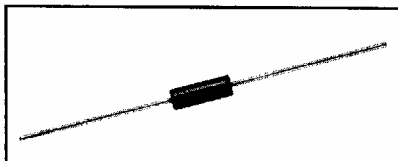


MODEL HN Metal Film Resistors

Military/Established Reliability

MIL-R-39017 Qualified, Type RLR, Semi-Precision



FEATURES

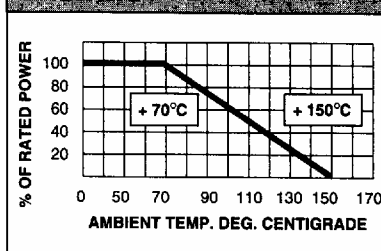
- "S" level failure rate
- High purity copper leads in accordance with MIL-STD-1276. Two solder finishes are available, electroplated 60/40 solder and hot dipped 60/40 solder.
- Blue epoxy insulation over polyimide varnish provides superior moisture resistance properties

STANDARD ELECTRICAL SPECIFICATIONS

DALE MODEL	MIL-R-39017 TYPE	WATTAGE RATING @ +70°C	VOLTAGE RATING	RESISTANCE RANGE (Ohms)	STANDARD * TOLERANCE	TEMPERATURE COEFFICIENT PPM/°C
HN3	RLR05C	1/8	200	4.7 - 300k	± 1%, ± 2%, ± 5%	100
HN4	RLR07C	1/4	250	10 - 1M	± 1%, ± 2%, ± 5%	100
HN5	RLR20C	1/2	350	10 - 1M	± 1%, ± 2%, ± 5%	100
HN6	RLR32C	1	500	10 - 1M	± 1%, ± 2%, ± 5%	100

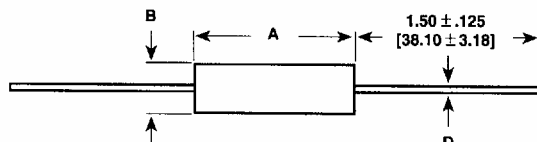
* ± 5% tolerance is inactive for new design.

DERATING



DIMENSIONAL CONFIGURATIONS

(Numbers in brackets indicate millimeters)



DALE MODEL	MIL-R-39017 TYPE	A	B	D
HN3	RLR05C	.145 ± .015 [3.68 ± .381]	.066 ± .008 [1.68 ± .203]	.016* [.406]
HN4	RLR07C	.235 ± .020 [5.97 ± .508]	.090 ± .008 [2.29 ± .203]	.025 [.635]
HN5	RLR20C	.375 ± .025 - .040 [9.53 ± .635 - 1.02]	.135 ± .020 - .005 [3.43 ± .508 - .127]	.032 [.813]
HN6	RLR32C	.560 ± .030 [14.22 ± .762]	.190 ± .015 [4.83 ± .381]	.040 [1.02]

* Leads are 1.25" ± .265" [31.75mm ± 6.73mm] long.

ENVIRONMENTAL PERFORMANCE

TEST	MAXIMUM ΔR			
	HN3/ RLR05C	HN4/ RLR07C	HN5/ RLR20C	HN6/ RLR32C
Power Conditioning	± 0.50%	± 0.50%	± 0.50%	± 0.50%
Thermal Shock	± 0.25%	± 0.25%	± 0.25%	± 0.25%
Short Time Overload	± 0.50%	± 0.50%	± 0.25%	± 0.25%
Low Temperature Storage	± 0.10%	± 0.10%	± 0.10%	± 0.25%
Low Temperature Operation	± 0.10%	± 0.10%	± 0.10%	± 0.25%
Moisture Resistance	± 0.50%	± 0.50%	± 0.50%	± 0.50%
Shock & Vibration	± 0.05%	± 0.05%	± 0.05%	± 0.10%
Load Life (2000 hours Mil rating)	± 1.0%	± 1.0%	± 1.0%	± 2.0%
Terminal Strength	± 0.05%	± 0.05%	± 0.05%	± 0.10%
Dielectric Withholding Voltage	± 0.05%	± 0.05%	± 0.05%	± 0.10%
Effect Solder Heat	± 0.10%	± 0.10%	± 0.10%	± 0.10%

PART MARKING

RLR05

- Year, week of year, lot code
- Coded resistance value*
- Tolerance, FR, JAN, manufacturer symbol

RLR07

- Year, week of year, lot code, JAN
- Model, lead material
- Coded resistance value*, tolerance
- FR, manufacturer symbol

RLR20 & RLR32

- Year, week of year, lot code, JAN
- Model, lead material
- Coded resistance value*, tolerance, FR
- Source code
- Dale

* ± 5% tolerance parts are marked with 3 digit resistance value code, e.g. 103. ± 2% tolerance parts are marked with 4 digit code but may be special ordered with 3 digit code. All ± 5% parts and ± 2% parts with 3 digit coding are inactive for new design.

HOW TO ORDER - MILITARY PART NUMBER

RLR MODEL	20 SIZE	C LEAD MATERIAL	1003 VALUE	G TOLERANCE	S FAILURE RATE
	05 07 20 32	Type C solderable/weldable	First 3 digits are significant figures, fourth digit is the multiplier.	F = ± 1% G = ± 2% J = ± 5%	1000 Hours (60% confidence) M = 1.0% P = 0.1% R = 0.01% S = 0.001%

HOW TO ORDER - DALE MODEL

HN MODEL	3 SIZE	1003 VALUE	± 1% TOLERANCE
	3 4 5 6	First 3 digits are significant figures, fourth digit is the multiplier.	± 1% ± 2% ± 5%