Bulk Metal® Foil Technology Power Current Sensing Resistors with TCR of 5 ppm/°C and Power Rating up to 7 Watts



Any value available within resistance range

These Bulk Metal® Foil power current sensing resistors are direct replacements for certain wirewound devices but without the inductive characteristics of wirewounds. The anodized aluminum housing is drilled and countersunk to accept flat head screws for thermal mounting. Because the device is internally Kelvin connected, there is no restriction on the lead lengths as would be the case if this were a two terminal device. Frequently used in YIG oscillator circuits these devices contribute to superior frequency stability.

FEATURES

Pb-free Available

RoHS* COMPLIANT

- Temperature Coefficient of Resistance (TCR):
  ± 5 ppm/°C (Above 10 Ω)
  ± 10 ppm/°C (Below 10 Ω)
- Tolerance: to ± 0.01 %
- Resistance Range: 1 Ω to 100 kΩ
- Electrostatic Discharge (ESD) above 25 000 V
- Non Inductive, Non Capacitive Design
- Rise Time: 1.0 ns without ringing
- Current Noise: < - 40 dB
- Thermal EMF: < 0.05 µV/°C typical
- Voltage Coefficient: < 0.1 ppm/V
- Non-Inductive: < 0.08 µH
- Non Hot Spot Design
- Terminal Finishes available: Lead (Pb)-free
  Tin/Lead Alloy
- Prototype Samples available from 48 hours. Please contact foil@vishay.com
- For better performances, please contact us

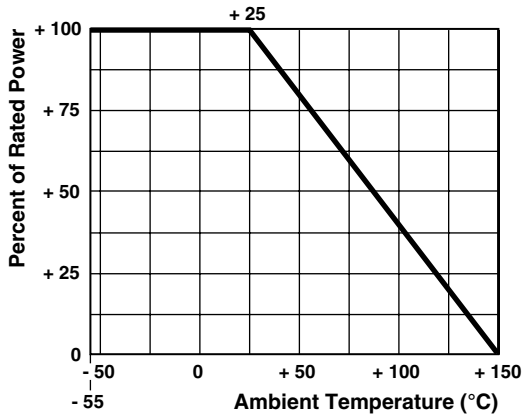
TABLE 1 - SPECIFICATIONS

MODEL NUMBER	RESISTANCE RANGE (Ω)	TOLERANCE TO	MAXIMUM WORKING VOLTAGE	POWER[1] RATING at 25 °C
VPR5	1 to 10	± 0.1 %	300 V	5 W
	> 10 to 100	± 0.05 %		
	> 100 to 100K	± 0.01 %		
VPR7	1 to 10	± 0.1 %	300 V	7 W
	> 10 to 100	± 0.05 %		
	> 100 to 100K	± 0.01 %		

Note

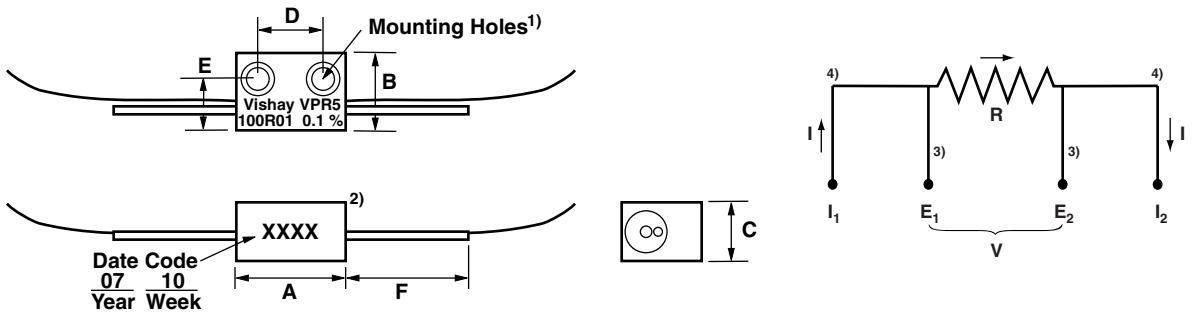
1. Mounted on aluminum chassis (6" L x 4" W x 2" H x 0.040" Th) per MIL-R-39009/1B.

FIGURE 1 - POWER DERATING CURVE



* Pb containing terminations are not RoHS compliant, exemptions may apply

TABLE 2 - STANDARD IMPRINTING AND DIMENSIONS



DIMENSIONS

A		B		C		D		E		F (min)	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
0.625	15.88	0.450	11.43	0.312	7.93	0.400	10.16	0.350	8.89	1.500	38.10
1.030	26.16	0.450	11.43	0.312	7.93	0.788	20.02	0.350	8.89	1.375	34.90

Notes

1. #4-40 F.H. Machine Screw (Not Included)
2. Anodized Aluminum Housing
3. #26 AWG, Teflon Coated, 4" min.
4. #20 AWG, Solder Coated Copper

TABLE 4 - GLOBAL PART NUMBER INFORMATION

NEW GLOBAL PART NUMBER: Y002625K5000T9L (preferred part number format)

DENOTES PRECISION	VALUE	AER*
Y	**R** = Ω **K** = kΩ	**0** = Standard **9** = Lead (Pb)-free **1 - 999** = Custom

Y	0	0	2	6	2	5	K	5	0	0	0	T	9	L

PRODUCT CODE	RESISTANCE TOLERANCE	PACKAGING
0026 = VPR5 **0027** = VPR7	**T** = ± 0.01 % **A** = ± 0.05 % **B** = ± 0.1 %	**L** = Bulk

FOR EXAMPLE: ABOVE GLOBAL ORDER Y0026 25K5000 T 9 L:
TYPE: VPR5
VALUE: 25.5 kΩ
ABSOLUTE TOLERANCE: ± 0.01 %
TERMINATION: Lead (Pb)-free
PACKAGING: Bulk

HISTORICAL PART NUMBER: VPR5T 25K500 T B (will continue to be used)

VPR5	T	25K500	T	B
MODEL	TERMINATION	OHMIC VALUE	RESISTANCE TOLERANCE	PACKAGING
VPR5 **VPR7**	**T** = Lead (Pb)-free None = Tin/Lead alloy	25.5 kΩ	**T** = ± 0.01 % **A** = ± 0.05 % **B** = ± 0.1 %	**B** = Bulk

Note

* For non-standard requests, please contact Application Engineering.

Disclaimer

All product specifications and data are subject to change without notice.

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