



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

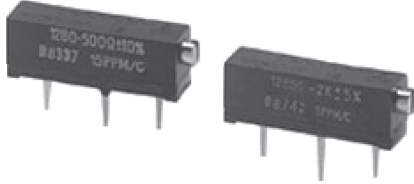
Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

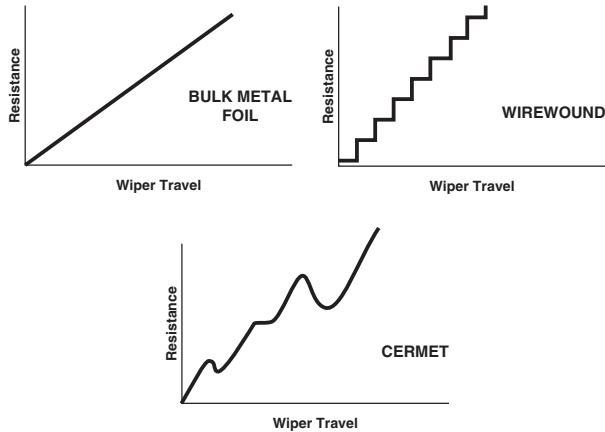


## Bulk Metal® Foil Technology Ultra High Precision Trimming Potentiometers $\frac{3}{4}$ " Rectilinear, $\pm 5 \text{ ppm}/^\circ\text{C}$ and $\pm 15 \text{ ppm}/^\circ\text{C}$ TCR with a Smooth and Unidirectional Output



### 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)<sup>(3)</sup>;
  - through the wiper  $\pm 50 \text{ ppm}/^\circ\text{C}$
- A smooth and unidirectional resistance with leadscrew adjustment
- Load life stability: 0.5 % maximum  $\Delta R$  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,  $\Delta SS$
- Power rating: 0.75 W at + 25 °C
- Resistance range: 10  $\Omega$  to 20 k $\Omega$
- 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**

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

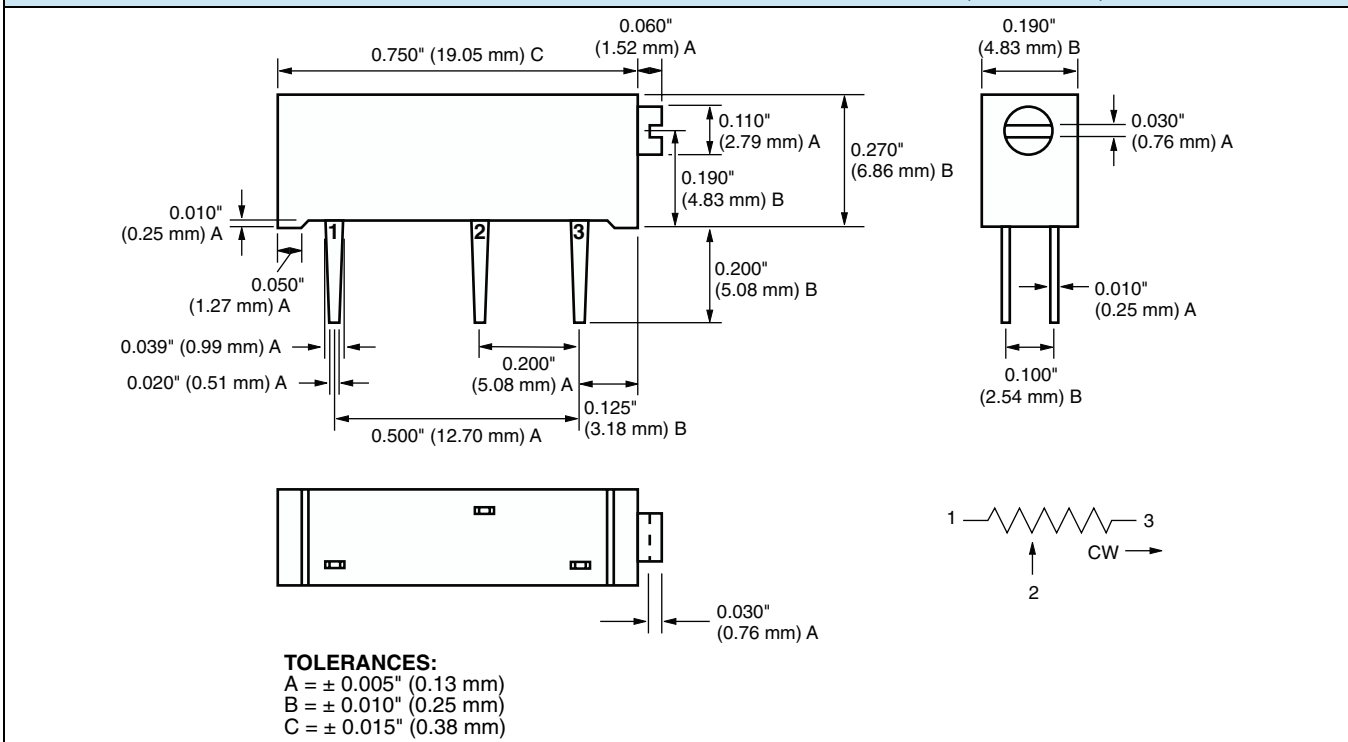
**TABLE 2 - STANDARD VALUE**

|   |
|---|
| 10 $\Omega$ , 20 $\Omega$ , 50 $\Omega$ , 100 $\Omega$ , 200 $\Omega$ , 500 $\Omega$ , 1 k $\Omega$ , 2 k $\Omega$ , 5 k $\Omega$ , 10 k $\Omega$ , 20 k $\Omega$ |
|---|

