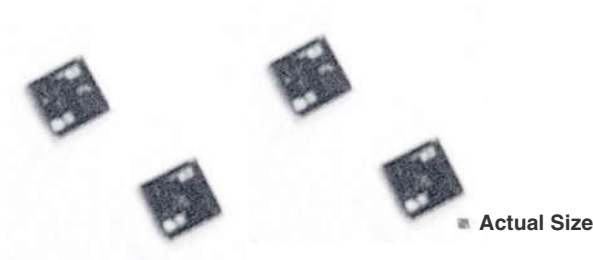


## Single Value Chip Resistor



Chromium silicon thin film is very well suited to produce high density and high ohmic value resistor chips. These high ohmic value chip resistors are available with improved performances and size when compared to thick film counterparts.

### FEATURES

- Small size 20 mil x 20 mil
- Very high ohmic value up to 10 M $\Omega$
- Good stability 0.1 % (2000 h, rated power at + 70 °C)
- Wirebondable



**RoHS**  
COMPLIANT  
**GREEN**  
[5-2008]\*\*

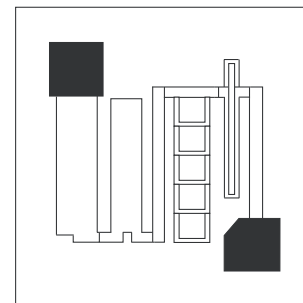
### Note

\*\* Please see document "Vishay Material Category Policy":  
[www.vishay.com/doc?99902](http://www.vishay.com/doc?99902)

### TYPICAL PERFORMANCE

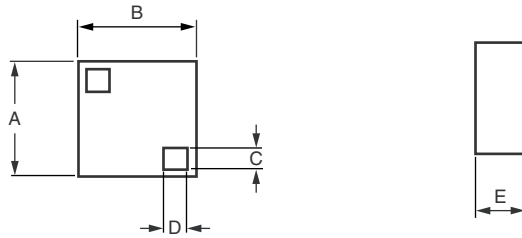
	ABS
TCR	100 ppm/°C
TOL.	0.5 %

### SCHEMATIC AND PATTERN



### STANDARD ELECTRICAL SPECIFICATIONS

TEST	SPECIFICATIONS	CONDITIONS
MATERIAL	PASSIVATED CHROMIUM SILICON	
Resistance range	10 k $\Omega$ to 10 M $\Omega$	
Absolute TCR	$\pm 100$ ppm/°C ( $\pm 50$ ppm/°C on request)	- 55 °C to + 155 °C
Absolute tolerance	$\pm 0.5$ %, $\pm 1$ %, $\pm 2$ %	
Power dissipation	100 mW at + 25 °C, 50 mW at + 70 °C, 25 mW at + 125 °C	
Stability	$\pm 0.1$ % typical, $\pm 0.2$ maximum	2000 h at + 70 °C at Pn
Limiting voltage	100 V <sub>DC</sub>	Higher on Al <sub>2</sub> O <sub>3</sub>
Operating temperature range	- 55 °C to + 155 °C	
Storage temperature range	- 55 °C to + 155 °C	
Noise	< - 20 dB typical	MIL-STD-202 Method 308
Thermal EMF	< 0.01 $\mu$ V/°C	
Shelf life stability	200 ppm	1 year at + 25 °C

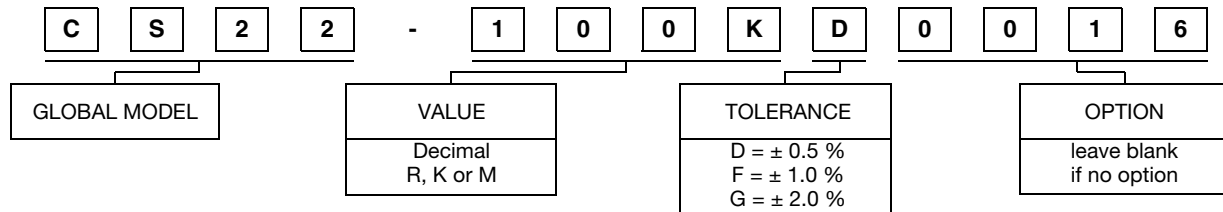
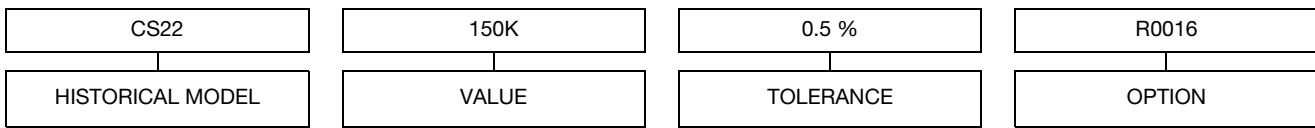
**DIMENSIONS**


DIMENSION	INCHES	MILLIMETERS
A	0.021 ± 0.002	0.55 ± 0.10
B	0.021 ± 0.002	0.55 ± 0.10
C	0.004	0.10
D	0.004	0.10
E	0.015	0.40 maximum

**MECHANICAL SPECIFICATIONS**

Resistive element	Chromium Silicon
Passivation	Silicon Nitride
Substrate material	Silicon (consult Vishay for Al <sub>2</sub> O <sub>3</sub> )
Bonding pads	Aluminum

**GLOBAL PART NUMBER INFORMATION**

 New Global Part Numbering: **CS22-100KD0016** (preferred part number format)

 Historical Part Number example: **CS22 150K 0.5 % R0016** (will continue to be accepted)




## Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

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

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay 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.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. 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. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk and agree to fully indemnify and hold Vishay and its distributors harmless from and against any and all claims, liabilities, expenses and damages arising or resulting in connection with such use or sale, including attorneys fees, even if such claim alleges that Vishay or its distributor was negligent regarding the design or manufacture of the part. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.