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SPECIFICATION FOR APPROVAL

CUSTOMER	
CERTIFIED MODEL/TYPE	PPL03151-A2B2
PART NO.	PPL03151MA2B2WFA(RoHS)
APPLICATION	
CUSTOMER P/N	
ISSUE DATE	Jan.22.2018
REV. NO.	
REV. DATE	

FOR CUSTOMER APPROVAL	CHECKED BY
	Haili Gong
	APPROVED BY
	Huaifang Zhang

REVISED RECORD SHEET

REV. NO	REV. DATE	REVISED CONTENT

INDEX

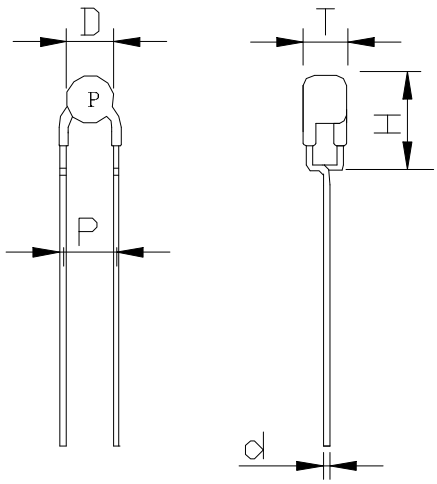
Part Number Code

Example :

PP	L	03	151	M	A2	B2	W	FA
(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	03	φ3 mm
(4)	Resistance(R_{25})	151	$15*10^{1}\Omega$=150 Ω
(5)	Tolerance of R_{25}	M	±20%
(6)	Curie Temperature	A2	120℃
(7)	Rated Voltage	B2	220V
(8)	Packaging	W	RoHS compliance &Taping&Reel
(9)	Optional Suffix	FA	Silicon Coating 0.5mm Cp Wires

Structure and Dimensions



(unit : mm)

Item.	D	T	P	d	H
Max	5.0	5.0	6.0	0.52	8.5
Min	---	---	4.0	0.48	---

Electrical Characteristics

Part No.	Curie Temperature	Zero-power Resistance at 25±2℃	Rated Voltage	Max. Current	Trip Current at 25℃
	Tc (℃)	R_{25} (Ω)	V_R (V)	Imax (A)	It (mA)
PPL03151MA2B2WFA	120typ.	150±20%	220	0.30	90

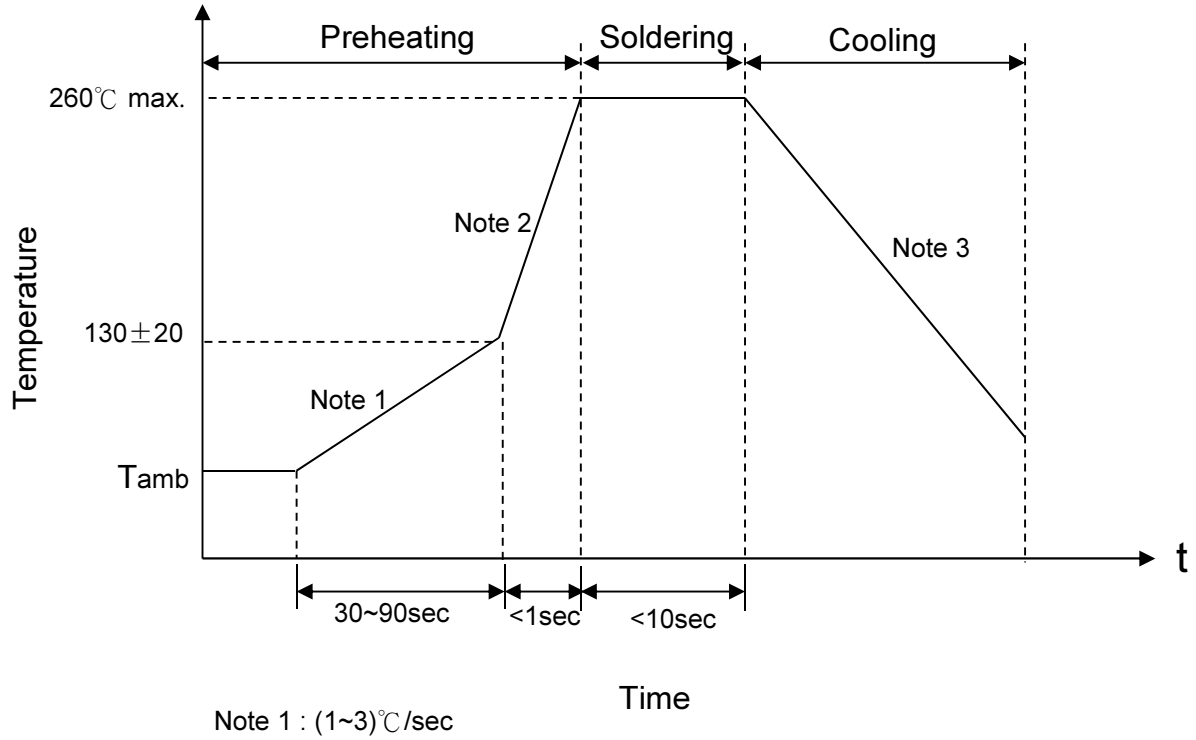
Part No.	Non-operating Current at 25℃	Operating Temperature Range (V=Vmax)	Operating Temperature Range (V=0)
	I_N (mA)	(℃)	(℃)
PPL03151MA2B2WFA	30	0~60	-25~+125