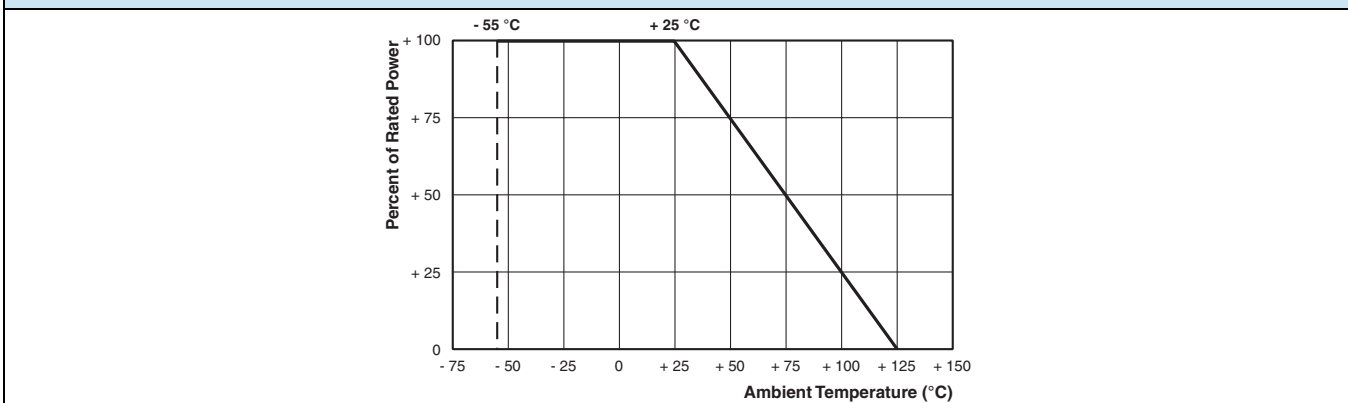
**TABLE 3 - 1280G AND 1285G SERIES MECHANICAL SPECIFICATIONS**

|                         |                             |
|-------------------------|-----------------------------|
| <b>Adjustment Turns</b> | 26 ± 2 turns                |
| <b>Backlash</b>         | < 0.05 %                    |
| <b>Stops</b>            | clutch, wiper idles         |
| <b>Sealed</b>           | + 85 °C water immersion     |
| <b>Torque</b>           | 5 oz. in. maximum           |
| <b>Weight</b>           | 1.5 grams maximum           |
| <b>Construction</b>     |                             |
| 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)



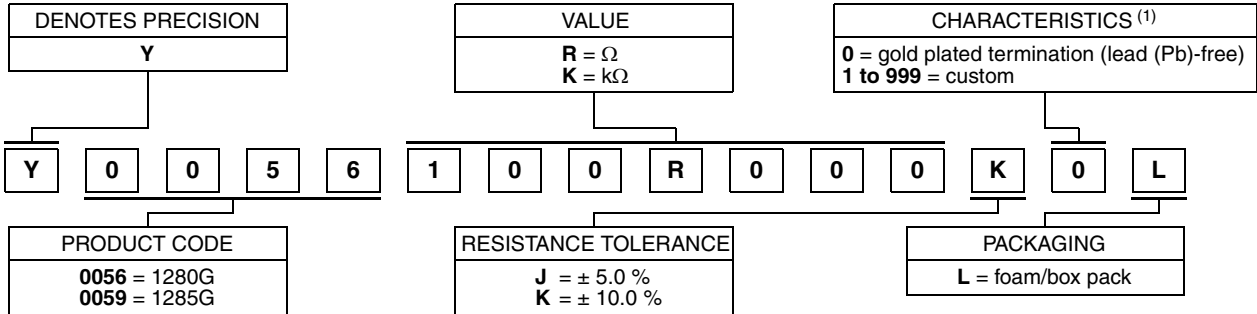
**FIGURE 2 - POWER DERATING CURVE**





**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

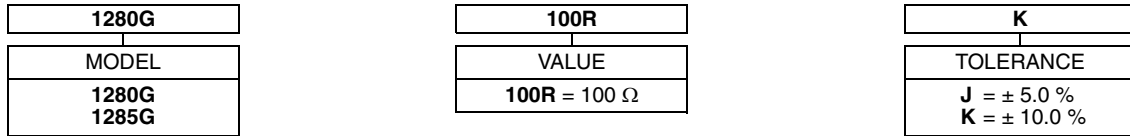
VALUES: 100.0 Ω

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.

## Disclaimer

ALL PRODUCTS, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Vishay Precision Group, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay Precision Group"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

The product specifications do not expand or otherwise modify Vishay Precision Group's terms and conditions of purchase, including but not limited to, the warranty expressed therein.

Vishay Precision Group makes no warranty, representation or guarantee other than as set forth in the terms and conditions of purchase. **To the maximum extent permitted by applicable law, Vishay Precision Group disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.**

Information provided in datasheets and/or specifications may vary from actual results in different applications and performance may vary over time. Statements regarding the suitability of products for certain types of applications are based on Vishay Precision Group's knowledge of typical requirements that are often placed on Vishay Precision Group products. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application.

No license, express, implied, or otherwise, to any intellectual property rights is granted by this document, or by any conduct of Vishay Precision Group.

The products shown herein are not designed for use in life-saving or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay Precision Group products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay Precision Group for any damages arising or resulting from such use or sale. Please contact authorized Vishay Precision Group personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.