

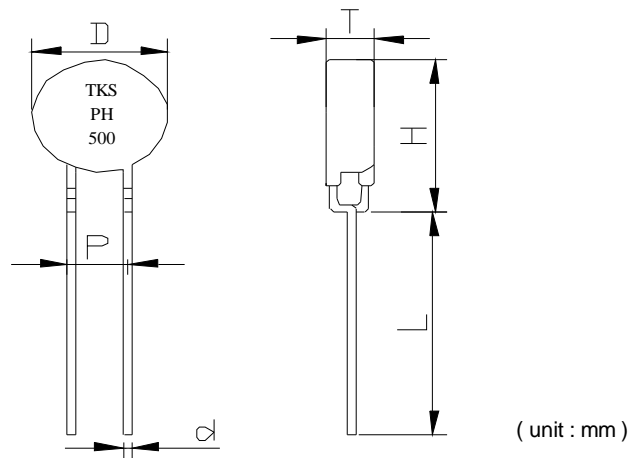
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Part Number Code

Example :

PP **L** **19** **500** **N** **A1** **C0** **Y** **TE**
 (1) (2) (3) (4) (5) (6) (7) (8) (9)

No.	Item	Digit	Specification
(1)	Product Type	PP	Thinking overload protection PP type
(2)	Type Series	L	Lead type
(3)	Size	19	φ19mm
(4)	Resistance(R ₂₅)	500	50*100Ω=50Ω
(5)	Tolerance of R ₂₅	N	± 30%
(6)	Curie Temperature	A1	110°C
(7)	Rated Voltage	C0	300V
(8)	Packaging	Y	RoHS compliance &Bulk
(9)	Optional Suffix	TE	Silicone Coating

Structure and Dimensions

Item.	D	T	H	L	P	d
Max	21.50	10.7	25.5	---	11	1.02
Min	---	---	---	25.0	9	0.98

Electrical Characteristics

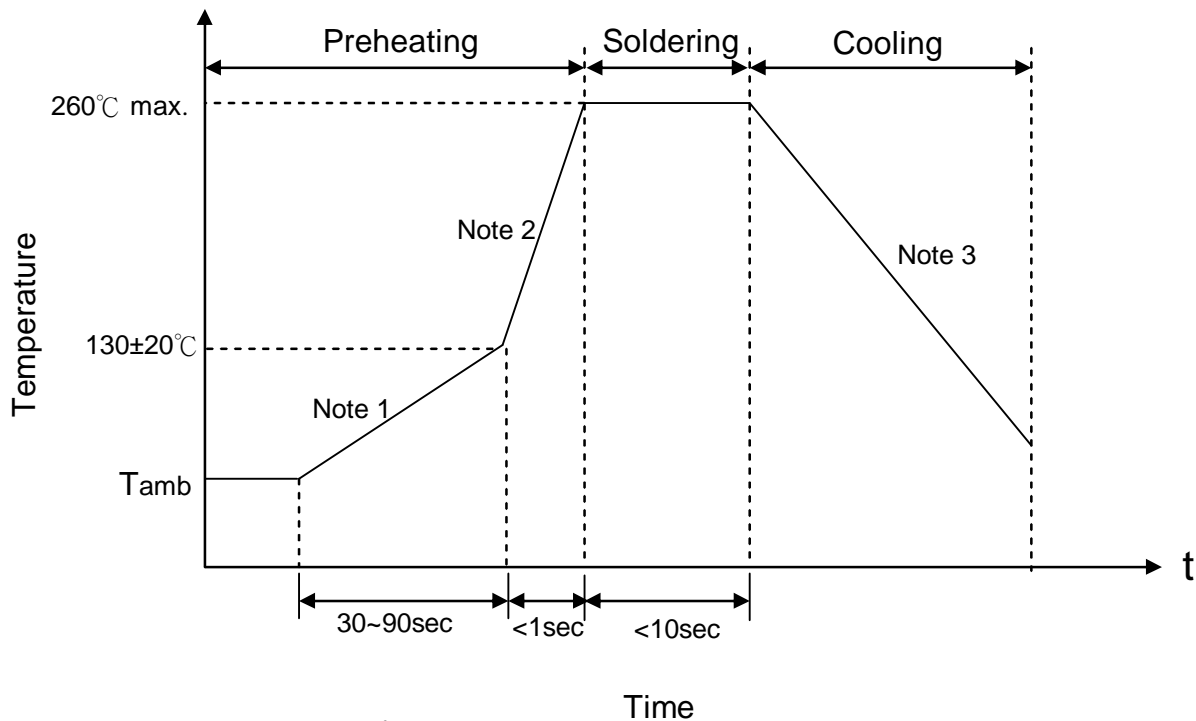
Part No.	Curie Temperature	Zero-power Resistance	Heat Capacity	Operating Temperature Range (V=V _{max})	Operating Temperature Range (V=0)
	T _c (°C)	R ₂₅ (Ω)	C _{th} (J/K)	(°C)	(°C)
PPL19500NA1C0YTE	110±10	50±30%	3.5typ	0-60	-25~+125

