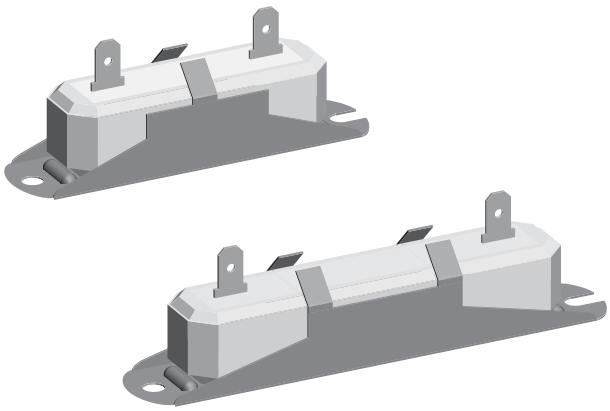
Wirewound Resistors, Special Purpose, Commercial, High Power



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
- Compliant to RoHS Directive 2002/95/EC

Pb-free
RoHS* COMPLIANT
GREEN (5-2008)** Available

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	HISTORICAL MODEL	POWER RATING $P_{25\,°C}$ W WITHOUT HEAT SINK	POWER RATING $P_{25\,°C}$ W WITH HEAT SINK (1)	RESISTANCE RANGE Ω	TOLERANCE ± %
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	± 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	°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

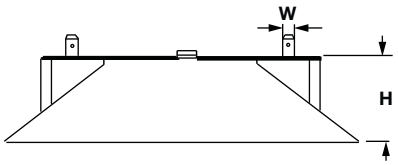
Note

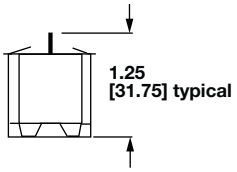
- Brackets used with “D” packaging code are not RoHS/Green compliant

* Pb containing terminations are not RoHS compliant, exemptions may apply
** Please see document “Vishay Material Category Policy”: www.vishay.com/doc?99902

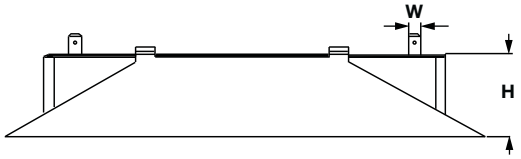
DIMENSIONS in inches [millimeters]

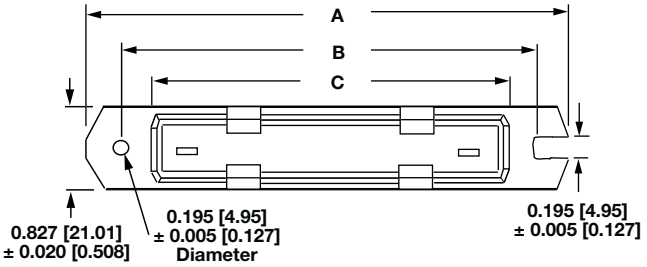
SPR2213





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

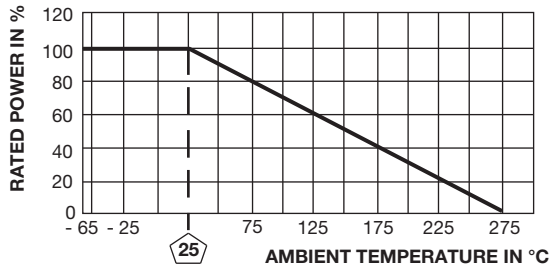
Body: Steatite ceramic case with inorganic potting compound

Terminals: Nickel plated steel

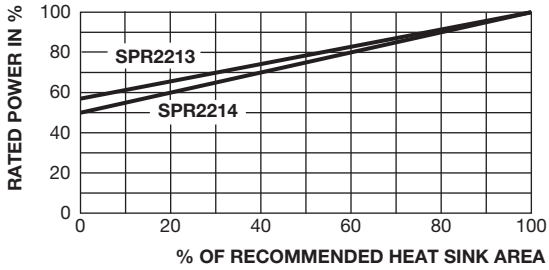
Bracket: Zinc plated steel

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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Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.

Общество с ограниченной ответственностью «МосЧип» ИНН 7719860671 / КПП 771901001
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