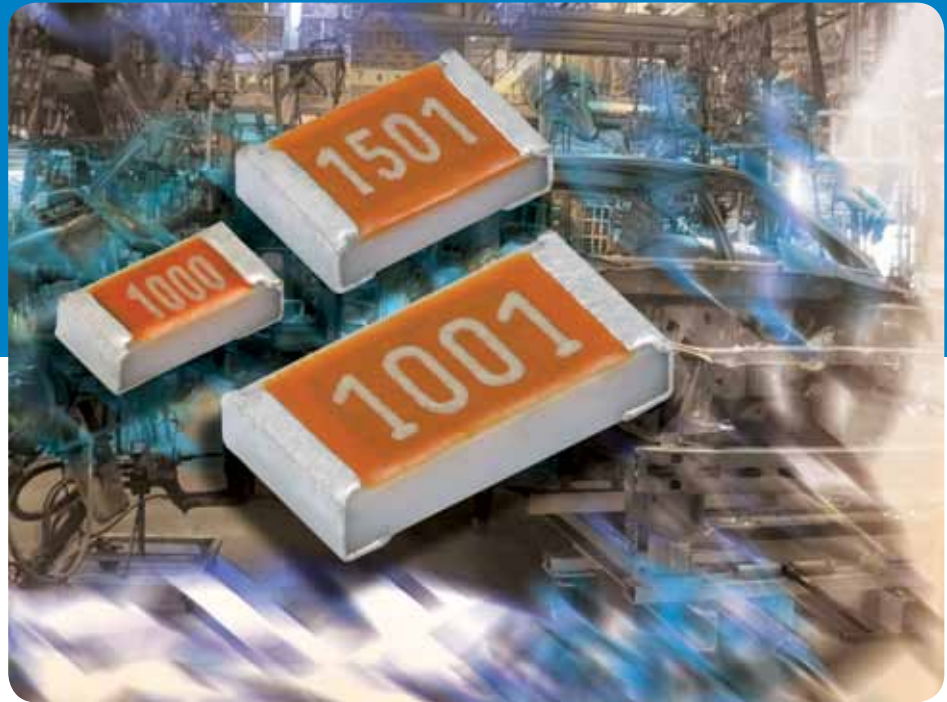




# NICKEL THIN FILM THERMISTOR

TFPT



## Nickel Thin Film PTC Thermistor with Linear Tracking

### KEY BENEFITS

- Terminations: nickel barrier, pure tin or tin/lead wraparound
- Operation range: - 55 °C to + 125 °C (+ 150 °C)
- Sizes available: 0603, 0805, 1206
- TCR @ 25 °C = 4110 ppm/K
- Standard tolerances:  $\pm 0.5\%$ ,  $\pm 1\%$ ,  $\pm 5\%$
- High stability (drift < 0.25 %)
- Reproducible curve with algorithm

### APPLICATIONS

- Temperature compensation and sensing in consumer, industrial, and automotive applications
- Printers
- Cell phones
- Pagers
- DC motors

## SMD PTC - Nickel Thin Film Linear Thermistors



### FEATURES

- Alumina substrate base with nickel based PTC thin film element
- 0603, 0805 and 1206 sizes available
- Available in tape and reel packaging
- Standard  $R_{25}$  tolerances:  $\pm 0.5\%$ ,  $\pm 1\%$ ,  $\pm 5\%$
- Operation range - 55 °C to + 125 °C (+ 150 °C)
- Compliant to RoHS directive 2002/95/EC


**RoHS**  
COMPLIANT

### STANDARD ELECTRICAL SPECIFICATIONS

TCR AT ROOM TEMPERATURE (25 °C) SEE TYPICAL CURVE FOR TCR AT OTHER TEMPS.	TCR <sup>(1)</sup> TOLERANCE ppm/K	$R_{25}$ VALUE RANGE in $\Omega$ (0.5 %, 1 %, 5 % TOLERANCE) <sup>(2)</sup>					
		0603		0805		1206	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
4110 ppm/K	$\pm 400$	100 to 1K		100 to 5K		100 to 10K	

**Notes**
<sup>(1)</sup> Contact Vishay if closer TCR lot tolerance is desired

<sup>(2)</sup> Other  $R_{25}$  values and tolerances are available upon request

### STANDARD RESISTANCE VALUES at 25 °C in $\Omega$

100	270	680	1.8K	4.7K
120	330	820	2.2K	5.6K
150	390	1K	2.7K	6.8K
180	470	1.2K	3.3K	8.2K
220	560	1.5K	3.9K	10.0K

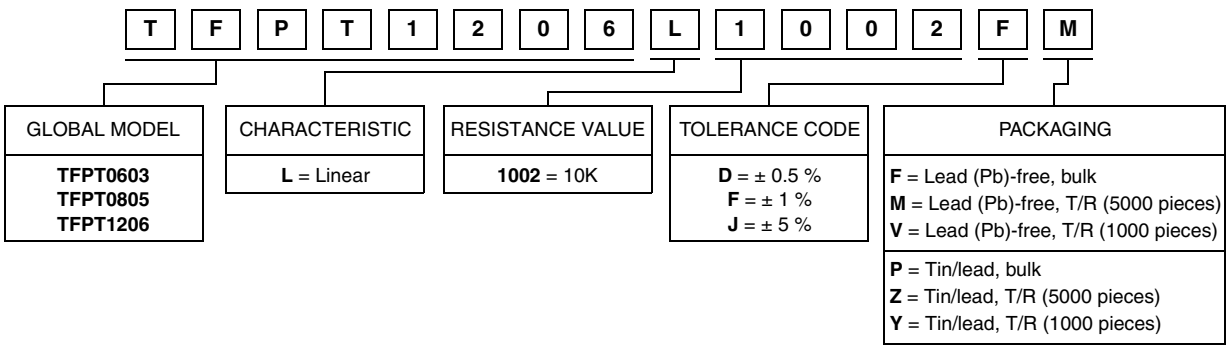
### STANDARD TECHNICAL SPECIFICATIONS

PART NUMBER	$P_{70}$ MAXIMUM POWER at 70 °C	MAXIMUM WORKING VOLTAGE RCWV <sup>(3)</sup>
TFPT 0603	75 mW	30 V <sub>DC</sub>
TFPT 0805	100 mW	40 V <sub>DC</sub>
TFPT 1206	125 mW	50 V <sub>DC</sub>

**Note**
<sup>(3)</sup> Rated Continuous Working Voltage is maximum working voltage or square root of the power rating times resistance value, whichever is less.

### GLOBAL PART NUMBER INFORMATION

Global Part Numbering: TFPT1206L1002FM (preferred part number format)



Revision 06-Nov-09

**DISCLAIMER** All product specifications and data are subject to change without notice. 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 herein or in any other disclosure relating to any product. Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products. 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. The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay 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.

 Build **Vishay** into your **Design**