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SPECIFICATION FOR APPROVAL

CUSTOMER _____

CERTIFIED _____

MODEL/TYPE _____

PART NO. PPL03222MA0B2YGU (RoHS)

APPLICATION _____

CUSTOMER P/N _____

ISSUE DATE Jul.04.2019

REV. NO. 1.1

REV. DATE Jul.29.2019

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





REVISED RECORD SHEET

REV. NO	REV. DATE	REVISED CONTENT



INDEX	Page
■ Part Number Code	1
■ Structure and Dimensions	2
■ Electrical Characteristics	2
■ Reliability	3
■ Soldering Recommendation	4
■ RoHS Compliant Declaration	5
■ Warehouse Storage Conditions of Products	5
■ Certificates	6

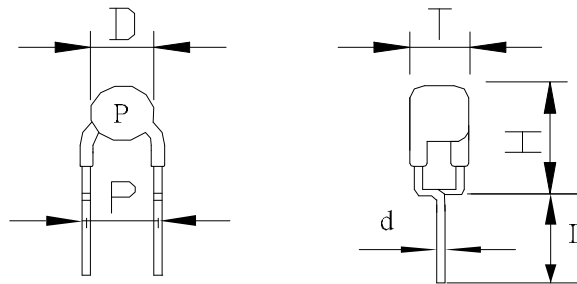


Part Number Code

Example :

PP **L** **03** **222** **M** **A0** **B2** **Y** **GU**
(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)	Body Size	03	φ3 mm
(4)	Resistance(R ₂₅)	222	22*10 ² Ω=2200Ω
(5)	Tolerance of R ₂₅	M	± 20 %
(6)	Curie Temperature	A0	Refer to "Optional Suffix"
(7)	Rated Voltage	B2	220V
(8)	Packaging	Y	RoHS compliance &Bulk
(9)	Optional Suffix	GU	Silicone Coating Refer to " Structure and Dimensions" and " Electrical Characteristics" on page 2.

Structure and Dimensions

(unit : mm)

Item.	D	T	H	d	L	P
max	4.5	4.5	8.5	0.52	3.5	6.0
min	3.0	3.5	---	0.48	2.5	4.0

Electrical Characteristics

Part No.	Curie Temperature	Zero-power Resistance at 25+/-2°C	Max. Current
	Tc(°C)	R ₂₅ (Ω)	I _{max} (A)
PPL03222MA0B2YGU	100±10°C	2200±20%	0.2

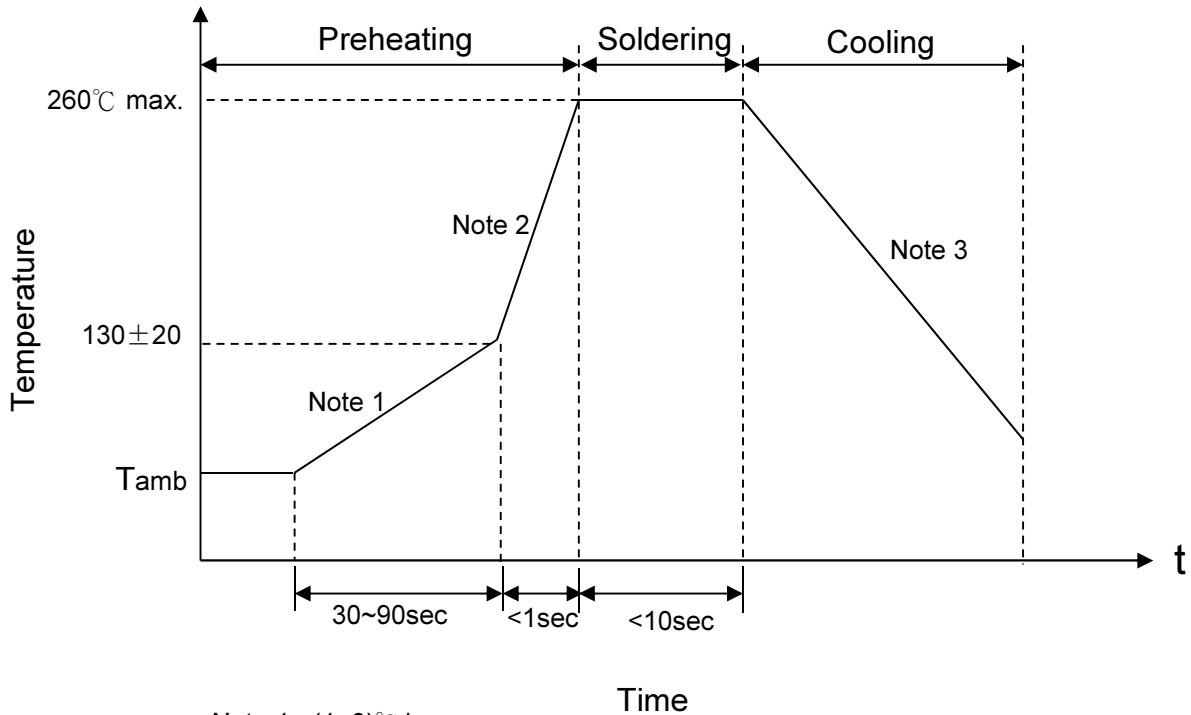
Part No.	Max. Voltage	Rated Voltage	Operating Temperature Range (V=Vmax)	Operating Temperature Range (V=0)
	V _{max} (Vac)	V _r (Vac)	(°C)	(°C)
PPL03222MA0B2YGU	270	220	0~60	-25~+125

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 ± 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;">$0.35 < d \leq 0.5$</td> <td style="text-align: center;">5.0</td> </tr> <tr> <td style="text-align: center;">$0.5 < d \leq 0.8$</td> <td style="text-align: center;">10.0</td> </tr> <tr> <td style="text-align: center;">$0.8 < d \leq 1.25$</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 ± 3 °C , 2 ± 0.5 sec	At least 95% of terminal electrode is covered by new solder															
Resistance to Soldering Heat	IEC 60738-1	260 ± 3 °C , 10 ± 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 ΔV : 1.0m/s Acceleration: $50m/s^2$ 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;">-40 ± 5</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 ± 5</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 ± 5	30 ± 3	2	Room temperature	5 ± 3	3	85 ± 5	30 ± 3	4	Room temperature	5 ± 3	$ \Delta R_{25}/R_{25} \leq 20\%$ No visible damage
Step	Temperature(°C)	Period(minutes)																
1	-40 ± 5	30 ± 3																
2	Room temperature	5 ± 3																
3	85 ± 5	30 ± 3																
4	Room temperature	5 ± 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 ± 2 °C , 90~95%RH, 1000 ± 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 ± 2 hrs	$ \Delta R_{25}/R_{25} \leq 20\%$ No visible damage															
Endurance at Maximum Voltage	IEC 60738-1	25 ± 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 2015/863/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) IATF 16949 certificate
- (2) ISO 9001 certificate

Test Report

- (1) RoHS test report