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SPECIFICATION

1. Standard atmospheric condition

Unless otherwise specified, the standard range of atmospheric conditions for making measurements and tests are as follows :

Ambient temperature: 5°C to 35°C

Relative humidity : 45% to 85%

Air pressure : 86kPa to 106kPa

If there is any doubt about the results, measurements shall be made within the following limits :

Ambient temperature: 20±2°C

Relative humidity : 60% to 70%

Air pressure : 86kPa to 106kPa

Operating temperature range: -20°C to 70°C

Storage temperature range : -40°C to 80°C

ISSUE	DATE	WRN	CHKD	APVD	DESCRIPTIONS
	2019.05.08	李阮龍	李阮龍	郭遠峰	

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2. Electrical characteristics:

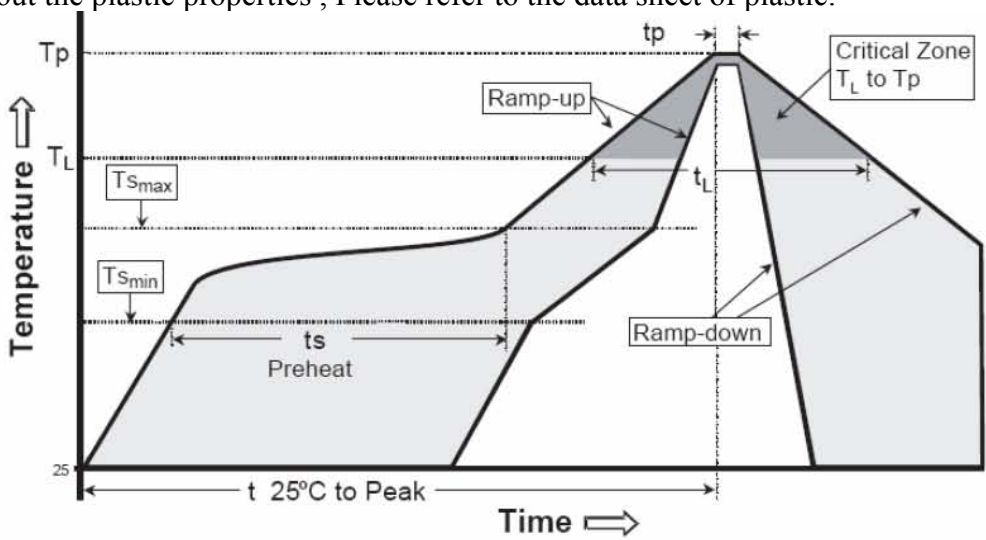
	Item	Condition	Specifications	
1	Contact resistance	Measurement shall be made at with small current 1000 Hz (1A MAX.)	Make contacts	50mΩ MAX.
			Break contacts	30mΩ MAX.
			Slide switch contacts	50mΩ MAX.
2	Insulation resistance	A voltage of 500 V DC shall be applied for 1 minute. After which measurement shall be made.	100MΩ MIN.	
3	Dielectric strength	A voltage of 500V AC (50 to 60Hz) shall be applied for 1 minute.	Without damage to parts, arcing or breakdown, etc.	

3. Mechanical characteristics

	Item	Condition	Specifications	
1	Operating force	Insertion and withdrawal force shall be measured after inserting and withdrawing 3 times by using a gauge of standard dimensions. (Refer to clause 5)		
			Insertion force	3.92N~24.5N (0.4Kgf~2.5Kgf)
			Withdrawal force	3.92N~24.5N (0.4Kgf~2.5Kgf)
2	Terminal strength	A static load of 4.9N (0.5Kgf) shall be applied to the tip of the terminal for 10 seconds. (x, y, z, direction)	Without cracks or excessive looseness to the terminal. Electrical and mechanical characteristics shall be satisfied. Without play in terminal etc.	
3	Contact pressure	The contact pressure during the break contact shall be measured under the normal conditions.	1N (102gf) MIN.	

