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## SPECIFICATION FOR APPROVAL

CUSTOMER \_\_\_\_\_

CERTIFIED  
MODEL/TYPE

\_\_\_\_\_

PPL05122-A2E0

PART NO.

\_\_\_\_\_

PPL05122HA2E0YKB(RoHS)

APPLICATION \_\_\_\_\_

CUSTOMER P/N \_\_\_\_\_

ISSUE DATE

\_\_\_\_\_

Oct.09.2018

REV. NO. \_\_\_\_\_

REV. DATE \_\_\_\_\_

FOR CUSTOMER APPROVAL	CHECKED BY
	<i>Haili Gong</i>
	APPROVED BY
	<i>Huaifang Zhang</i>





**REVISED RECORD SHEET**

REV. NO	REV. DATE	REVISED CONTENT



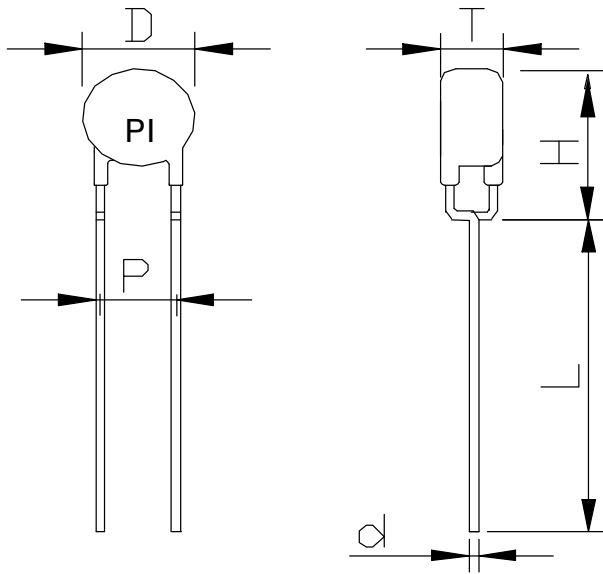
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Part Number Code

Example :

**PP**    **L**    **05**    **122**    **H**    **A2**    **E0**    **Y**    **KB**  
 (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	05	φ05 mm
(4)	Resistance( $R_{25}$ )	122	$12 \cdot 10^2 = 1200\Omega$
(5)	Tolerance of $R_{25}$	H	$\pm 25\%$
(6)	Curie Temperature	A2	120°C
(7)	Rated Voltage	E0	500V
(8)	Packaging	Y	RoHS compliance & Bulk
(9)	Optional Suffix	KB	Silicone coating

Structure and Dimensions

( unit : mm )

Item.	D	T	H	P	d	L
Max	7.0	5.0	10.5	6.0	0.62	---
Min	4.5	2.5	---	4.0	0.58	25.0

Electrical Characteristics

Part No.	Curie Temperature	Zero-power Resistance at 25±2°C	Rated Voltage	Max. Current
	T <sub>c</sub> (°C)	R <sub>25</sub> (Ω)	V <sub>R</sub> (V)	I <sub>max</sub> (A)
PPL05122HA2E0YKB	120typ.	1200±25%	500	0.1

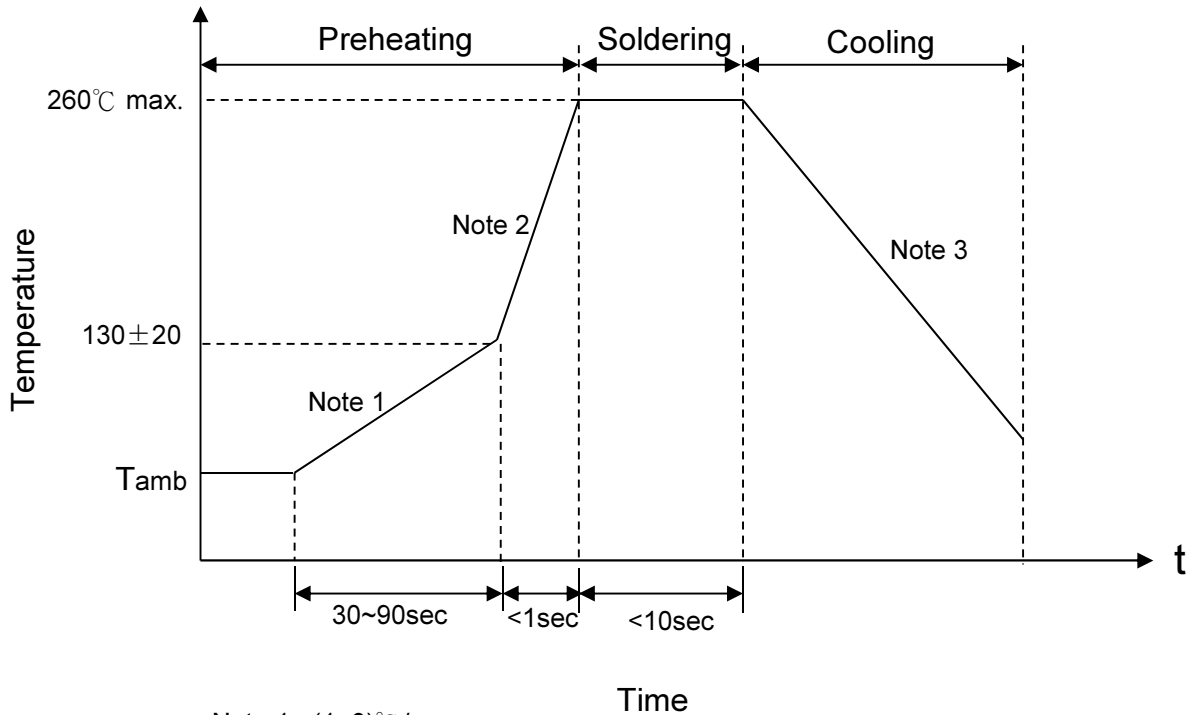
Part No.	Trip Current at 25°C	Non-operating Current at 25°C	Operating Temperature Range (V=V <sub>max</sub> )	Operating Temperature Range (V=0)
	I <sub>t</sub> (mA)	I <sub>N</sub> (mA)	(°C)	(°C)
PPL05122HA2E0YKB	30	15	0~60	-25~+125

