Vishay Dale



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: ± 5 %, ± 10 %
- Contact factory for non-standard tolerance
- Linear from 55 °C to + 125 °C
- Maximum linear deviation: ± 0.01 %/°C

STANDARD ELECTRICAL SPECIFICATIONS										
TCR LOT	TCR ¹⁾ TOLERANCE ppm	$ m R_{25}\Omega$ VALUE RANGE (5 % and 10 % TOLERANCE) $^{2)}$								
ppm - 55 °C to + 125 °C		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

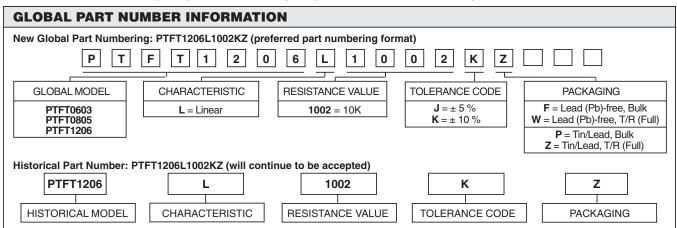
Notes 1. Contact Vishay Dale if closer TCR lot tolerance is desired.

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			

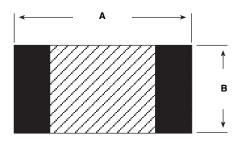
Note 1. Rated Continuous Working Voltage is maximum working voltage or square root of the power rating times resistance value, whichever is less.

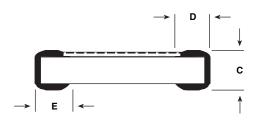




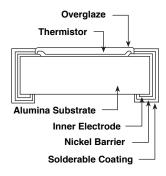
Linear PTC Thermistors, Surface Mount Chip

DIMENSIONS in inches [millimeters]





PART NUMBER	Α	В	С	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 $[0.50 \pm 0.10]$	0.012 ± 0.008 [0.30 ± 0.20]	0.012 ± 0.008 [0.30 ± 0.20]
PTFT0805	0.079 ± 0.006	0.049 ± 0.006	0.020 ± 0.006	0.016 ± 0.010	0.016 ± 0.010
	[2.00 ± 0.15]	[1.25 ± 0.15]	[0.50 ± 0.15]	[0.40 ± 0.25]	[0.40 ± 0.25]
PTFT1206	0.124 ± 0.006	0.063 ± 0.006	0.022 ± 0.006	0.020 ± 0.010	0.020 ± 0.010
	[3.15 ± 0.15]	[1.60 ± 0.15]	[0.56 ± 0.15]	[0.50 ± 0.25]	[0.50 ± 0.25]



CONSTRUCTION

PERFORMANCE ¹⁾				
TFOT3	MAXIMUM % $\Delta R^{2)}$			
TEST ³⁾	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)	Р	Р		
Leaching (Physical Damage P/F)	Р	Р		

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 \pm 0.3 %.

Legal Disclaimer Notice



Vishay

Notice

Specifications of the products displayed herein are subject to change without notice. Vishay Intertechnology, Inc., or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Vishay's terms and conditions of sale for such products, Vishay assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of Vishay products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Vishay for any damages resulting from such improper use or sale.

Document Number: 91000 www.vishay.com Revision: 08-Apr-05