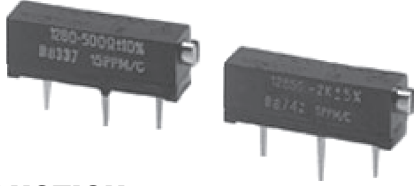


Bulk Metal® Foil Technology Ultra High Precision Trimming Potentiometers $\frac{3}{4}$ " Rectilinear, $\pm 5 \text{ ppm}/^\circ\text{C}$ and $\pm 15 \text{ ppm}/^\circ\text{C}$ TCR with a Smooth and Unidirectional Output



INTRODUCTION

Vishay Foil precision trimmers have the Bulk Metal® Foil resistive element which possesses a unique inherent temperature and load life stability. Plus, their advanced virtually backlash-free adjustment mechanism makes them easy to set quickly and accurately and keeps the setting exactly on target.



FEATURES

- Temperature coefficient of resistance (TCR): (- 55 °C to + 125 °C ref. at + 25 °C)
 - $\pm 15 \text{ ppm}/^\circ\text{C}$ (model 1280G);
 - $\pm 5 \text{ ppm}/^\circ\text{C}$ (model 1285G)⁽³⁾;
 - through the wiper $\pm 50 \text{ ppm}/^\circ\text{C}$
- A smooth and unidirectional resistance with leadscrew adjustment
- Load life stability: 0.5 % maximum ΔR under full rated power at + 25 °C for 2000 h
- Electrostatic discharge (ESD) up to 25 000 V
- Settability: 0.05 % typical; 0.1 % maximum
- Setting stability: 0.1 % typical; 0.5 % maximum, ΔSS
- Power rating: 0.75 W at + 25 °C
- Resistance range: 10 Ω to 20 k Ω
- Resistance tolerance: $\pm 10 \%$, $\pm 5 \%$
- Backlash: < 0.05 %
- Tap test: 0.05 % typical; 0.1 % maximum
- "O"-ring prevents ingress of fluids during any board cleaning operation
- Terminal finish: gold plated (tin/lead finish available on request)



RoHS
COMPLIANT

TABLE 1 - 1280G AND 1285G SERIES ELECTRICAL SPECIFICATIONS

Resistance Tolerance	Model 1280G 10 % ⁽¹⁾ , Model 1285G 5 %
Resistance Range	10 Ω to 20 k Ω
TCR Model 1280G	$\pm 15 \text{ ppm}/^\circ\text{C}$ (- 55 °C to + 125 °C, ref. + 25 °C)
TCR Model 1285G ⁽³⁾	$\pm 5 \text{ ppm}/^\circ\text{C}$ (- 55 °C to + 125 °C, ref. + 25 °C)
Power	0.75 W at + 25 °C derated linearly to 0 W at + 125 °C (see Fig. 2)
Settability	0.05 % typical; 0.1 % maximum
Setting Stability	0.1 % typical; 0.5 % maximum
Roll-on, Roll-off	0.25 % typical; 1.0 % maximum
Load Life Stability	0.5 % ΔR after 2000 h under full rated power at + 25 °C
End Resistance	2 Ω maximum
C.R.V. (noise) ⁽²⁾	3 Ω typical; 10 Ω maximum
Frequency Characteristics	10 ns rise time at 1 k Ω to 100 MHz

Notes

- (1) 5 % available on special order
- (2) The 1280G can be screened for low noise, if required
- (3) For model 1285G 10 Ω and 20 Ω TCR is $\pm 10 \text{ ppm}/^\circ\text{C}$
- (4) Panel mount available on special order

TABLE 2 - STANDARD VALUE

10 Ω , 20 Ω , 50 Ω , 100 Ω , 200 Ω , 500 Ω , 1 k Ω , 2 k Ω , 5 k Ω , 10 k Ω , 20 k Ω

TABLE 3 - 1280G AND 1285G SERIES MECHANICAL SPECIFICATIONS

Adjustment Turns	26 ± 2 turns
Backlash	< 0.05 %
Stops	clutch, wiper idles
Sealed	+ 85 °C water immersion
Torque	5 oz. in. maximum
Weight	1.5 grams maximum
Construction	
Case Material	Valox®
Lead Screw	Brass
Wiper	Precious metal brush
Rider Block	Nylon
Element	Bulk Metal® Foil
Lead Material	Gold plated phosphor bronze

FIGURE 1 - 1280G/1285G SCHEMATIC AND DIMENSIONS in Inches (Millimeters)

