

## SPECIFICATION AND PERFORMANCE

<b>Series</b>	303C-C3018-25-05	<b>File</b>	303C-C3018-25-05_SPEC_1	<b>Date</b>	2016/05/10
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### Scope:

This specification covers the requirements for product performance, test methods and quality assurance provisions of 303C-C3018-25-05

### Performance and Descriptions:

The product is designed to meet the electrical, mechanical and environmental performance requirements specification. Unless otherwise specified, all tests are performed at ambient environmental conditions.

### RoHS:

All material in according with the RoHS environment related substances list controlled.

MATERIAL AND FINISH		
<b>HOUSING</b>	<b>Material</b>	PPA, UL94HB, Black
<b>PIN</b>	<b>Material</b>	Copper alloy Brass
	<b>Plating</b>	32μ" Gold Min. 120μ" Nickel Min.
<b>O-RING</b>	<b>Material</b>	Silicone Rubber
<b>RATING</b>	Current Rating: 2A12V AC/DC Operating Temperature : -40°C to +85°C Durability: 20,000 cycles	

<b>ELECTRICAL</b>		
<b>Item</b>	<b>Requirement</b>	<b>Test Condition</b>
Contact Resistance	50mΩ Max. at 0.9mm stroke (at standing still)	Voltage drop system four-wire system with below 300mA

<b>MECHANICAL</b>		
<b>Item</b>	<b>Requirement</b>	<b>Test Condition</b>
Pin Pulling Off Force	No appearance damage	Apply 4.9N static load on the pin in axis direction for 1 minute.

<b>ENVIRONMENTAL</b>		
<b>Item</b>	<b>Requirement</b>	<b>Test Condition</b>
Low Temperature Durability	Contact Resistance: 100mΩ Max. No appearance damage	Store in temp: -40°C±3°C for 96hrs, then leave in the ambient temperature for 1 hour.
High Temperature Durability		Store in temp: +85°C±2°C for 96hrs, then leave in the ambient temperature for 1 hour.
Humidity Durability		Store in temp: 60°C±2°C with humidity of 90% ~ 95% for 96hrs, then leave in the ambient temperature for 1 hour.
Temperature Cycle Test		Cycle 5 times (Table 1 Shows test condition for 1 circle). Leave in the ambient temp for 1 hour.
Temperature And Humidity Cycle Test		Operate cycle test 10 times. (See Fig1) Then leave in the ambient temp for 1 hour. The other issues are in conformity to JIS C60068-2-38.

Salt Spray	No excessive surface corrosion	The electrical performance shall be measured after continuous spray of salt water with $5 \pm 1\%$ density and $35^{\circ}\text{C} \pm 2^{\circ}\text{C}$ temperature for 48 hours, cleaning with lukewarm water and dry, and leaving in ambient temperature for 1 hour.
Heat Resistance	Contact Resistance: 100m $\Omega$ Max. No appearance damage	<ul style="list-style-type: none"> <li>The electrical performance shall be measured after soldering for 3seconds or less per terminal. (Temperature of soldering iron: <math>350^{\circ}\text{C}</math>)</li> <li>The electrical performance shall be measure in ambient temperature after soldering in accordance with the reflow profile. (See Fig2)</li> </ul>
Waterproof test (IPV7)	No water leakage found form the test fixture inside	Set a connector with the testing fixture (See Fig3) and submerge it in water at 1m depth for 30 minute.



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Table 1 –Temperature Cycle

Step	Temperature (°C)	Time (minutes)
1	-40±3	30~35
2	5~35	10~15
3	85±2	30~35
4	5~35	10~15

