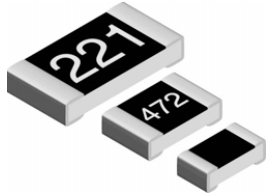


Linear PTC Thermistors, Surface Mount Chip



FEATURES

- Solderable wraparound terminations
- Alumina substrate base with PTC thick film element
- 0603, 0805, and 1206 sizes available
- Available in tape and reel packaging
- Standard tolerances: $\pm 5\%$, $\pm 10\%$
- Contact factory for non-standard tolerance
- Linear from $-55\text{ }^\circ\text{C}$ to $+125\text{ }^\circ\text{C}$
- Maximum linear deviation: $\pm 0.01\text{ }^\circ\text{C}/^\circ\text{C}$

STANDARD ELECTRICAL SPECIFICATIONS

TCR LOT ppm - 55 °C to + 125 °C	TCR ¹⁾ TOLERANCE ppm	R ₂₅ Ω VALUE RANGE (5 % and 10 % TOLERANCE) ²⁾					
		0603		0805		1206	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
3500	± 300	10	- 22	10	- 39	10	- 47
3300	± 300	27	- 120	47	- 180	56	- 220
3100	± 300	150	- 270	220	- 330	270	- 470
2900	± 300	330	- 560	390	- 680	560	- 1K
2700	± 300	680	- 1.2K	820	- 1.5K	1.2K	- 3.9K
2500	± 300	1.5K	- 5.6K	1.8K	- 6.8K	4.7K	- 8.2K
2300	± 300	6.8K	- 10K	8.2K	- 10K	10K	- 15K

Notes 1. Contact Vishay Dale if closer TCR lot tolerance is desired. 2. Other R₂₅ values and tolerances are available upon request.

STANDARD RESISTANCE VALUES

10	120	1.5K
12	150	1.8K
15	180	2.2K
18	220	2.7K
22	270	3.3K
27	330	3.9K
33	390	4.7K
39	470	5.6K
47	560	6.8K
56	680	8.2K
68	820	10K
82	1K	12K
100	1.2K	15K

STANDARD TECHNICAL SPECIFICATIONS

PART NUMBER	POWER RATING	MAXIMUM WORKING VOLTAGE RCWV ¹⁾
PTFT 0603	75 mW	30 VDC
PTFT 0805	100 mW	40 VDC
PTFT 1206	125 mW	50 VDC

Note 1. 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

New Global Part Numbering: PTFT1206L1002KZ (preferred part numbering format)

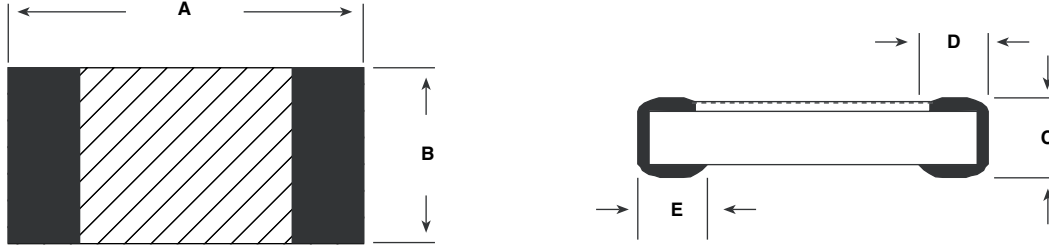
P T F T 1 2 0 6 L 1 0 0 2 K Z

GLOBAL MODEL	CHARACTERISTIC	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING
PTFT0603 PTFT0805 PTFT1206	L = Linear	1002 = 10K	J = $\pm 5\%$ K = $\pm 10\%$	F = Lead (Pb)-free, Bulk W = Lead (Pb)-free, T/R (Full) P = Tin/Lead, Bulk Z = Tin/Lead, T/R (Full)

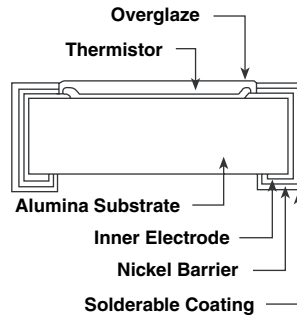
Historical Part Number: PTFT1206L1002KZ (will continue to be accepted)

HISTORICAL MODEL	CHARACTERISTIC	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING
PTFT1206	L	1002	K	Z

DIMENSIONS in inches [millimeters]



PART NUMBER	A	B	C	D	E
PTFT0603	0.063 ±0.006 [1.60 ±0.15]	0.031 + 0.006 - 0.002 [0.80 + 0.15 - 0.05]	0.020 ±0.004 [0.50 ±0.10]	0.012 ±0.008 [0.30 ±0.20]	0.012 ±0.008 [0.30 ±0.20]
PTFT0805	0.079 ±0.006 [2.00 ±0.15]	0.049 ±0.006 [1.25 ±0.15]	0.020 ±0.006 [0.50 ±0.15]	0.016 ±0.010 [0.40 ±0.25]	0.016 ±0.010 [0.40 ±0.25]
PTFT1206	0.124 ±0.006 [3.15 ±0.15]	0.063 ±0.006 [1.60 ±0.15]	0.022 ±0.006 [0.56 ±0.15]	0.020 ±0.010 [0.50 ±0.25]	0.020 ±0.010 [0.50 ±0.25]



CONSTRUCTION

PERFORMANCE¹⁾		
TEST ³⁾	MAXIMUM % ΔR ²⁾	
	1K and Below	Above 1K
High Temperature Exposure (100 hours at 125 °C)	1 %	1 %
Effects of Bonding (10 sec. Solder dip at 260 °C)	1 %	1 %
Thermal Shock (30 min. at - 65 °C, 30 min. at 125 °C, 5 cycles)	1 %	5 %
Low Temperature Operation (Maximum Rated Power for 2 hours at - 65 °C)	1 %	10 %
Short Time Overload (2.5 x RCWV for 5 seconds)	1 %	20 %
Moisture Resistance (240 hours, 10 cycles)	4 %	5 %
Load Life (1000 hours 70 °C, Maximum Rated Power 1.5 hours "ON", 5 hours "OFF")	2 %	10 %
Load Humidity (1000 hours at 85 °C, 85 % RH, and 10 % RCWV)	5 %	15 %
Solderability (95 % coverage P/F)	P	P
Leaching (Physical Damage P/F)	P	P

Notes

1. Environmental performance specifications use test procedures as outlined in MIL-R-23648D and MIL-STD-202.
2. PTFT's are ESD Sensitive.
3. Test reading accuracy of ± 0.3 %.



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.