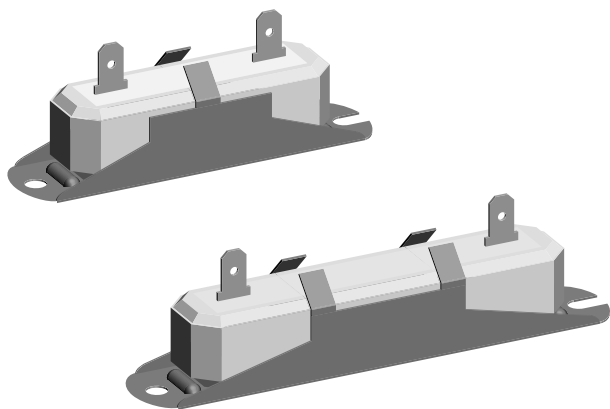




Wirewound Resistors, Special Purpose, Commercial, High Power



FEATURES

- High power / size ratio
- Quick connect terminals
- Complete welded construction
- High surge capability
- Non-inductive styles available
- Special inorganic potting compound and ceramic case provide high thermal conductivity in a fireproof package
- SPR2214 is available with a center terminal option
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS*

Available

HALOGEN

FREE

Available

GREEN

[5-2008]

Available

Note

* This datasheet provides information about parts that are RoHS-compliant and / or parts that are non-RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information / tables in this datasheet for details.

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	HISTORICAL MODEL	POWER RATING $P_{25^{\circ}\text{C}}$ W WITHOUT HEAT SINK	POWER RATING $P_{25^{\circ}\text{C}}$ W WITH HEAT SINK ⁽¹⁾	RESISTANCE RANGE Ω	TOLERANCE $\pm \%$
SPR2213	SPR-2213	40	70	0.5 to 24K	5, 10
SPR2214	SPR-2214	50	100	1.0 to 44K	5, 10

Note

⁽¹⁾ Recommended heat sink is 12" x 12" x 0.125" thick aluminum panel (294 sq. in. surface area).

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	SPR2213, SPR2214 RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/ $^{\circ}\text{C}$	± 30 10 Ω and above; ± 50 below 10 Ω
Short Time Overload	-	10 x rated power for 5 s
Maximum Working Voltage	V	$(P \times R)^{1/2}$
Operating Temperature Range	$^{\circ}\text{C}$	-65 to +275
Dielectric Withstanding Voltage	V_{AC}	2500

GLOBAL PART NUMBER INFORMATION

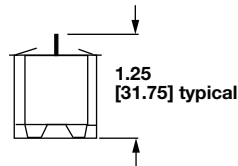
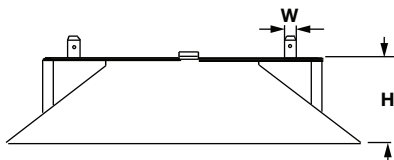
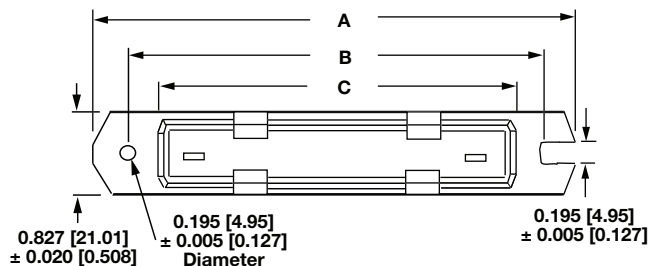
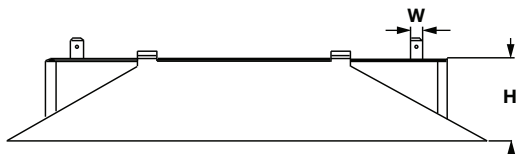
Global Part Numbering example: SPR221375R000JD

