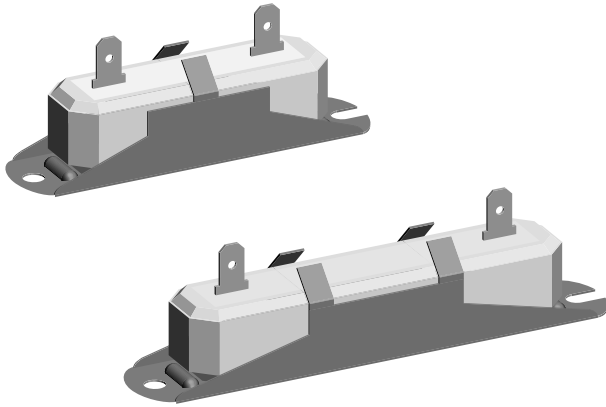




Wirewound Resistors, Special Purpose, Commercial, High Power



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).

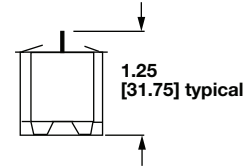
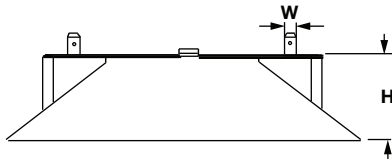
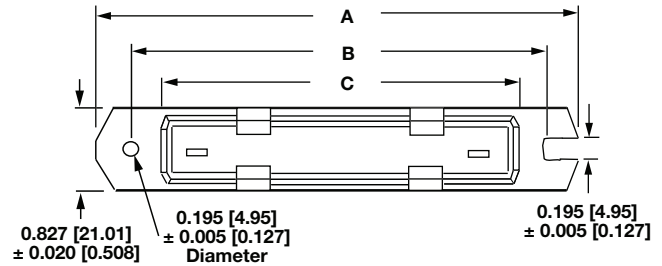
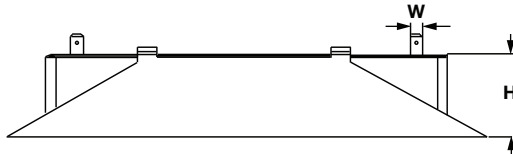
TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	SPR2213, SPR2214 RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/°C	\pm 30 10 Ω and above; \pm 50 below 10 Ω
Short Time Overload	-	10 x rated power for 5 s
Maximum Working Voltage	V	$(P \times R)^{1/2}$
Operating Temperature Range	°C	-65 to +275
Dielectric 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 = \pm 5.0 % K = \pm 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 $\pm 0.031 [0.794]$	C $\pm 0.031 [0.794]$	W $\pm 0.005 [0.127]$	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

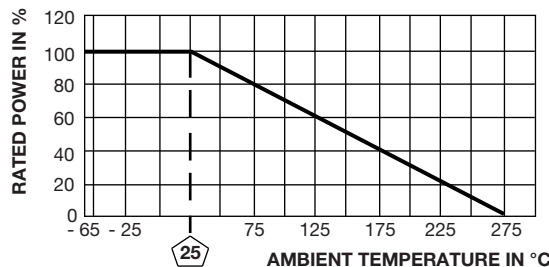
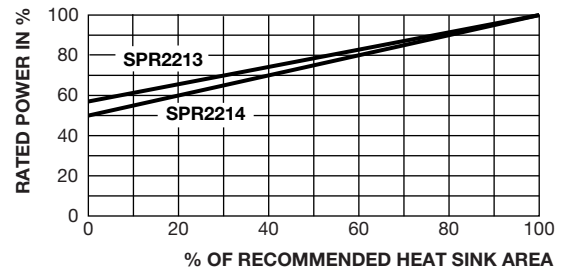
Core: steatite ceramic

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	$\pm (2.0 \% + 0.05 \Omega) \Delta R$
Short Time Overload	10 x rated power for 5 s	$\pm (2.0 \% + 0.05 \Omega) \Delta R$
Dielectric Withstanding Voltage	1000 V _{RMS} , 1 min	$\pm (0.1 \% + 0.05 \Omega) \Delta R$
Low Temperature Storage	-65 °C for 24 h	$\pm (2.0 \% + 0.05 \Omega) \Delta R$
High Temperature Exposure	250 h at +275 °C	$\pm (2.0 \% + 0.05 \Omega) \Delta R$
Moisture Resistance	MIL-STD-202 Method 106, 7b not applicable	$\pm (2.0 \% + 0.05 \Omega) \Delta R$
Shock, Specified Pulse	MIL-STD-202 Method 213, 100 g's for 6 ms, 10 shocks	$\pm (0.2 \% + 0.05 \Omega) \Delta R$
Vibration, High Frequency	Frequency varied 10 Hz to 2000 Hz, 20 g peak, 2 directions 6 h each	$\pm (0.2 \% + 0.05 \Omega) \Delta R$
Load Life	1000 h at rated power, +25 °C, 1.5 h "ON", 0.5 h "OFF"	$\pm (3.0 \% + 0.05 \Omega) \Delta R$



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