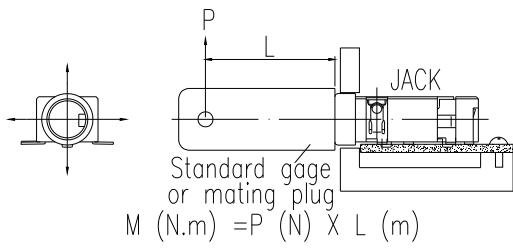
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4. Endurance characteristics

Item	Condition	Specifications
1	Reflow Temperature Profile	
	Profile Feature	Pb-Free Assembly
	Average Ramp-up Rate (T _{Smax} to T _p)	3 °C/second max
	Preheat -Temperature Min(T _{Smin}) -Temperature Max(T _{Smax}) -Time (T _s min to max)	150 °C 200 °C 60-180 seconds
	Time maintained above -Temperature (T _L) -Time (T _L)	217 °C 60-150 seconds
	Peak/Classification Temperature(T _p)	250 °C
	Time within 5°C of actual Temperature (t _p)	20-40 seconds
	Ramp-Down Rate	6 °C/second max
	Time 25°C to Peak Temperature	8 minutes max
	Resistance to soldering heat	Reflow Temp Profile Temperature Profile are as below About the plastic properties , Please refer to the data sheet of plastic. 
Soldering Iron Test Temperature of soldering Iron : 380±10 °C Soldering time : 3±1 seconds		Same as Wave soldering Process
Insertion force		2.94~24.5N (0.3~2.5kgf)
Withdrawal force		2.94~24.5N (0.3~2.5kgf)

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Item	Condition	Specifications	
2 Solderability	Temperature of solder : $250^{\circ}\text{C} \pm 5^{\circ}\text{C}$ Time of dip : 3 ± 0.5 seconds Length of dip : $2 \pm 0.5\text{mm}$ (from top of terminal)	A new uniform of solder shall cover a minimum of 90% of the surface being immersed.	
3 Humidity test	The jack shall be stored at a temperature of $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and a humidity of 90%~95% for 96 hours. Then the jack shall be maintained at standard atmospheric conditions for 1 to 2 hours after which measurement shall be made.	Dimensional requirements shall be satisfied. Electrical and mechanical characteristics shall be satisfied.	
	Insulation resistance	50M Ω MIN.	
4 Dry heat	The jack shall be stored for 96 hours at a temperature of $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ immediately after which measurement shall be made.	Dimensional requirements shall be satisfied. Electrical and mechanical characteristics shall be satisfied.	
	Insulation resistance	50M Ω MIN.	
5 Cold	The jack shall be stored for 96 hours at a temperature of $-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ immediately after which measurement shall be made.	Dimensional requirements shall be satisfied. Electrical and mechanical characteristics shall be satisfied.	
	Insulation resistance	50M Ω MIN.	
6 Composite temperature / humidity cyclic test	The jack shall be subjected to 10 continuous cycles. Then the jack shall be stored at standard atmospheric conditions for 24 hours for recovery, after which measurement shall be made. Temperature shall be reduced from 25°C to -10°C within 30 minutes. Humidity uncontrolled at a temperature less than 25°C .	Electrical and mechanical characteristics shall be satisfied.	

