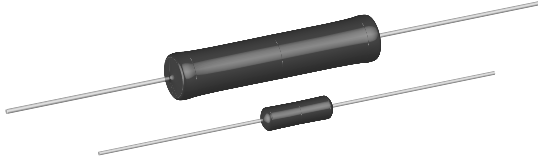


Vishay Dale

Wirewound Resistors, Military, MIL-PRF-26 Qualified, Type RW, Precision Power, Silicone Coated



FEATURES

- From 1.4 to 4 times higher power ratings than conventional resistors of equivalent size
- High temperature coating
- Complete welded construction
- Meets applicable requirements of MIL-PRF-26
- Available in non-inductive styles (type GN) with Ayrton-Perry winding for lowest reactive components
- Excellent stability in operation

STANDARD ELECTRICAL SPECIFICATIONS								
MODEL	MIL-PRF-26 TYPE	POWER RATING* $P_{25^{\circ}\text{C}}$ W		RESISTANCE RANGE MIL. RANGE SHOWN IN BOLD FACE Ω				WEIGHT (Typical) g
		U $\pm 0.05\%$ thru $\pm 5\%$	V $\pm 3\%$ & $\pm 5\%$	$\pm 0.05\%$	$\pm 0.1\%$	$\pm 0.25\%$	$\pm 0.5\%, \pm 1\%$ $\pm 3\%, \pm 5\%$	
G-1-80	—	1.0	—	1.0 - 1k	0.499 - 1k	0.499 - 3.4k	0.1 - 3.4k	0.20
G-1-380	RW81	1.0	—	—	0.499 - 1k	0.499 - 1k	0.1 - 1k	0.20
G-2	—	1.5	—	1.0 - 1.3k	0.499 - 1.3k	0.499 - 4.9k	0.1 - 4.9k	0.21
G-3-80	—	2.0	—	1.0 - 2.74k	0.499 - 2.74k	0.499 - 10.4k	0.1 - 10.4k	0.34
G-3-380	RW80	2.0	—	—	0.499 - 2.74k	0.499 - 2.74k	0.1 - 2.74k	0.34
G-5	—	4.0	5.0	0.499 - 6.5k	0.499 - 6.5k	0.1 - 24.5k	0.1 - 24.5k	0.80
G-5C	—	5.0	7.0	0.499 - 8.6k	0.499 - 8.6k	0.1 - 32.3k	0.1 - 32.3k	1.20
G-10	—	7.0	10.0	0.499 - 25.7k	0.499 - 25.7k	0.1 - 95.2k	0.1 - 95.2k	3.60

*Vishay Dale G models have two power ratings, depending on operation temperature and stability requirements.

NOTE: Shaded area indicates most popular models.

TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	G RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/°C	± 90 for below 1Ω , ± 50 for 1Ω to 9.9Ω , ± 20 for 10Ω and above
Dielectric Withstanding Voltage	V_{AC}	500 minimum for G-1-80 thru G-3-380, 1000 minimum for all others
Short Time Overload	—	5 x rated power for 5 seconds for G-1-80 thru G-5C (Characteristic U), 10 x rated power for 5 seconds for G-10
Maximum Working Voltage	V	$(P \times R)^{1/2}$
Insulation Resistance	Ω	1000 Megohm minimum dry, 100 Megohm minimum after moisture test
Terminal Strength	lb	5 minimum for G-1-80 thru G-3-380, 10 minimum for all others
Solderability	—	MIL-PRF-26 type - Meets requirements of ANSI J-STD-002 Non Mil type - Terminals are 60/40 electro tin plated to facilitate soldering
Operating Temperature Range	°C	Characteristic U = - 65/+ 250, Characteristic V = - 65/+ 350
Power Rating	—	Characteristic U - + 250°C max. hot spot temperature, $\pm 0.5\%$ max. ΔR in 2000 hr. load life Characteristic V - + 350°C max. hot spot temperature, $\pm 3.0\%$ max. ΔR in 2000 hr. load life

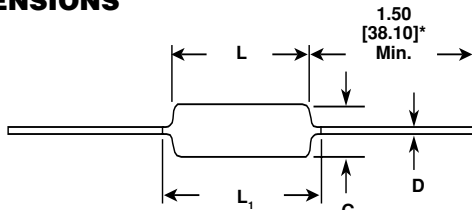
ORDERING INFORMATION		
G-3-80	10 Ω	1.0%
MODEL	RESISTANCE	TOLERANCE
	Ω	$\pm \%$



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DIMENSIONS



*On some standard reel pack methods, the leads may be trimmed to a shorter length than shown.