Reliability

Item	Standard	Test conditions / Methods	Specifications															
Tensile Strength of Terminals	IEC60068-2-21	Gradually applying the force specified and keeping the unit fixed for 10±1 sec. <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">Terminal diameter (mm)</td> <td style="text-align: center;">Force T(N)</td> </tr> <tr> <td style="text-align: center;">0.35<d≤0.5</td> <td style="text-align: center;">5.0</td> </tr> <tr> <td style="text-align: center;">0.5<d≤0.8</td> <td style="text-align: center;">10.0</td> </tr> <tr> <td style="text-align: center;">0.8<d≤1.25</td> <td style="text-align: center;">20.0</td> </tr> </table>	Terminal diameter (mm)	Force T(N)	0.35<d≤0.5	5.0	0.5<d≤0.8	10.0	0.8<d≤1.25	20.0	$ \Delta R_{25}/R_{25} \leq 20\%$ No visible damage							
Terminal diameter (mm)	Force T(N)																	
0.35<d≤0.5	5.0																	
0.5<d≤0.8	10.0																	
0.8<d≤1.25	20.0																	
Solderability	IEC60068-2-20	245 ± 3 °C , 3 ± 0.3 sec	At least 95% of terminal electrode is covered by new solder															
Resistance to Soldering Heat	IEC60068-2-20	260 ± 3 °C , 10 ± 1 sec	$ \Delta R_{25}/R_{25} \leq 20\%$ No visible damage															
Vibration	IEC60068-2-6	Frequency range:10~55Hz Amplitude:0.75mm or 98m/S ² Direction:3 mutually perpendicular directions Duration :6HRS(3x2HRS)	$ \Delta R_{25}/R_{25} \leq 20\%$ No visible damage															
Shock	IEC60068-2-27	Wave:half-sine ΔV:1.0m/s Acceleration:50m/s ² Pulse time:30ms	$ \Delta R_{25}/R_{25} \leq 20\%$ No visible damage															
High Temperature Continuous Load	IEC60738-1	60°C ,300Vrmsfor 1000hrs	$ \Delta R_{25}/R_{25} \leq 20\%$ No visible damage															
High Temperature Storage	IEC60068-2-2	60 °C , for 1000hrs	$ \Delta R_{25}/R_{25} \leq 20\%$ No visible damage															
Damp Heat, Steady State	IEC60068-2-78	40±2°C,90~95%RH, for 1000±2hrs	$ \Delta R_{25}/R_{25} \leq 20\%$ No visible damage															
Room Temperature Intermittent Load	IEC60738-1	25±5°C,300Vrms, 1min. on and 5min. Off ×100 cycles	$ \Delta R_{25}/R_{25} \leq 20\%$ No visible damage															
Rapid Change of Temperature	IEC60068-2-14	The thermal shock conditions shown below shall be repeated 5 cycles <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Step</th> <th>Temperature(°C)</th> <th>Period(minutes)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">-40 ± 3</td> <td style="text-align: center;">30 ± 3</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">Room temperature</td> <td style="text-align: center;">5 ± 3</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">85 ± 2</td> <td style="text-align: center;">30 ± 3</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">Room temperature</td> <td style="text-align: center;">5 ± 3</td> </tr> </tbody> </table>	Step	Temperature(°C)	Period(minutes)	1	-40 ± 3	30 ± 3	2	Room temperature	5 ± 3	3	85 ± 2	30 ± 3	4	Room temperature	5 ± 3	$ \Delta R_{25}/R_{25} \leq 20\%$ No visible damage
Step	Temperature(°C)	Period(minutes)																
1	-40 ± 3	30 ± 3																
2	Room temperature	5 ± 3																
3	85 ± 2	30 ± 3																
4	Room temperature	5 ± 3																

Soldering Recommendation

Wave Soldering Profile



- Note 1 : $(1\sim 3)^\circ\text{C}/\text{sec}$
 Note 2 : Approx. $200^\circ\text{C}/\text{sec}$
 Note 3 : $5^\circ\text{C}/\text{sec Max}$

Recommended Reworking Conditions with Soldering Iron

Item	Conditions
Temperature of Soldering Iron-tip	360°C (max.)
Soldering Time	3 sec (max.)
Distance from Thermistor	2 mm (min.)

RoHS Compliant Declaration

We hereby declare that the components delivered to your company are compliant with RoHS directive 2011/65/EU.

Warehouse Storage Conditions of Products

(I) Storage Conditions :

- 1.Storage Temperature : $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$
- 2.Relative Humidity : $\leq 75\%RH$
- 3.Keep away from corrosive atmosphere and sunlight.

(II) Period of Storage : 1 year



Certificates

- (1) TS 16949 certificate
- (2) ISO 9001 certificate

Test Report

- (1) RoHS test report