Reliability

<table>
<tr><th>Item</th><th>Standard</th><th>Test conditions / Methods</th><th>Specifications</th></tr>
<tr><td>Robustness of Terminations</td><td>IEC 60738-1</td><td>Gradually apply the specified force and keep the unit fixed for10±1 sec.
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</td><td>｜△R_{25}/R_{25}｜≦20%
No visible damage</td></tr>
<tr><td>Solderability</td><td>IEC 60738-1</td><td>245 ± 3 ℃ , 2± 0.5 sec</td><td>At least 95% of terminal electrode is covered by new solder</td></tr>
<tr><td>Resistance to Soldering Heat</td><td>IEC 60738-1</td><td>260 ± 3 ℃ , 10 ± 1 sec</td><td>｜△R_{25}/R_{25}｜≦20%
No visible damage</td></tr>
<tr><td>Vibration</td><td>IEC 60738-1</td><td>Frequency range:10~55Hz
Amplitude:0.75mm or 98m/S^2
Direction:3 mutually perpendicular directions
Duration :6HRS(3x2HRS)</td><td>｜△R_{25}/R_{25}｜≦20%
No visible damage</td></tr>
<tr><td>Shock</td><td>IEC 60738-1</td><td>Wave:half-sine
⊿V:1.0m/s
Acceleration:50m/s^2
Pulse time:30ms</td><td>｜△R_{25}/R_{25}｜≦20%
No visible damage</td></tr>
<tr><td>Rapid Change of Temperature</td><td>IEC 60738-1</td><td>The thermal shock conditions shown below shall be repeated 5 cycles
<table>
<tr><th>Step</th><th>Temperature(℃)</th><th>Period(minutes)</th></tr>
<tr><td>1</td><td>-40 ± 5</td><td>30 ± 3</td></tr>
<tr><td>2</td><td>Room temperature</td><td>5 ± 3</td></tr>
<tr><td>3</td><td>85 ± 5</td><td>30 ± 3</td></tr>
<tr><td>4</td><td>Room temperature</td><td>5 ± 3</td></tr>
</table></td><td>｜△R_{25}/R_{25}｜≦20%
No visible damage</td></tr>
<tr><td>Climatic Sequence</td><td>IEC 60738-1</td><td>Dry heat: 125 ℃ for 16 hrs
Damp heat first cycle: 40℃, 95% R.H ,cycle time: 24 hrs
Cold: -40℃ for 2 hrs
Damp heat (cyclic), remaining cycles: 5 cycles
Test according to IEC60068-2-30</td><td>｜△R_{25}/R_{25}｜≦20%
No visible damage</td></tr>
<tr><td>Damp Heat, Steady State</td><td>IEC 60738-1</td><td>40±2℃,90~95%RH,1000±2hrs</td><td>｜△R_{25}/R_{25}｜≦20%
No visible damage</td></tr>
<tr><td>Endurance at Maximum Operating Temperature and Maximum Voltage</td><td>IEC 60738-1</td><td>UCT=60℃, VR, It≦I≦Imax , 1000±2hrs</td><td>｜△R_{25}/R_{25}｜≦20%
No visible damage</td></tr>
<tr><td>Endurance at Maximum Voltage</td><td>IEC 60738-1</td><td>25±5℃, VR, It ≦ I ≦ Imax
1min. on and 5min. Off ×100cycles</td><td>｜△R_{25}/R_{25}｜≦20%
No visible damage</td></tr>
</table>

Soldering Recommendation

Wave Soldering Profile



Note 1 : (1~3)℃/sec
Note 2 : Approx. 200℃/sec
Note 3 : 5℃/sec Max

Recommended Reworking Conditions with Soldering Iron

Item	Conditions
Temperature of Soldering Iron-tip	360℃ (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 :