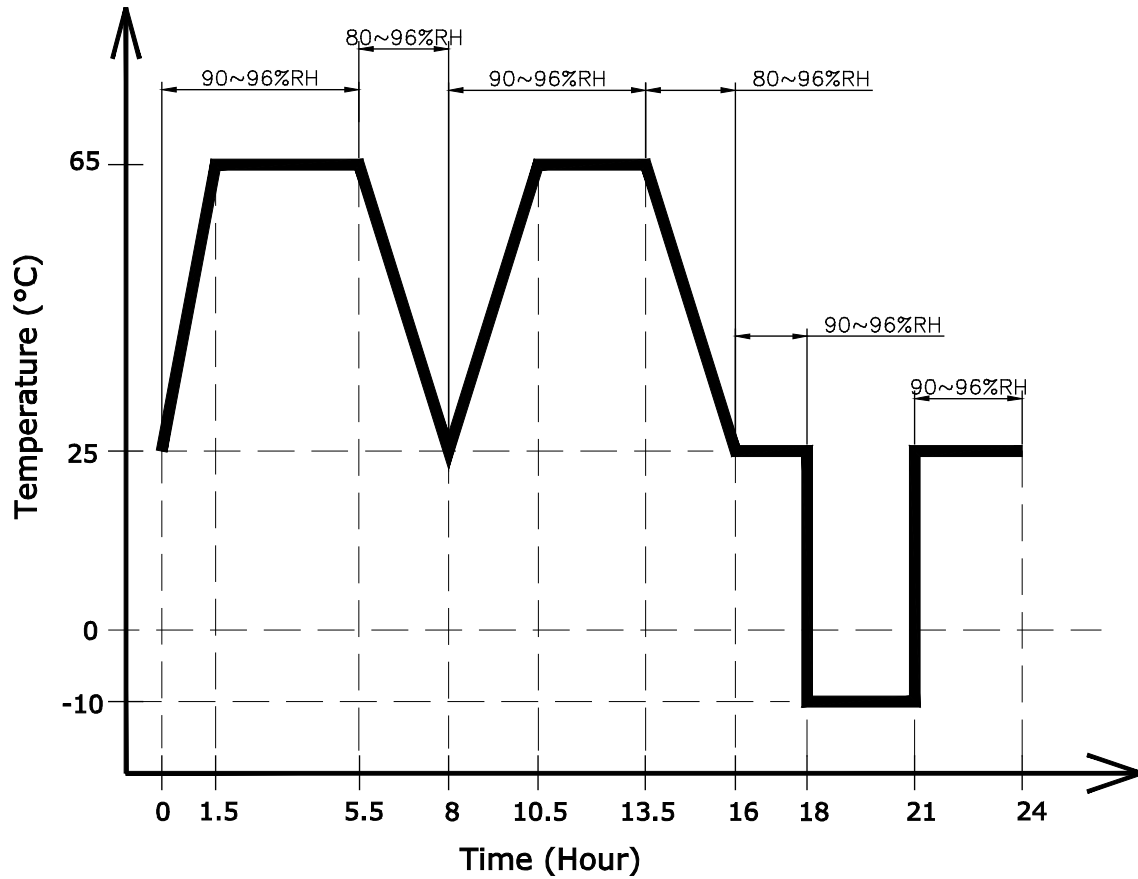


Fig1 Temperature And Humidity Cycle

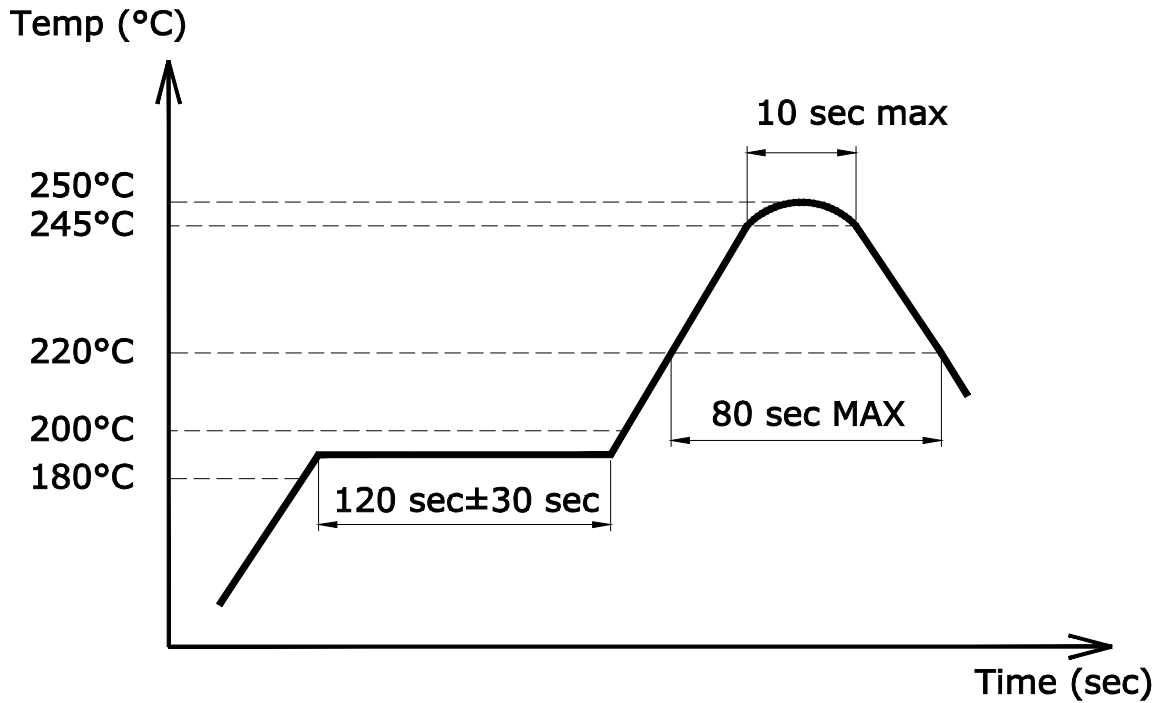


Fig2 Reflow Profile

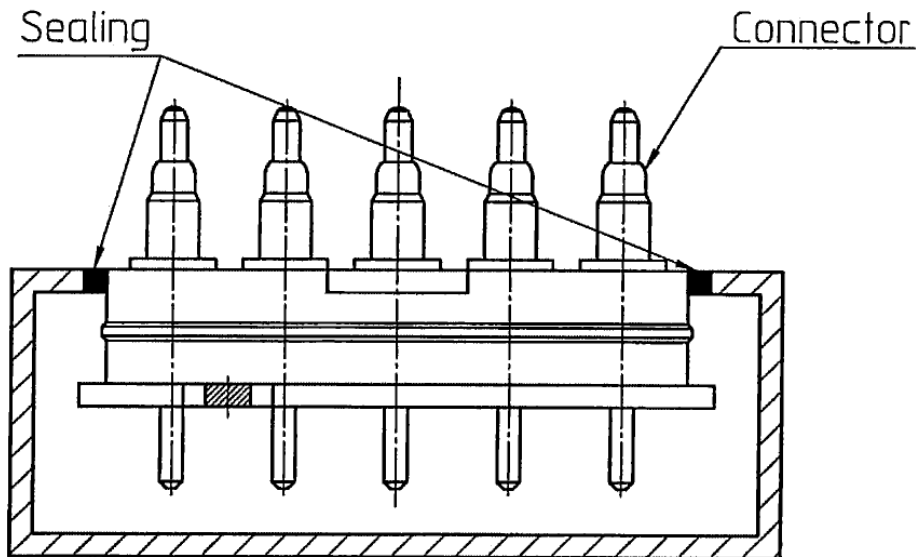


Fig3 Water proof fixture