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Item	Condition	Specifications						
7 Operating endurance	Inserting and withdrawing shall be made by the following mating plug or standard dimension gauge, (Refer to Clause 5. grease applied) at a speed of 20 to 30 times/min. Without load : 5000 times.	Dimensional requirements shall be satisfied. Electrical and mechanical characteristics shall be satisfied.						
	Contact resistance	Make contacts	100mΩ MAX.					
		Break contacts	60mΩ MAX.					
		Slide switch contacts	100mΩ MAX.					
	Insertion force		2.94N~24.5N (0.3kgf~2.5kgf)					
	Withdrawal force		2.94N~24.5N (0.3kgf~2.5kgf)					
8 Torsion strength	The standard dimension gauge (refer item5) shall be fixed to the set in the actual used condition. Following plug shall be inserted. A load specified in condition below shall be applied to horizontal and vertical directions to the jack for 5 times in 5 second, after which measurement shall be made.							
	 <p style="text-align: center;">M (N.m) =P (N) X L (m)</p> <p style="text-align: center;">(schematic diagram)</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Size</th> <th>L (cm)</th> <th>Condition</th> </tr> </thead> <tbody> <tr> <td>Mini (φ 3.5)</td> <td>2.5</td> <td>20N (2.04kgf)</td> </tr> </tbody> </table>		Size	L (cm)	Condition	Mini (φ 3.5)	2.5	20N (2.04kgf)
	Size	L (cm)	Condition					
	Mini (φ 3.5)	2.5	20N (2.04kgf)					
	Contact resistance	Make contacts	100mΩ MAX.					
		Break contacts	60mΩ MAX.					
Slide switch contacts		100mΩ MAX.						
Insertion force		2.94N~24.5N (0.3kgf~2.5kgf)						
Withdrawal force		2.94N~24.5N (0.3kgf~2.5kgf)						

5. Soldering condition shelf life about 6 months depend on storage condition of humidity, temperature and others factors.

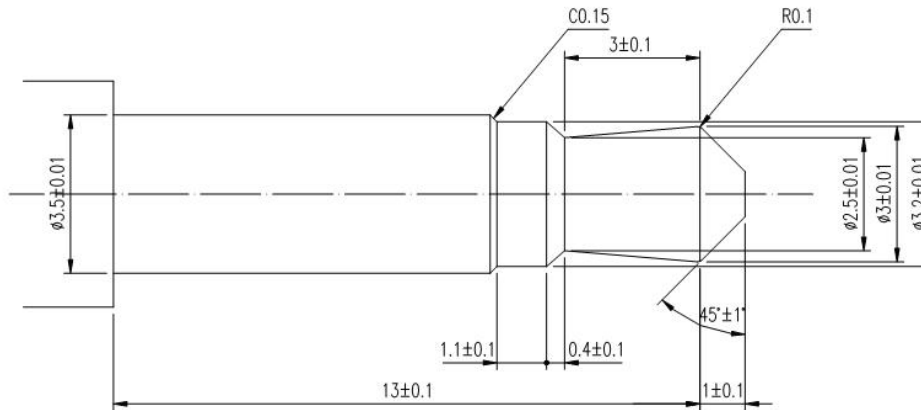
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6. Applicable plug and standard dimensions gauge :

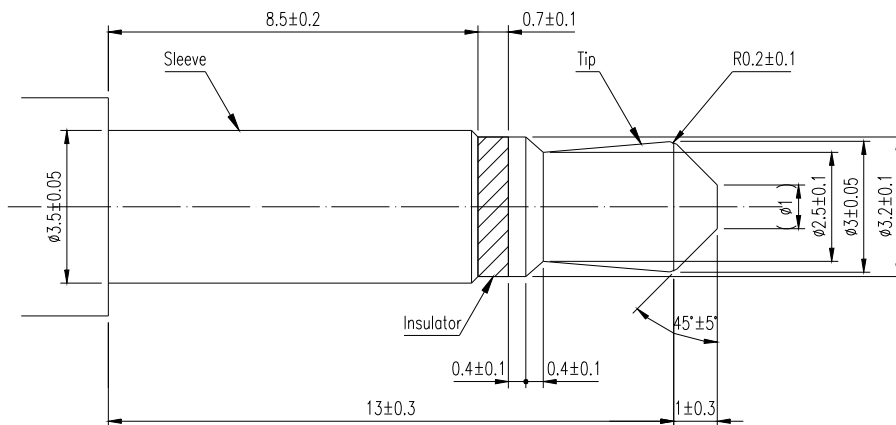
6.1 Standard dimension

Roughness of the surface : $\sqrt{0.8 S} \left(\frac{0.8 S}{\nabla \nabla \nabla \nabla} \right)$