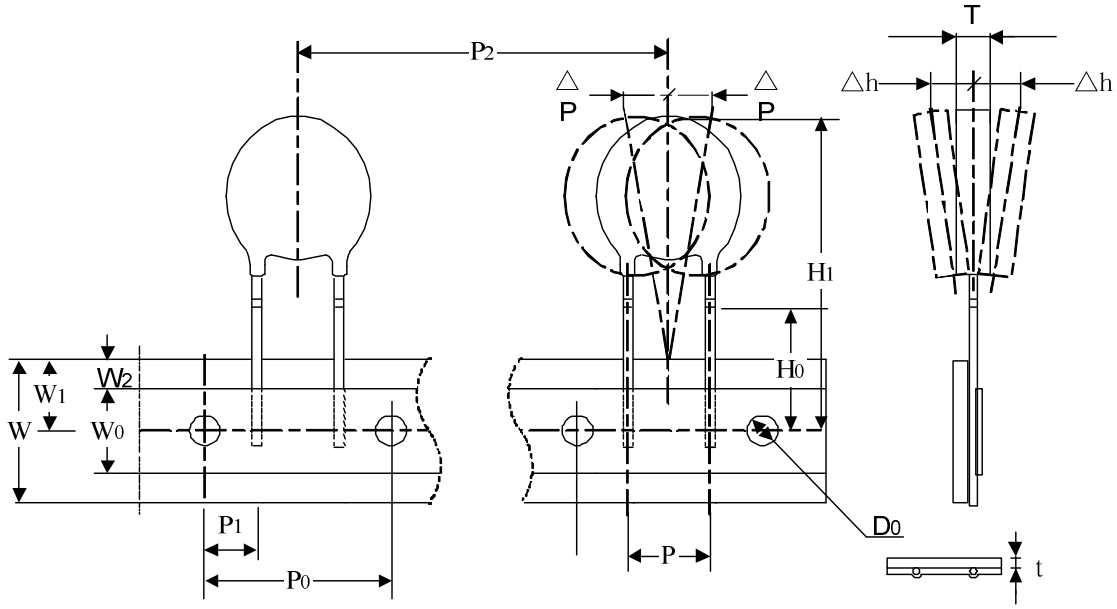
1.Storage Temperature : -10℃~+40℃

2.Relative Humidity : ≦75%RH

3.Keep away from corrosive atmosphere and sunlight.

(II) Period of Storage : 1 year

Taping and Dimensions

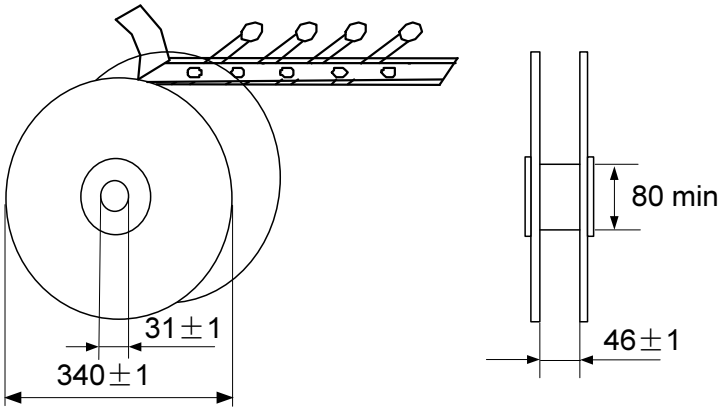


(unit : mm)

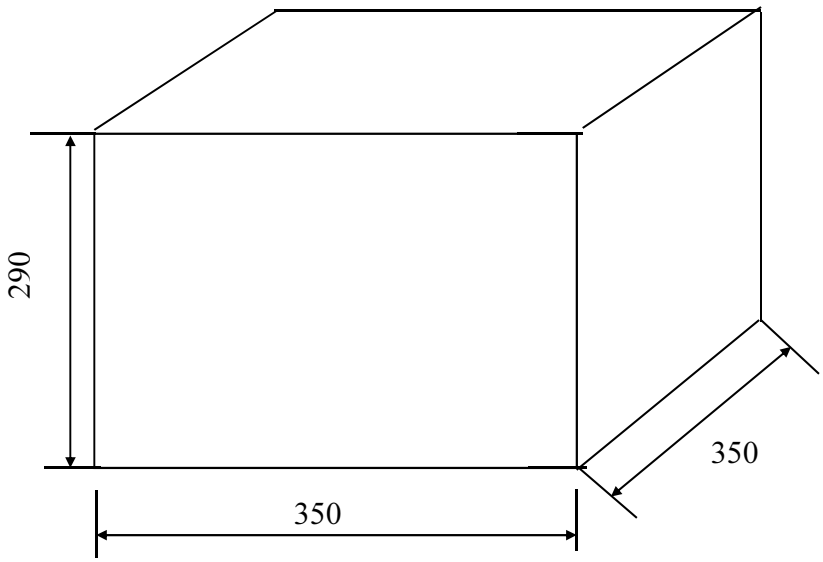
ITEM	P_0	P	P_1	H_0	W_0	W_1	W	W_2 max	T max	△P max	△h max	D_0	t	P_2	H1 max	
Nor.	12.7	5	3.85	16	12	9	18	3	5	1.0	2.0	4	0.6	12.7	25	
ToL.	±0.3	±1	±1	±0.5	±1.5	±1	±1	---	---	---	---	±0.2	±0.2	±1	---	

Standard Packing

(1) SPQ : 1500 pcs / reel



(2) Outer Box : 5 Reel / carton



(Unit:mm)

Safety Approvals (Certified Model/Type : PPL03151-A2B2)

* UL 1434 / cUL recognized (File # E138827)

* TUV recognized (File R50143310)

* CQC recognized (File# CQC03001008123)
* CQC recognized (File# CQC03001008124)

Certificates

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

Test Report

(1) RoHS test report