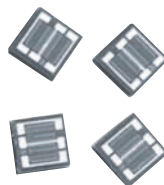


Wirebondable Dual Value Thin Film Chip Resistor Networks, Center Tap (High Ohmic Value)


 Actual Size

DESIGN SUPPORT TOOLS

[click logo to get started](#)

3D
Models
Available

Chromium silicon thin film is very well suited to produce high density and high ohmic value resistor chips. Performances and sizes are greatly improved compared to Thick Film counterparts. The center tap configuration offers a greater flexibility for hybrid layout design.

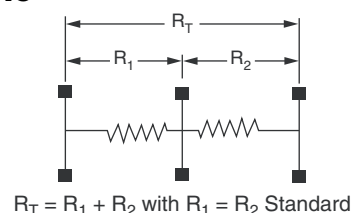
FEATURES

- Center tap feature
- Small size 30 mil x 30 mil
- Very high ohmic values (up to 10 M Ω)
- Aluminum or gold terminations
- Wirebondable
- Good stability 0.1 % (2000 h, rated power, at +70 °C)
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

SCHEMATIC



STANDARD ELECTRICAL SPECIFICATIONS

MODEL	SIZE	RESISTANCE RANGE ⁽¹⁾ Ω	POWER RATING $P_{70^\circ\text{C}}$ W	ABSOLUTE TOLERANCE $\pm$ %	RATIO TOLERANCE $\pm$ %	ABSOLUTE TCR ⁽²⁾ $\pm$ ppm/°C	RATIO TCR $\pm$ ppm/°C
CS 33	0303	10K to 10M	0.125	0.5, 1, 2	0.5	50, 100	5

Notes

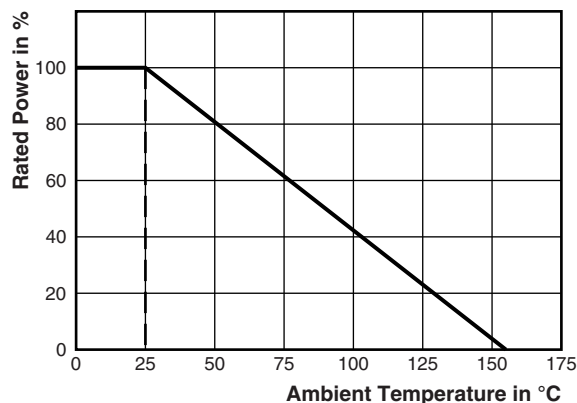
⁽¹⁾ ($R_T = R_1 + R_2$)

⁽²⁾ ± 100 ppm/°C, ± 50 ppm/°C on request at -55 °C to +155 °C

PERFORMANCES

TEST	SPECIFICATIONS	CONDITIONS
Ohmic value: Ratio	1/1 standard (unequal values: please consult)	
Stability	± 0.1 % typical, ± 0.2 maximum	2000 h at +70 °C under P_n
Voltage coefficient	0.1 ppm/V	
Limiting voltage	100 V _{DC} on R_T	
Noise	< -20 dB typical	MIL-STD-202 method 308
Thermal EMF	< 0.01 μ V/°C	
Shelf life stability	200 ppm	1 year at +25 °C

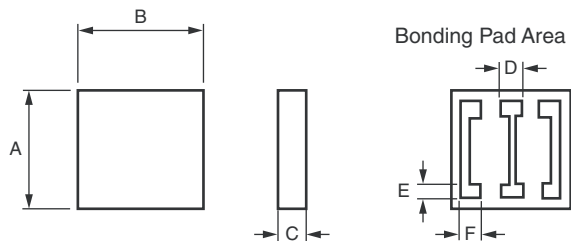
DERATING



CLIMATIC SPECIFICATIONS

Operating temperature range	-55 °C to +155 °C
Storage temperature range	-55 °C to +155 °C

DIMENSIONS



DIMENSION	INCHES	MILLIMETERS
A	0.033 ± 0.004	0.855 ± 0.10
B	0.033 ± 0.004	0.855 ± 0.10
C	0.01 to 0.015	0.25 to 0.40
D	0.006	0.15
E	0.004	0.10
F	0.006	0.15

MECHANICAL SPECIFICATIONS

Resistive element	Chromium silicon
Passivation	Silicone nitride
Substrate material	Silicon (consult vishay for Al ₂ O ₃)
Bonding pads	Aluminum or gold

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: CS33-100KF1MD0099

C	S	3	3	-	1	0	0	K	F	1	M	D		0	0	9	9
GLOBAL MODEL		R ₁ VALUE			ABS. TOLERANCE				R ₂ VALUE		RAT. TOLERANCE		TERMINATIONS		OPTION		
		Decimal R, K, or M			D = ± 0.5 % F = ± 1.0 % G = ± 2.0 %				Decimal R, K, or M		D = ± 0.5 %		Blank = aluminum G = gold		Leave blank if no option		



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. 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.