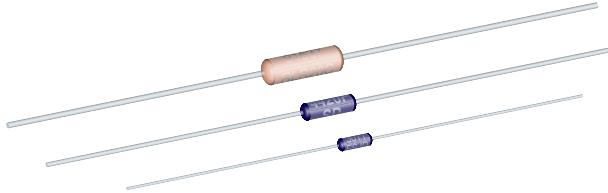




Metal Film Resistors, Military/Established Reliability, MIL-PRF-55182 Qualified, Precision, Type RNC, Characteristics J, H, K



FEATURES

- Meets requirements of MIL-PRF-55182
Very low noise (- 40 dB)
Verified failure rate (contact factory for current level)
100 % stabilization and screening tests. Group A testing, if desired, to customer requirements
Controlled temperature coefficient
Epoxy coating provides superior moisture protection
Standard lead on RNC product is solderable and weldable
Traceability of materials and processing
Monthly acceptance testing
Vishay Dale has complete capability to develop specific reliability programs designed to customer requirements
Extensive stocking program at distributors and factory on RNC50, RNC55, RNC60 and RNC65
For MIL-PRF-55182 characteristics E and C product, see Vishay Angstrom's HDN (Military RNR/RNN) datasheet (www.vishay.com/doc?66001)

Table with 10 columns: GLOBAL MODEL, MIL-PRF-55182 STYLE, MIL SPEC. SHEET, POWER RATING P70 °C W, POWER RATING P125 °C W, TOLERANCE ± %, MAXIMUM WORKING VOLTAGE V, RESISTANCE RANGE Ω, TEMPERATURE COEFFICIENT ± ppm/°C, LIFE FAILURE RATE (1)

Notes

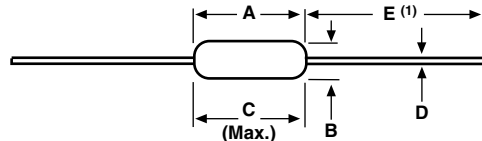
- (1) Consult factory for current QPL failure rates.
(2) Continuous working voltage shall be √P x R or maximum working voltage, whichever is less.
(3) Hot solder dipped leads.
(4) Tolerance of ± 0.1 % is not applicable to characteristics K.

Table with 3 columns: PARAMETER, UNIT, CONDITION

GLOBAL PART NUMBER INFORMATION						
New Global Part Numbering: RNC55H2152FR R36 (preferred part numbering format)						
<div style="display: flex; justify-content: space-around; font-weight: bold; font-size: 1.2em;"> <span>R</span><span>N</span><span>C</span><span>5</span><span>5</span><span>H</span><span>2</span><span>1</span><span>5</span><span>2</span><span>F</span><span>R</span><span>R</span><span>3</span><span>6</span><span></span><span></span><span></span> </div>						
MIL STYLE	CHARACTERISTICS	RESISTANCE VALUE	TOLERANCE CODE	FAILURE RATE	PACKAGING	SPECIAL
<b>RNC</b> = Solderable/weldable <b>RNR</b> = Solderable only (see Standard Electrical Specifications table)	<b>J</b> = ± 25 ppm <b>H</b> = ± 50 ppm <b>K</b> = ± 100 ppm	3 digit significant figure, followed by a multiplier Use "R" for values < 100 Ω <b>10R0</b> = 10 Ω <b>2152</b> = 21.5 kΩ <b>3014</b> = 3.01 MΩ	<b>B</b> = ± 0.1 % <b>D</b> = ± 0.5 % <b>F</b> = ± 1 %	<b>M</b> = 1.0%/1000 h <b>P</b> = 0.1%/1000 h <b>R</b> = 0.01%/1000 h <b>S</b> = 0.001%/1000 h	<b>B14</b> = Tin/lead, bulk <b>BSL</b> = Tin/lead, bulk, single lot date code <b>R36</b> = Tin/lead, T/R (full; 50, 55, 60) <b>R64</b> = Tin/lead, T/R (full; 65, 70) <b>RE6</b> = Tin/lead, T/R (1000 pieces) <b>RSL</b> = Tin/lead, T/R, single lot date code	Blank = Standard (Dash number) (Up to 3 digits) From <b>1 to 999</b> as applicable <b>4</b> = Hot solder dip (70's) <b>31</b> = Hot solder dip (50's) <b>65</b> = Hot solder dip (55's, 65's) <b>201</b> = Hot solder dip (60's)
Historical Part Number example: RNC55H2152FR R36 (will continue to be accepted)						
<b>RNC55</b>	<b>H</b>	<b>2152</b>	<b>F</b>	<b>R</b>	<b>R36</b>	
MIL STYLE	CHARACTERISTIC	RESISTANCE VALUE	TOLERANCE CODE	FAILURE RATE	PACKAGING	

**Note**

- For additional information on packaging, refer to the Through Hole Resistor Packaging document ([www.vishay.com/doc?31544](http://www.vishay.com/doc?31544)).