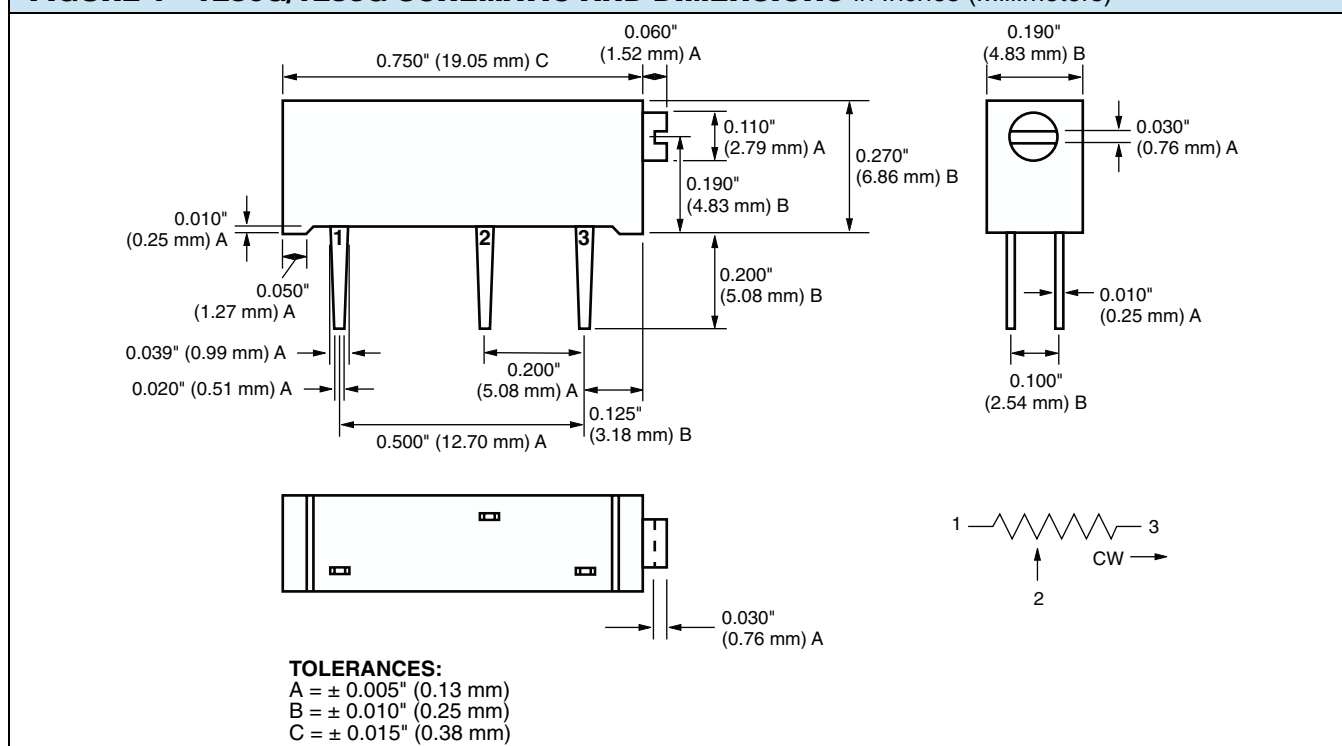


FIGURE 2 - POWER DERATING CURVE

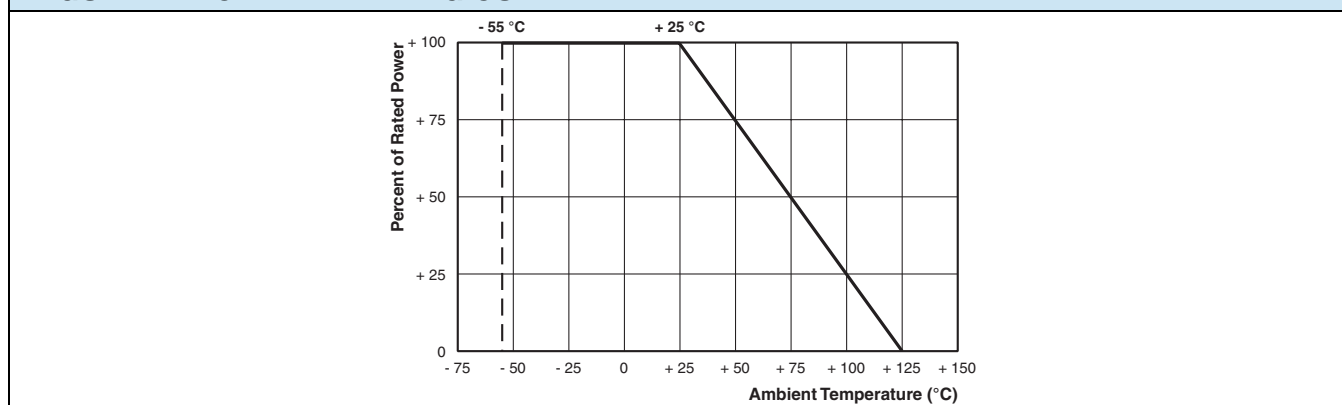


TABLE 4 - GLOBAL PART NUMBER INFORMATION

NEW GLOBAL PART NUMBER: Y0056100R000K0L (preferred part number format)



FOR EXAMPLE: ABOVE GLOBAL ORDER Y0056 100R000 K 0 L:

TYPE: 1280G

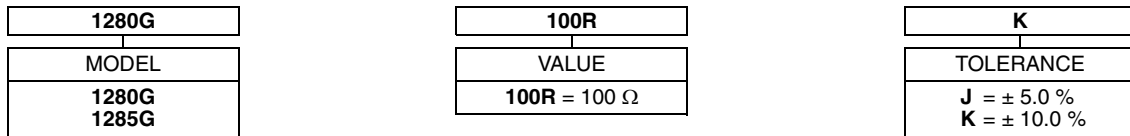
VALUES: 100.0 Ω

ABSOLUTE TOLERANCE: ± 10 %

TERMINATION: gold plated (lead (Pb)-free)

PACKAGING: foam/box pack

HISTORICAL PART NUMBER: 1280G 100R K (will continue to be used)



Note

(1) For non-standard requests or additional values, please contact application engineering.

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