

## Bulk Metal<sup>®</sup> 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<sup>®</sup> 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

- Temperature Coefficient of Resistance (TCR):  
 $\pm 5 \text{ ppm/}^\circ\text{C}$  (Above  $10 \Omega$ )  
 $\pm 10 \text{ ppm/}^\circ\text{C}$  (Below  $10 \Omega$ )
- Tolerance: to  $\pm 0.01 \%$
- Resistance Range:  $1 \Omega$  to  $100 \text{ k}\Omega$
- Electrostatic Discharge (ESD) above  $25 \text{ 000 V}$
- Non Inductive, Non Capacitive Design
- Rise Time:  $1.0 \text{ ns}$  without ringing
- Current Noise:  $< -40 \text{ dB}$
- Thermal EMF:  $< 0.05 \mu\text{V/}^\circ\text{C}$  typical
- Voltage Coefficient:  $< 0.1 \text{ ppm/V}$
- Non-Inductive:  $< 0.08 \mu\text{H}$
- Non Hot Spot Design
- Terminal Finishes available: Lead (Pb)-free  
Tin/Lead Alloy
- Prototype Samples available from 48 hours. Please contact [foil@vishay.com](mailto:foil@vishay.com)
- For better performances, please contact us



RoHS\*  
COMPLIANT

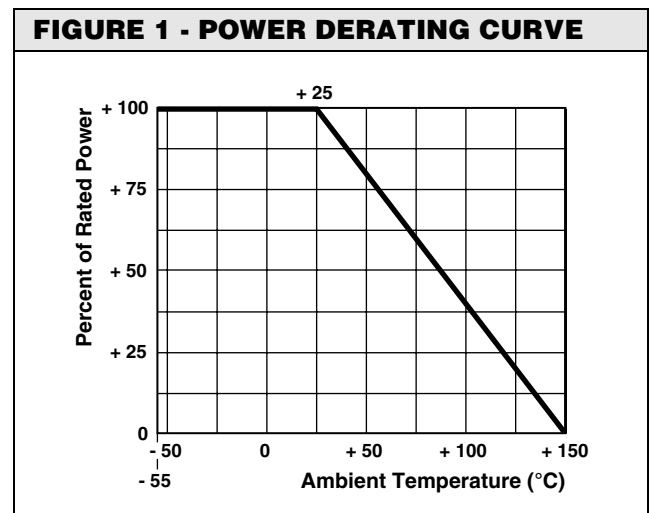
**TABLE 1 - SPECIFICATIONS**

MODEL NUMBER	RESISTANCE RANGE ( $\Omega$ )	TOLERANCE TO	MAXIMUM WORKING VOLTAGE	POWER <sup>1)</sup> RATING at $25^\circ\text{C}$
VPR5	1 to 10	$\pm 0.1 \%$	300 V	5 W
	> 10 to 100	$\pm 0.05 \%$		
	> 100 to 100K	$\pm 0.01 \%$		
VPR7	1 to 10	$\pm 0.1 \%$	300 V	7 W
	> 10 to 100	$\pm 0.05 \%$		
	> 100 to 100K	$\pm 0.01 \%$		

**Note**

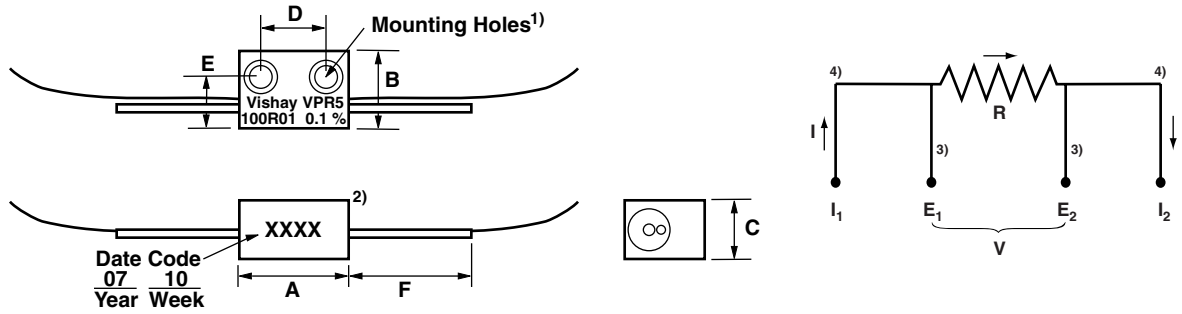
1. Mounted on aluminum chassis ( $6'' \text{ L} \times 4'' \text{ W} \times 2'' \text{ H} \times 0.040'' \text{ Th}$ ) per MIL-R-39009/1B.

**FIGURE 1 - POWER DERATING CURVE**



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

**TABLE 2 - STANDARD IMPRINTING AND DIMENSIONS**



**DIMENSIONS**

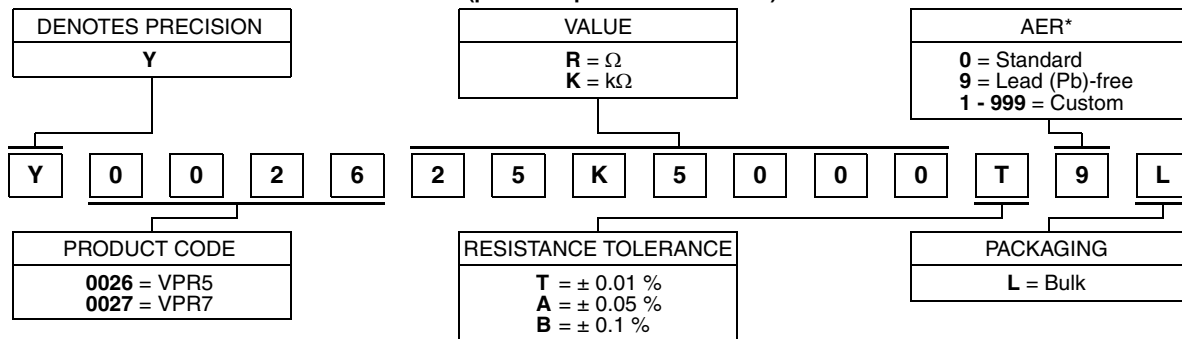
A		B		C		D		E		F (min)	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
0.625	15.88	0.450	11.43	0.312	7.93	0.400	10.16	0.350	8.89	1.500	38.10
1.030	26.16	0.450	11.43	0.312	7.93	0.788	20.02	0.350	8.89	1.375	34.90

**Notes**

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

**TABLE 4 - GLOBAL PART NUMBER INFORMATION**

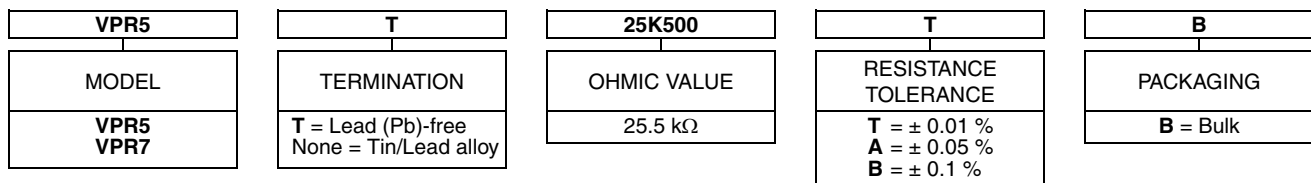
NEW GLOBAL PART NUMBER: Y002625K5000T9L (preferred part number format)



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)



**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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