MATERIAL SPECIFICATIONS

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

Core: Ceramic, Beryllium oxide or alumina, depending on resistor model

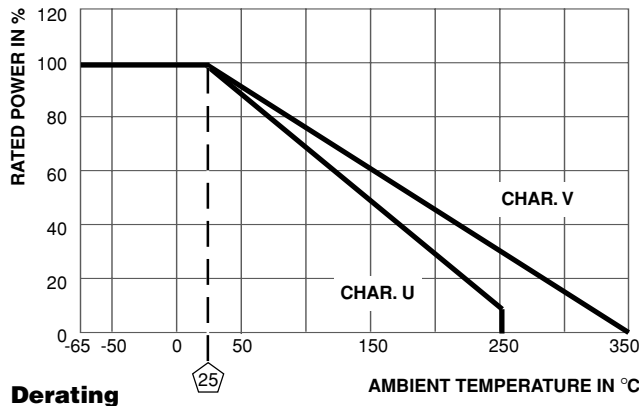
Coating: Special high temperature silicone

Standard Terminals: Tinned Copperweld®

End Caps: Stainless steel

Part Marking: DALE, Model, Wattage*, Value, Tolerance, Date Code

*Wattage marked on part will be "U" characteristic



Derating

MODEL	DIMENSIONS in inches [millimeters]			
	L	L ₁ (Max.)**	C	D
G-1-80 G-1-380	0.250 ± 0.031 [6.35 ± 0.787]	0.281 [7.14]	0.085 ± 0.020 [2.16 ± 0.508]	0.020 ± 0.002 [0.508 ± 0.051]
G-2	0.312 ± 0.016 [7.92 ± 0.406]	0.328 [8.33]	0.078 + 0.016 - 0.031 [1.98 + 0.406 - 0.787]	0.020 ± 0.002 [0.508 ± 0.051]
G-3-80 G-3-380	0.406 ± 0.031 [10.31 ± 0.787]	0.437 [11.10]	0.094 ± 0.031 [2.39 ± 0.787]	0.020 ± 0.002 [0.508 ± 0.051]
G-5	0.562 ± 0.062 [14.27 ± 1.57]	0.622 [15.80]	0.188 ± 0.032 [4.78 ± 0.813]	0.032 ± 0.002 [0.813 ± 0.051]
G-5C	0.500 ± 0.062 [12.70 ± 1.57]	0.593 [15.06]	0.218 ± 0.032 [5.54 ± 0.813]	0.040 ± 0.002 [1.02 ± 0.051]
G-10	0.875 ± 0.062 [22.23 ± 1.57]	1.0 [25.4]	0.312 ± 0.032 [7.92 ± 0.813]	0.040 ± 0.002 [1.02 ± 0.051]

**L₁ (Max.) dimension is clean lead to clean lead.

GN NON-INDUCTIVE

Models of equivalent physical and electrical specifications are available with non-inductive (Aryton-Perry) winding. They are identified by inserting the letter N after G in the model number (GN-5, for example). Two conditions apply:

1. For GN models, divide maximum resistance values by two
2. Body O.D. on GN-5C may exceed that of the G-5C by 0.010"

TERMINATION

When G resistors will be operated at full rated power, resistance welding or high temperature solder are the recommended termination methods. Termination should be made within 1/2 inch from end of resistor body.

PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS (CHARACTERISTIC U)
Thermal Shock	Rated power applied until thermally stable, then a minimum of 15 minutes at - 55°C	± (0.2% + 0.05Ω) ΔR
Short Time Overload	5 x power (G-1-80 thru G-5C), 10 x power (G-10) for 5 seconds	± (0.2% + 0.05Ω) ΔR
Dielectric Withstanding Voltage	1000V rms, one minute	± (0.1% + 0.05Ω) ΔR
Low Temperature Storage	- 65°C for 24 hours	± (0.2% + 0.05Ω) ΔR
High Temperature Exposure	250 hours at + 250° (Characteristic U)	± (0.5% + 0.05Ω) ΔR
Moisture Resistance	MIL-STD-202 Method 106, 7b not applicable	± (0.2% + 0.05Ω) ΔR
Shock, Specified Pulse	MIL-STD-202 Method 213, 100g's for 6 milliseconds, 10 shocks	± (0.1% + 0.05Ω) ΔR
Vibration, High Frequency	Frequency varied 10 to 2000Hz, 20g peak, 2 directions 6 hours each	± (0.1% + 0.05Ω) ΔR
Load Life	2000 hours at rated power, + 25°C, 1.5 hours "ON", 0.5 hours "OFF"	± (0.5% + 0.05Ω) ΔR
Terminal Strength	5 to 10 sec., 5 or 10 lb pull test (depending on size), torsion test - 3 alternating directions, 360°C each	± (0.1% + 0.05Ω) ΔR