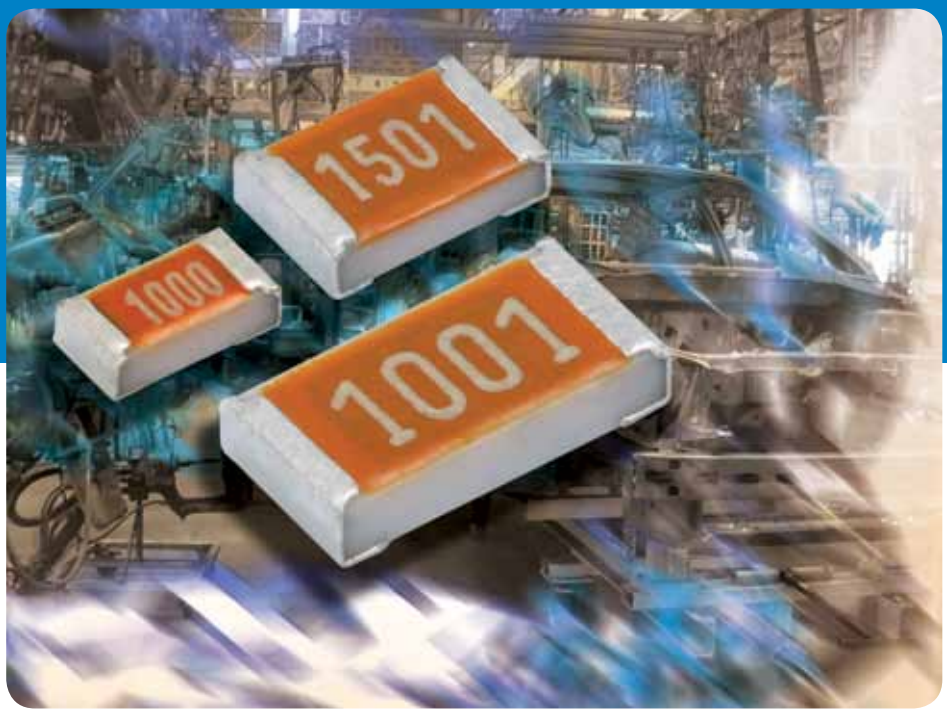
NICKEL THIN FILM THERMISTOR

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: ± 0.5 %, ± 1 %, ± 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

Datasheet is available on our web site at www.vishay.com
for TFPT - http://www.vishay.com/doc?33017

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: ± 0.5 %, ± 1 %, ± 5 %
- Operation range - 55 °C to + 125 °C (+ 150 °C)
- Compliant to RoHS directive 2002/95/EC

e3
RoHS COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS

TCR AT ROOM TEMPERATURE (25 °C) SEE TYPICAL CURVE FOR TCR AT OTHER TEMPS.	TCR [1] TOLERANCE ppm/K	R_{25} VALUE RANGE in Ω (0.5 %, 1 %, 5 % TOLERANCE) [2]					
		0603		0805		1206	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
4110 ppm/K	± 400	100	to 1K	100	to 5K	100	to 10K

Notes
(1) Contact Vishay if closer TCR lot tolerance is desired
(2) Other R_{25} values and tolerances are available upon request

STANDARD RESISTANCE VALUES at 25 °C in Ω

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 [3]
TFPT 0603	75 mW	30 V_{DC}
TFPT 0805	100 mW	40 V_{DC}
TFPT 1206	125 mW	50 V_{DC}

Note
(3) 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)

T	F	P	T	1	2	0	6	L	1	0	0	2	F	M

GLOBAL MODEL	CHARACTERISTIC	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING
TFPT0603 **TFPT0805** **TFPT1206**	**L** = Linear	**1002** = 10K	**D** = ± 0.5 % **F** = ± 1 % **J** = ± 5 %	**F** = Lead (Pb)-free, bulk **M** = Lead (Pb)-free, T/R (5000 pieces) **V** = Lead (Pb)-free, T/R (1000 pieces) **P** = Tin/lead, bulk **Z** = Tin/lead, T/R (5000 pieces) **Y** = Tin/lead, T/R (1000 pieces)

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