**DIMENSIONS** in inches (millimeters)

**Note**

- (1) Lead length for product in bulk pack. For product supplied in Tape and Reel, the actual lead length would be based on the body size, tape spacing and lead trim.

VISHAY DALE MODEL	MIL-PRF-55182 STYLE	A	B	C (MAX.)	D	E
ERC50	RNC50, RNR50	0.150 ± 0.020 (3.81 ± 0.51)	0.070 ± 0.010 (1.78 ± 0.25)	0.187 (4.75)	0.016 ± 0.002 (0.41 ± 0.05)	1.25 ± 0.266 (31.75 ± 6.76)
ERC55	RNC55, RNR55	0.250 ± 0.031 - 0.046 (6.35 ± 0.79 - 1.17)	0.094 ± 0.012 (2.39 ± 0.30)	0.300 (7.62)	0.025 ± 0.002 (0.64 ± 0.05)	1.50 ± 0.125 (38.1 ± 3.18)
ERC55..200	RNC60, RNR60	0.280 ± 0.020 (7.11 ± 0.51)	0.097 ± 0.012 (2.46 ± 0.30)	0.350 (8.89)	0.025 ± 0.002 (0.64 ± 0.05)	1.50 ± 0.125 (38.1 ± 3.18)
ERC65	RNC65, RNR65	0.562 ± 0.031 (14.27 ± 0.79)	0.180 ± 0.015 (4.57 ± 0.38)	0.687 (17.45)	0.025 ± 0.002 (0.64 ± 0.05)	1.50 ± 0.125 (38.1 ± 3.18)
ERC70	RNC70, RNR70	0.562 ± 0.031 (14.27 ± 0.79)	0.180 ± 0.015 (4.57 ± 0.38)	0.687 (17.45)	0.032 ± 0.002 (0.81 ± 0.05)	1.50 ± 0.125 (38.1 ± 3.18)

MATERIAL SPECIFICATIONS	
Element	Vacuum-deposited nickel-chrome alloy
Core	Fire-cleaned high purity ceramic
Encapsulation	Specially formulated epoxy compound
Termination	Standard lead material is solder-coated copper solderable and weldable per MIL-STD-1276, type C

**POWER RATING**

Power ratings are based on the following two conditions:

- ± 2.0 % maximum DR in 10 000 h load life
- + 175 °C maximum operating temperature

**APPLICABLE MIL-SPECIFICATIONS**
**MIL-PRF-55182:**

The ERC series meets the electrical, environmental and dimensional requirements of MIL-PRF-55182.

**MIL-R-10509:**

MIL-PRF-55182 supercedes MIL-R-10509 on new designs. The ERC series meets or exceeds MIL-R-10509 requirements.

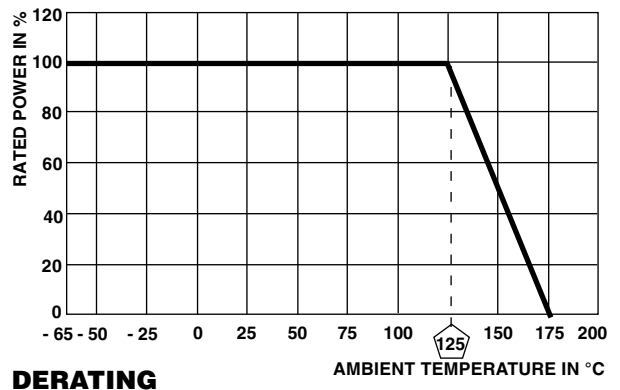
**DOCUMENTATION:**

Qualification and failure rate verification test data is maintained by Vishay Dale and is available upon request. Lot traceability and identification data is maintained by Vishay Dale for five years.

**CAGE CODE: 91637**



Vishay Dale ERC resistors have an operating temperature range of - 65 °C to + 175 °C. They must be derated according to the following curve:



<b>MARKING</b> (per MIL-PRF-55182)	
Characteristics: K = 100 ppm, H = 50 ppm, J = 25 ppm	
Tolerance: F = 1 %, D = 0.5 %, B = 0.1 %	
Value = Three significant figures and multiplier	
J = JAN (Joint Army - Navy) brand	
RNC/RNR50, 55 (4 lines)	RNC/RNR60, 65, 70 (5 lines)
D     Manufacturer's code	91637   CAGE code
210H   3 digit date code and characteristic	1213J   4 digit date code and JAN
1003   Value	RNC60J   Style and characteristic
FSCJ   Tolerance, failure rate, lead material and JAN	1211FS   Value, tolerance, and failure rate
	1209A   Production lot code



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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.**

**Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.**