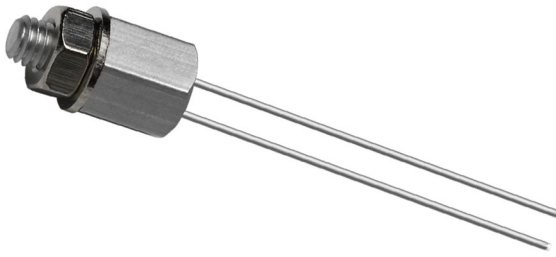


NTC Thermistors, Screw Threaded Sensors



QUICK REFERENCE DATA		
PARAMETER	VALUE	UNIT
Resistance value at 25 °C	1K to 470K	Ω
Tolerance on R_{25} -value	$\pm 1, \pm 2, \pm 5$	%
$B_{25/85}$ -value	3740 to 4570	K
Tolerance on $B_{25/85}$ -value	± 0.5 to ± 2.5	%
Operating temperature range at: Zero dissipation	- 40 to + 100	$^{\circ}\text{C}$
Maximum power dissipation	0 to + 55	
Dissipation factor ⁽¹⁾	≈ 23	mW/K
Maximum power dissipation	500	mW
Thermal time constant ⁽¹⁾	≈ 7.5	s
Min. dielectric withstanding voltage between terminals and Al case	1500 (1 s)	V_{AC}
Insulation resistance between terminals and Al case	min. 100	$M\Omega$
Weight	≈ 1.5	g

Notes

- Other R_{25} -values and tolerances are available upon request
 - Insulated leads available upon request
- ⁽¹⁾ Measured with screw mounted on an aluminium heatsink of 100 cm², thickness 1.5 mm, in still air at $T_{amb} = + 25^{\circ}\text{C}$

FEATURES

- Easy mounting with screw
- Rugged construction
- Material categorization:
For definitions of compliance please see www.vishay.com/doc?999912


RoHS
COMPLIANT

APPLICATIONS

- Temperature measurement, sensing and control
- Suitable for surface temperature applications, especially when a good electrical insulation and a good thermal contact with the chassis is required

DESCRIPTION

The thermistors are made of NTC ceramic material reflow soldered between two solid tinned copper or nickel wires and potted in the head of passivated aluminum screw size M4.

PACKAGING

The thermistors are packed in cardboard boxes; the smallest packaging quantity is 100 units.

DESIGN IN SUPPORT

For complete Curve Computation, visit:
www.vishay.com/resistors-non-linear/curve-computation-list

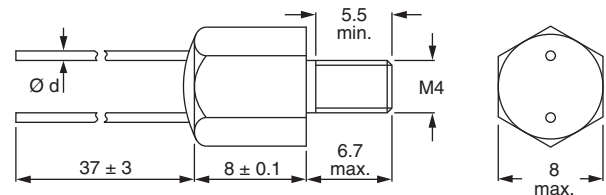
MARKING

The last 4 digits of the 12NC code are printed on the stud in accordance with the information in Electrical Data and Ordering Information table.

MOUNTING

By means of a washer and M4 nut supplied with the device or in a threaded screw hole. Applied torque shall not exceed 1.2 Nm. Leads to be soldered or crimped.

DIMENSIONS in millimeters



Component outline

ELECTRICAL DATA AND ORDERING INFORMATION						
R_{25} (k Ω)	TOLERANCE ON R_{25}	$B_{25/85}$ -VALUE	LEADS DIAMETER $\varnothing d$ (mm)	TCR (%/K)	SAP MATERIAL NUMBER AND ORDERING CODE	OLD 12NC CODE
1.0	$\pm 5\%$	$3528K \pm 0.5\%$	0.6	- 3.87	NTCASCWE3102J	2381 640 73102
2.2	$\pm 5\%$	$3977K \pm 0.75\%$	0.6	- 4.37	NTCASCWE3222J	2381 640 73222
4.7	$\pm 1\%$	$3977K \pm 0.75\%$	0.5	- 4.37	NTCASCWE3472F	2381 640 75472
4.7	$\pm 2\%$	$3977K \pm 0.75\%$	0.5	- 4.37	NTCASCWE3472G	2381 640 74472
4.7	$\pm 5\%$	$3977K \pm 0.75\%$	0.6	- 4.37	NTCASCWE3472J	2381 640 73472
10	$\pm 1\%$	$3977K \pm 0.75\%$	0.5	- 4.37	NTCASCWE3103F	2381 640 75103
10	$\pm 2\%$	$3977K \pm 0.75\%$	0.5	- 4.37	NTCASCWE3103G	2381 640 74103
10	$\pm 5\%$	$3977K \pm 0.75\%$	0.6	- 4.37	NTCASCWE3103J	2381 640 73103
12	$\pm 5\%$	$3740K \pm 1.5\%$	0.6	- 4.10	NTCASCWE3123J	2381 640 73123
15	$\pm 5\%$	$3740K \pm 1.5\%$	0.6	- 4.10	NTCASCWE3153J	2381 640 73153
47	$\pm 5\%$	$4090K \pm 1.5\%$	0.6	- 4.46	NTCASCWE3473J	2381 640 73473
100	$\pm 1\%$	$4190K \pm 1.5\%$	0.5	- 4.57	NTCASCWE3104F	2381 640 75104
100	$\pm 2\%$	$4190K \pm 1.5\%$	0.5	- 4.57	NTCASCWE3104G	2381 640 74104
100	$\pm 5\%$	$4190K \pm 1.5\%$	0.6	- 4.57	NTCASCWE3104J	2381 640 73104
150	$\pm 5\%$	$4370K \pm 2.5\%$	0.6	- 4.75	NTCASCWE3154J	2381 640 73154
470	$\pm 5\%$	$4570K \pm 2\%$	0.6	- 4.95	NTCASCWE3474J	2381 640 73474



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.

Material Category Policy

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.

Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.