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⁾		R	25 Ω VALU I	E RANGE (5 % aı	nd 10 % TC	DLERANCE) ²⁾	
ppm - 55 °C to + 125 °C	TOLERANCE		0603			0805			1206	
- 55 °C to + 125 °C	ppm	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 SPECIF	TANDARD 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			

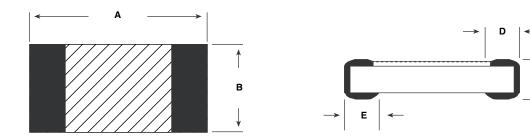
Note 1. Rated Continuous Working Voltage is maximum working voltage or square root of the power rating times resistance value, whichever is less.

GLOBAL PART N	JMBER INFORMATIO)N		
New Global Part Number	ring: PTFT1206L1002KZ (pref	erred part numbering form	nat)	
PT	F T 1 2 0	6 L 1 0	0 2 K Z	
GLOBAL MODEL	CHARACTERISTIC	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING
PTFT0603 PTFT0805	L = Linear	1002 = 10K	J = ± 5 % K = ± 10 %	F = Lead (Pb)-free, Bulk W = Lead (Pb)-free, T/R (Full)
PTFT1206 Historical Part Number:	PTFT1206L1002KZ (will conti	nue to be accepted)		P = Tin/Lead, Bulk Z = Tin/Lead, T/R (Full)
PTFT1206	I I I I ZOOZ TOCZNE (WIII COINI	1002	K	7
11111200	,	1002		
HISTORICAL MODEL	CHARACTERISTIC	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING

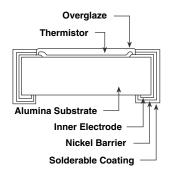


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DIMENSIONS in inches [millimeters]



PART NUMBER	Α	В	С	D	E
PTFT0603	0.063 ±0.006	0.031 + 0.006 - 0.002	0.020 ±0.004	0.012 ±0.008	0.012 ±0.008
	[1.60 ±0.15]	[0.80 + 0.15 - 0.05]	[0.50 ±0.10]	[0.30 ±0.20]	[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⁾					
TEST ³⁾	MAXIMUM % ∆R ²⁾				
1551-9	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 %.

Document Number: 33014 Revision: 04-Apr-05



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Revision: 18-Jul-08

Document Number: 91000 www.vishay.com