Reliability

Item	Standard	Test conditions / Methods	Specifications															
Robustness of Terminations	IEC 60738-1	Gradually apply the specified force and keep the unit fixed for $10 \pm 1$ 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;"><math>0.35 &lt; d \leq 0.5</math></td> <td style="text-align: center;">5.0</td> </tr> <tr> <td style="text-align: center;"><math>0.5 &lt; d \leq 0.8</math></td> <td style="text-align: center;">10.0</td> </tr> <tr> <td style="text-align: center;"><math>0.8 &lt; d \leq 1.25</math></td> <td style="text-align: center;">20.0</td> </tr> </table>	Terminal diameter (mm)	Force T(N)	$0.35 < d \leq 0.5$	5.0	$0.5 < d \leq 0.8$	10.0	$0.8 < d \leq 1.25$	20.0	$ \Delta R_{25}/R_{25}  \leq 20\%$ No visible damage							
Terminal diameter (mm)	Force T(N)																	
$0.35 < d \leq 0.5$	5.0																	
$0.5 < d \leq 0.8$	10.0																	
$0.8 < d \leq 1.25$	20.0																	
Solderability	IEC 60738-1	$245 \pm 3$ °C , $2 \pm 0.5$ sec	At least 95% of terminal electrode is covered by new solder															
Resistance to Soldering Heat	IEC 60738-1	$260 \pm 3$ °C , $10 \pm 1$ sec	$ \Delta R_{25}/R_{25}  \leq 20\%$ No visible damage															
Vibration	IEC 60738-1	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	IEC 60738-1	Wave:half-sine $\Delta V$ :1.0m/s Acceleration:50m/s <sup>2</sup> Pulse time:30ms	$ \Delta R_{25}/R_{25}  \leq 20\%$ No visible damage															
Rapid Change of Temperature	IEC 60738-1	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;"><math>-40 \pm 5</math></td> <td style="text-align: center;"><math>30 \pm 3</math></td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">Room temperature</td> <td style="text-align: center;"><math>5 \pm 3</math></td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;"><math>85 \pm 5</math></td> <td style="text-align: center;"><math>30 \pm 3</math></td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">Room temperature</td> <td style="text-align: center;"><math>5 \pm 3</math></td> </tr> </tbody> </table>	Step	Temperature(°C)	Period(minutes)	1	$-40 \pm 5$	$30 \pm 3$	2	Room temperature	$5 \pm 3$	3	$85 \pm 5$	$30 \pm 3$	4	Room temperature	$5 \pm 3$	$ \Delta R_{25}/R_{25}  \leq 20\%$ No visible damage
Step	Temperature(°C)	Period(minutes)																
1	$-40 \pm 5$	$30 \pm 3$																
2	Room temperature	$5 \pm 3$																
3	$85 \pm 5$	$30 \pm 3$																
4	Room temperature	$5 \pm 3$																
Climatic Sequence	IEC 60738-1	Dry heat: $125$ °C for 16 hrs Damp heat first cycle: $40$ °C , 95% R.H ,cycle time: 24 hrs Cold: $-40$ °C for 2 hrs Damp heat (cyclic), remaining cycles: 5 cycles Test according to IEC60068-2-30	$ \Delta R_{25}/R_{25}  \leq 20\%$ No visible damage															
Damp Heat, Steady State	IEC 60738-1	$40 \pm 2$ °C , 90~95%RH, $1000 \pm 2$ hrs	$ \Delta R_{25}/R_{25}  \leq 20\%$ No visible damage															
Endurance at Maximum Operating Temperature and Maximum Voltage	IEC 60738-1	UCT= $60$ °C , VR, $I_t \leq I \leq I_{max}$ , $1000 \pm 2$ hrs	$ \Delta R_{25}/R_{25}  \leq 20\%$ No visible damage															
Endurance at Maximum Voltage	IEC 60738-1	$25 \pm 5$ °C , VR, $I_t \leq I \leq I_{max}$ 1min. on and 5min. Off $\times 100$ cycles	$ \Delta R_{25}/R_{25}  \leq 20\%$ No visible damage															

## Soldering Recommendation

### ■ Wave Soldering Profile



- Note 1 : (1~3)°C/sec
- Note 2 : Approx. 200°C/sec
- Note 3 : 5°C/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 :  $\leq 75\% \text{RH}$
- 3.Keep away from corrosive atmosphere and sunlight.

(II) Period of Storage : 1 year



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Safety Approvals (Certified Model/Type : PPL05122-A2E0)



\* UL 1434 / cUL recognized (File # E138827)

Certificates

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

Test Report

- (1) RoHS test report

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[PTGL13AR0R8H2B71B0](#) [PTGL12AR1R2H2B51B0](#)