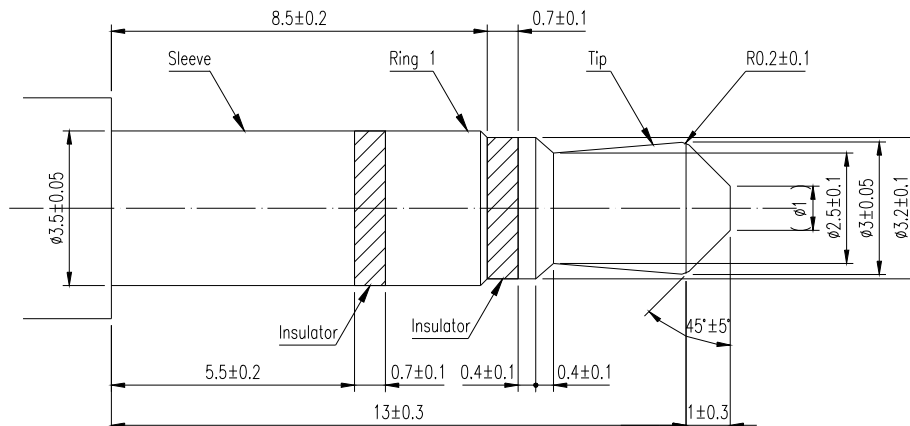
Materials : Stainless steel



6.2 Mate plug : 2 points mini-plug



6.3 Mate plug : 3 points mini-plug

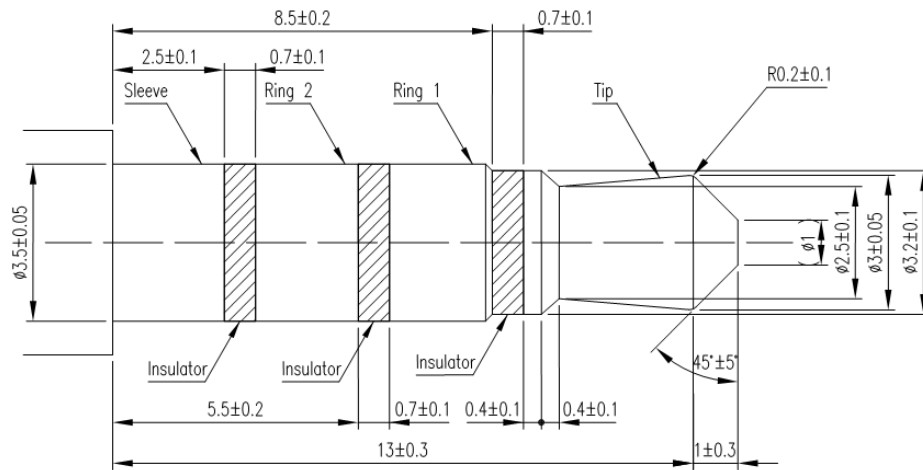


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6.4 Mate Plug : 4 points mini-plug



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7. Endurance test sequence :

Test Item		Test group									
		A	B	C	D	E	F	G	H	I	J
2.1	Contact resistance	1,6		1,6		1,6	1,6	1,6	1,6	1	1
2.2	Insulation resistance	2,7		2,7		2	2	2	2,7	2,6	2,6
2.3	Dielectric strength	3,8		3,8		3,7	3,7	3,7	3,8	3,7	3,7
3.1	Operating force	4,9		4		4,8	4,8	4,8	4,9	4	4
3.2	Terminal strength	5									
3.3	Contact pressure		1								
4.1	Resistance to soldering heat			5							
4.2	Solderability				1						
4.3	Humidity test					5					
4.4	Dry heat						5				
4.5	Cold							5			
4.6	Composite temperature / humidity cyclic test								5		
4.7	Operating endurance									5	
4.8	Torsion strength										5

Test sample quality : 2 pcs min. / group