		
SPU051	0.790 ± 0.010	0.375 ± 0.010	0.200 ± 0.015	1.000 + 0.25 - 0.125		
	[20.06 ± 0.25]	[9.52 ± 0.25]	[5.08 ± 0.38]	[25.40 + 6.35 - 3.17]		
SPU052	1.000 ± 0.010	0.375 ± 0.010	0.125 ± 0.015	1.000 minimum		
	[25.40 ± 0.25]	[9.52 ± 0.25]	[3.17 ± 0.38]	[25.40 minimum]		
SPU053	1.870 ± 0.010	0.437 ± 0.010	0.125 ± 0.015	1.000 minimum		
	[47.50 ± 0.25]	[11.10 ± 0.25]	[3.17 ± 0.38]	[25.40 minimum]		

MATERIAL SPECIFICATIONS

Element: Nickel-chromium alloy or copper-manganese

alloy, depending on resistance value

Molding Material: SPU050/051 thermo-set epoxy

SPU052/053 thermo-set silicone

Standard Terminals: SPU050/051: 100 % Sn or 60/40

Sn/Pb coated Copperweld®

SPU052/053: 100 % Sn or 60/40 Sn/Pb coated copper

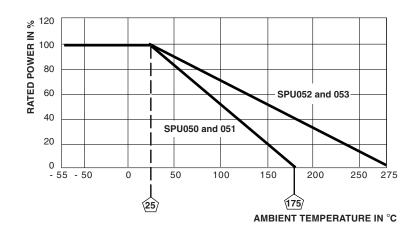
Part Marking: DALE, model, wattage, value, tolerance,

date code

AMBIENT TEMPERATURE DERATING

Derating is required for ambient temperature above 25 °C per the following graph

DERATING





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