

TA 33

ROHS COMPLIANT

HALOGEN

FREE

GREEN

<u>(5-2008)</u>

Vishay Sfernice

Wirebondable Dual Value Thin Film Chip Resistor Networks, Center Tap



Actual Size

LINKS TO ADDITIONAL RESOURCES

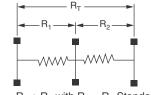


These tantalum chips combine excellent stability 0.07 % (2000 h, rated power at +70 °C) with great power handling capacity. Two bonding pads per termination allow greater flexibility in hybrid layout design.

FEATURES

- Center tap feature
- Resistor material: self-passivating tantalum nitride
- Silicon substrate for good power dissipation
- Wirebondable
- Material categorization: for definitions of compliance please see www.vishav.com/doc?99912

SCHEMATIC



 $R_T = R_1 + R_2$ with $R_1 = R_2$ Standard

STANDARD ELECTRICAL SPECIFICATIONS							
MODEL	SIZE	RESISTANCE RANGE ⁽¹⁾ Ω	POWER RATING P _{70 °C} W	ABSOLUTE TOLERANCE ± %	RATIO TOLERANCE ± %	ABSOLUTE TCR ⁽²⁾ ± ppm/°C	RATIO TCR ± ppm/°C
TA 33	0303	50 to 1M	0.125	0.5, 1, 2	0.1, 0.5	50, 100	5

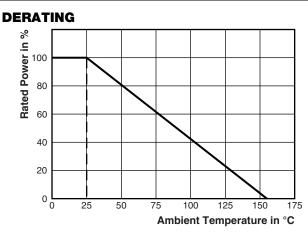
Notes

⁽¹⁾ $(R_{\rm T} = R_1 + R_2)$

 $^{(2)}$ ± 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	± 0.07 % typical, ± 0.1 maximum	2000 h at +70 °C under Pn		
Limiting voltage	50 V _{DC} on <i>R</i> _T			
Noise	< -35 dB typical	MIL-STD-202 method 308		
Thermal EMF	0.01 µV/°C			
Shelf life stability	100 ppm	1 year at +25 °C		

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



Revision: 31-Oct-2023

1 For technical questions, contact: <u>sferthinfilm@vishay.com</u> Document Number: 60066

End of Life April 2024 - Alternative Device: RSK 33N

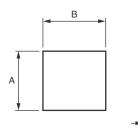


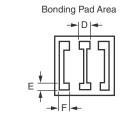
TA 33

www.vishay.com

Vishay Sfernice

DIMENSIONS





DIMENSION	INCHES	MILLIMETERS	
А	0.033 ± 0.004	0.855 ± 0.10	
В	0.033 ± 0.004	0.855 ± 0.10	
С	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	Tantalum nitride			
Substrate material	Silicon			
Passivation	Self passivation			
Bonding pads	Aluminum, gold on request			

GLOBAL PART NUMBER INFORMATION						
New Global Part Numbering: TA33-5K2F25KD0099 (preferred part number format)						
T A 3 3 - 5 K 2 F 2 5 K D 0 9 9						
GLOBAL MODEL	R ₁ VALUE	ABS. TOLERANCE	R ₂ VALUE	RAT. TOLERANCE	OPTION	
	Decimal	D = ± 0.5 %	Decimal	B = ± 0.1 %	Leave blank	
	R, K, or M	F = ± 1.0 %	R, K, or M	D = ± 0.5 %	if no option	
		G = ± 2.0 %				

2



Vishay

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.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Vishay products are not designed for use in life-saving or life-sustaining applications or any application in which the failure of the Vishay product could result in personal injury or death unless specifically qualified in writing by Vishay. 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.

© 2025 VISHAY INTERTECHNOLOGY, INC. ALL RIGHTS RESERVED

Revision: 01-Jan-2025

1