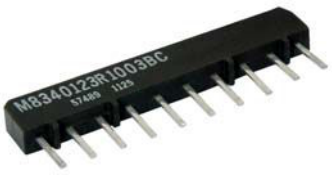
Thin Film Resistor Network Military, MIL-PRF-83401 Qualified, Type RZ070, RZ080, RZ090, RZ210, RZ220, RZ230, Single-In-Line SIP



Qualified to meet MIL-PRF-83401 characteristic “R”, “V”, and “H”

These resistor networks are available in 6 pins, 8 pins, and 10 pins in schematic C and G styles. Custom circuits are not available. Schematic C and G only. They incorporate Vishay Dale Thin Film’s patented passivated nichrome film to give superior performance on temperature coefficient of resistance, thermal stability, noise, voltage coefficient, power handling and resistance stability. The leads are attached to the metallized alumina substrates by Thermo-Compression bonding. The body is molded thermoset plastic with gold plated copper alloy leads. This product will outperform all of the requirements of characteristic “R”, “V”, and “H” of MIL-PRF-83401.

FEATURES

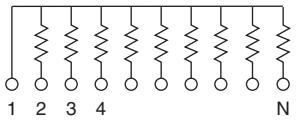
- MIL-PRF-83401 qualified (cage code 57489)
- Low Profile 0.195" (4.95 mm seated height)
- Characteristics R (± 25 ppm), H, V, K, and M
- Hot fused tin/lead 60/40 solder dipped
- Rugged molded low profile construction with standoff
- 100 % screened to groups A MIL-PRF-83410 testing
- Tolerances to 0.1 %
- Isolated and bussed (schematic C and G)

TYPICAL PERFORMANCE

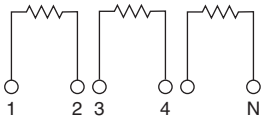
	ABSOLUTE	TRACKING
TCR	25	5
	ABSOLUTE	RATIO
TOL.	0.1	0.1 to 0.05

SCHEMATIC

C Schematic (Pin 1 Common)



G Schematic (Isolated)



STANDARD ELECTRICAL SPECIFICATIONS

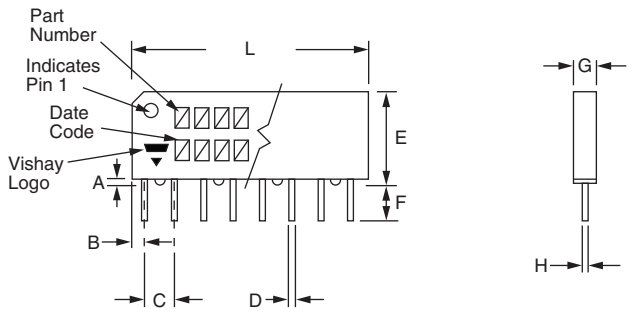
TEST	SPECIFICATIONS	CONDITIONS
Material	Passivated nichrome	-
Pin/Lead Number	6, 8, 10	-
Resistance Range	100 Ω to 200 kΩ per resistor	Tolerance dependent (2)
TCR: Absolute	± 25 ppm/°C to 300 ppm/°C	- 55 °C to + 125 °C (1)
TCR: Tracking	± 5 ppm/°C	- 55 °C to + 125 °C
Tolerance: Absolute	± 0.1 % to ± 5.0 %	+ 25 °C
Tolerance: Ratio	± 0.1 % to R_1	+ 25 °C
Power Rating: Resistor	0.06 mW to 0.120 mW (per element typical at + 25 °C) (1)	Maximum at + 70 °C
Power Rating: Package	0.18 W to 1.08 W (1)	Maximum at + 70 °C
Stability: Absolute	ΔR ± 0.05 %	2000 h at + 70 °C
Stability: Ratio	ΔR ± 0.015 %	2000 h at + 70 °C
Voltage Coefficient	< 0.1 ppm/V	-
Working Voltage	100 V	-
Operating Temperature Range	- 55 °C to + 125 °C	-
Storage Temperature Range	- 55 °C to + 125 °C	-
Noise	< - 30 dB	-
Thermal EMF	< 0.08 µV/°C	-
Shelf Life Stability: Absolute	ΔR ± 0.01 %	1 year at + 25 °C
Shelf Life Stability: Ratio	ΔR ± 0.002 %	1 year at + 25 °C

Notes

(1) Consult MIL-PRF-83401

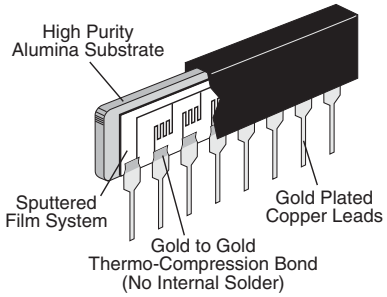
(2) “H” characteristic 100 Ω to 100 kΩ resistance range at 0.1% best
“R” characteristic 250 Ω to 100 kΩ resistance range at 0.1% best
“R” characteristic 250 Ω to 200 kΩ resistance range at 1% best

DIMENSIONS AND IMPRINTING in inches and millimeters



DIMENSION	INCHES	MILLIMETERS
A	0.035	0.89
B	0.040	1.02
C	0.100 ± 0.005 non-accum.	2.54 ± 0.13
D	0.019 ± 0.006 typical	0.48 ± 0.15
E	0.187 ± 0.010	4.75 ± 0.25
F	0.135	3.43
G	0.095	2.41
H	0.012 ± 0.004	0.31 ± 0.10
L (6 Pins)	0.583 - 0.023/+ 0.01	14.81 - 0.584/+ 0.254
L (8 Pins)	0.783 - 0.023/+ 0.01	19.89 - 0.584/+ 0.254
L (10 Pins)	0.983 - 0.023/+ 0.01	24.97 - 0.584/+ 0.254

