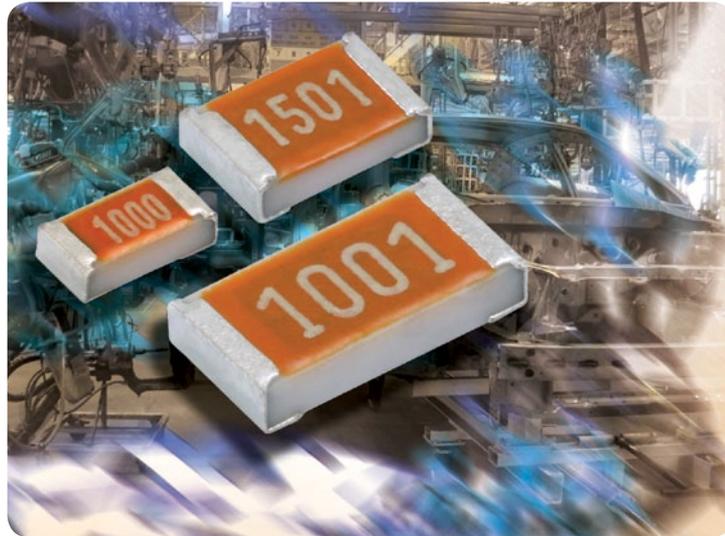


Nickel Thin Film PTC Thermistor with Linear Tracking



KEY BENEFITS

- Terminations: nickel barrier, pure tin or tin/lead wraparound
- Operation range: - 55 °C to + 150 °C
- Sizes available: 0603, 0805, 1206
- TCR at 25 °C = 4110 ppm/K
- Standard tolerances: ± 0.5 %, ± 1 %, ± 5 %
- High stability over the complete temperature range (drift < 0.25 %)
- cUL recognized component

APPLICATIONS

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

RESOURCES

- Datasheet: TFPT - <http://www.vishay.com/doc?33017>
- For technical questions contact nlr@vishay.com

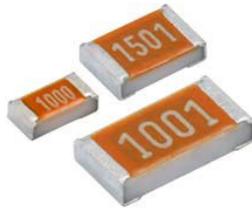


THIN FILM PTC THERMISTOR

TFPT



Nickel Thin Film PTC Thermistor with Linear Tracking



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 - $55\text{ }^{\circ}\text{C}$ to $+150\text{ }^{\circ}\text{C}$
- High stability over the entire temperature range
- cUL recognized component: File E148885
- Compliant to RoHS Directive 2011/65/EU
- Halogen-free according to IEC 61249-2-21 definition



RoHS
COMPLIANT
HALOGEN
FREE

QUICK REFERENCE DATA				
PARAMETER	VALUE			UNIT
DESCRIPTION	TFPT0603	TFPT0805	TFPT1206	
Resistance value at $25\text{ }^{\circ}\text{C}$ ⁽²⁾	100 to 1K	100 to 5K	100 to 10K	Ω
Tolerance on R_{25} -value ⁽²⁾	± 0.5 ; ± 1 ; ± 5			%
TCR at $25\text{ }^{\circ}\text{C}$	4110			ppm/K
Tolerance on TCR at $25\text{ }^{\circ}\text{C}$ ⁽¹⁾	± 400			
Operating temperature range: at rated power at zero dissipation ⁽⁴⁾	- 55 to + 70 - 55 to + 150			$^{\circ}\text{C}$
Dissipation factor δ (for information only)	1.8	2.3	4	mW/K
Maximum rated power at $70\text{ }^{\circ}\text{C}$ (P_{70})	75	100	125	mW
Maximum working voltage RCWV ⁽³⁾	30	40	50	V
Climatic category (LCT/UCT/days)	55/150/56			-
Weight	2	5.5	10	mg

Notes

- (1) Contact Vishay if closer TCR lot tolerance is desired
- (2) Other R_{25} -values and tolerances are available upon request
- (3) Rated continuous working voltage is maximum working voltage or $\sqrt{P_{70} \times R}$, whichever is less
- (4) Zero power or zero dissipation is considered as measuring power max. 1 % of rated power P_{70}

STANDARD RESISTANCE VALUES at $25\text{ }^{\circ}\text{C}$ in Ω								
100	180	330	560	1.0K	1.8K	3.3K	5.0K	8.2K
120	220	390	680	1.2K	2.2K	3.9K	5.6K	10.0K
150	270	470	820	1.5K	2.7K	4.7K	6.8K	

Note

- Rated continuous working voltage is maximum working voltage or $\sqrt{P_{70} \times R}$, 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 = $\pm 0.5\%$ F = $\pm 1\%$ J = $\pm 5\%$			M = Lead (Pb)-free, T/R (5000 pieces) V = Lead (Pb)-free, T/R (1000 pieces) Z = Tin/lead, T/R (5000 pieces) Y = Tin/lead, T/R (1000 pieces)			

Revision 22-Mar-11