S	P	R	2	2	1	3	7	5	R	0	0	0	J	D		
GLOBAL MODEL			VALUE			TOLERANCE			PACKAGING					SPECIAL		
SPR2213 SPR2214			R = decimal K = thousand R15000 = 0.15 Ω 1K5000 = 1500 Ω			J = ± 5.0 % K = ± 10.0 %			D = skin pack (S51) K = RoHS compliant, skin pack (E51)					(dash number) (up to 2 digits) from 1 to 99 as applicable		
Historical Part Numbering example: SPR-2213 75 Ω 5 % S51																
SPR-2213			75 Ω			5 %			S51							
HISTORICAL MODEL			RESISTANCE VALUE			TOLERANCE CODE			PACKAGING							

Note

- Brackets used with "D" packaging code are not RoHS/Green compliant.

DIMENSIONS in inches [millimeters]

SPR2213

SPR2214


GLOBAL MODEL	DIMENSIONS in inches [millimeters]				
	A TYPICAL	B ± 0.031 [0.794]	C ± 0.031 [0.794]	W ± 0.005 [0.127]	H TYPICAL
SPR2213	3.375 [85.73]	3.00 [76.20]	2.50 [63.50]	0.250 x 0.031 [6.35 x 0.794]	0.810 [20.57]
SPR2214	4.563 [115.90]	4.125 [104.78]	3.625 [92.08]	0.250 x 0.031 [6.35 x 0.794]	0.810 [20.57]

MATERIAL SPECIFICATIONS

Element: copper-nickel alloy or nickel-chrome alloy, depending on resistance value

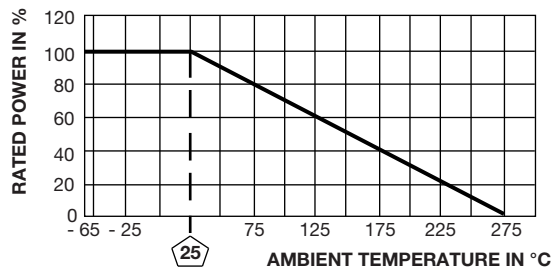
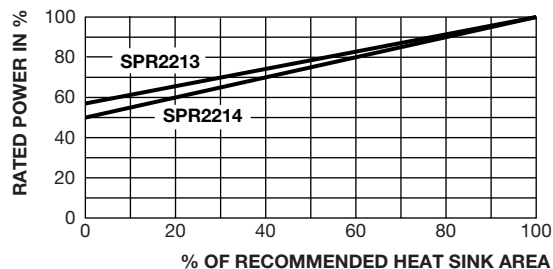
Core: steatite ceramic

Body: steatite ceramic case with inorganic potting compound

Terminals: nickel plated steel

Bracket: zinc plated steel

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

DERATING

HEAT SINK DERATING


PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Thermal Shock	Rated power applied until thermally stable, then a minimum of 15 min at -55 °C	± (2.0 % + 0.05 Ω) ΔR
Short Time Overload	10 x rated power for 5 s	± (2.0 % + 0.05 Ω) ΔR
Dielectric Withstanding Voltage	1000 V _{RMS} , 1 min	± (0.1 % + 0.05 Ω) ΔR
Low Temperature Storage	-65 °C for 24 h	± (2.0 % + 0.05 Ω) ΔR
High Temperature Exposure	250 h at +275 °C	± (2.0 % + 0.05 Ω) ΔR
Moisture Resistance	MIL-STD-202 Method 106, 7b not applicable	± (2.0 % + 0.05 Ω) ΔR
Shock, Specified Pulse	MIL-STD-202 Method 213, 100 g's for 6 ms, 10 shocks	± (0.2 % + 0.05 Ω) ΔR
Vibration, High Frequency	Frequency varied 10 Hz to 2000 Hz, 20 g peak, 2 directions 6 h each	± (0.2 % + 0.05 Ω) ΔR
Load Life	1000 h at rated power, +25 °C, 1.5 h "ON", 0.5 h "OFF"	± (3.0 % + 0.05 Ω) ΔR



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