CONSTRUCTION

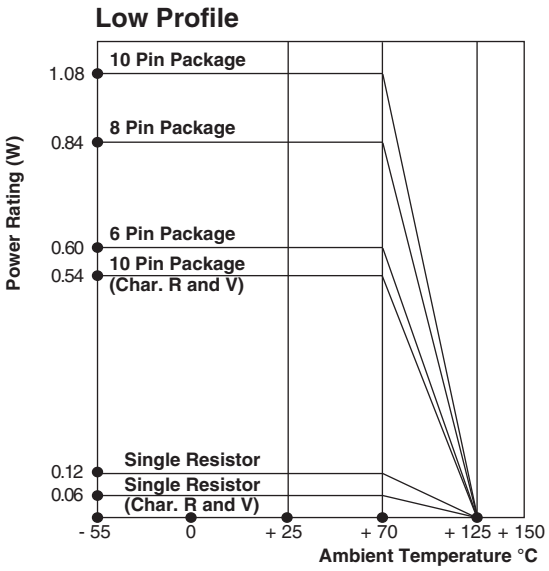


MECHANICAL SPECIFICATIONS

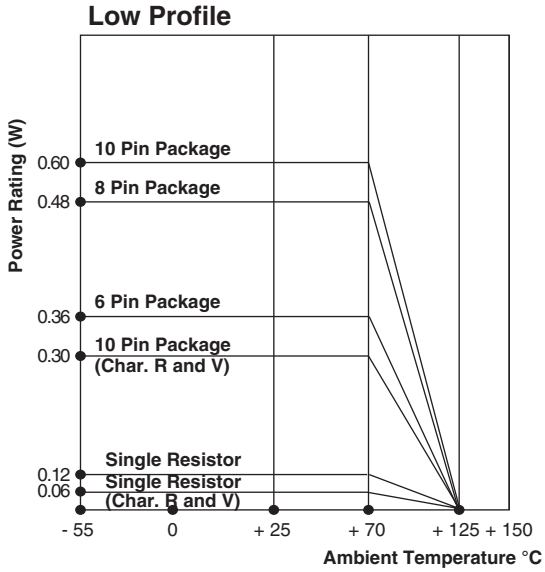
Resistive Element	TAMELOX passivated nichrome
Substrate Material	Alumina
Body Molded	Epoxy
Terminals	Copper alloy
Plating/Solder	Nickel/gold/Sn63 fussed

POWER DERATING

C Schematic (Pin 1 Common Characteristic H)



G Schematic (Isolated Characteristic H)



GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: M8340107H1000BCUF

M	8	3	4	0	1	0	7	H	1	0	0	0	B	C	U	F	V

MODEL (5 digits)	SCHEMATIC (2 digits)	CHARACTERISTIC (1 digits)	RESISTANCE (4 digits)	TOLERANCE (1 digits)	SCHEMATIC (1 digits)	PACKAGING (2 digits)	VENDOR (1 digits)
M83401 Single in-line resistor network low profile **C83401** Non burn in screened network	**07** = 6 pin **08** = 8 pin **09** = 10 pin **21** = 6 pin (1) **22** = 8 pin (1) **23** = 10 pin (1)	**H** = 50 ppm/°C **V** = 50 ppm/°C 5 ppm/°C track **R** = 25 ppm/°C 5 ppm/°C track **K** = 100 ppm/°C **M** = 300 ppm/°C	First 3 digits are significant figures and the last digit specifies the number of zeros to follow. (100 Ω to 100 kΩ) Examples: **1000** = 100 Ω **1001** = 1000 Ω	**B** = 0.1 % (3) **D** = 0.5 % (3) **F** = 1 % **G** = 2 % **J** = 5 %	**C** = Pin 1 common **G** = Isolated resistors	**UF** = Tubed **UI** = 100 min, 1 mult (item single lot date code) **UP** = 100 min.,1 mult (package unit single lot date)	**V** (2) = Vishay Dale Thin Film

Notes

(1) No internal solder

(2) "V" is not required for characteristics R, H, and V, it is only required for K and M. Characteristics tolerance equal to or greater than 1 %."

(3) "H" characteristic 100 Ω to 100 kΩ resistance range at 0.1% best
"R" characteristic 250 Ω to 100 kΩ resistance range at 0.1% best
"R" characteristic 250 Ω to 200 kΩ resistance range at 1% best

MODEL	SCHEMATIC	CHARACTERISTIC	RESISTANCE RANGE	TOLERANCE	SCHEMATIC
M83401 C83401	07 = 6 pin (RZ070) 08 = 8 pin (RZ080) 09 = 10 pin (RZ090) 21 = 6 pin (RZ210) 22 = 8 pin (RZ220) 23 = 10 pin (RZ230)	H = 50 ppm/°C	100 to 100K	B, D, F, G, J	C, G
		V = 50 ppm/°C/ 5 ppm/°C track	250 to 100K	B, D, F, G, J	
			250 to 200K	F, G, J	
		R = 25 ppm/°C 5 ppm/°C track	250 to 100K	B, D, F, G, J	
			250 to 200K	F, G, J	
		K = 100 ppm/°C	100 to 100K	B, D, F, G, J	
		M = 300 ppm/°C			

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