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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: 15°C to 35°C

Relative humidity : 25% to 80%

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: -25°C to 65°C

Storage temperature range : -25°C to 85°C

2. Electrical characteristics:

	Item	Condition	Specifications
1	Rated voltage Rated current		DC 12V 1A
2	Contact resistance	Measurement shall be made at with small current 1000 Hz (1A MAX.)	30mΩ MAX.
3	Insulation resistance	A voltage of 500V DC shall be applied for 1 minute after which measurement shall be made.	100MΩ MIN.
		Between the conductors which should not make contact under normal conditions. Between each terminal and insulated metal part.	

ISSUE	DATE	WRTN	CHKD	APVD	DESCRIPTIONS
	2013.09.02	江浩霆	郭素玲	郭遠峰	To revise the Specification from HTJ-035series-DIP(F)

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	Item	Condition		Specifications
4	Dielectric strength	500V AC (50 Hz to 60 Hz) for 1 minute. Trip current : 2mA	Between the conductors which should not make contact under normal conditions.	Without damage to parts, arcing or breakdown, etc.
			Between each terminal and insulated metal part.	

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.		
		Insertion force		4N~30N (0.4kgf~3.0kgf)
		Withdrawal force		3N~30N (0.3kgf~3.0kgf)
2	Contact pressure	Contact pressure during the make contact shall be measured in the operation by using the minimum dimensional gauge.	The contact pressure between chip, ring, sleeve and the contact piece.	1N (100gf) MIN.
			The contact pressure with the make contact.	
		The contact pressure during the break contact shall be measured under the normal conditions.		

4. Endurance characteristics

	Item	Condition		Specifications
1	Humidity test	Temperature : 40°C±5°C Relative humidity : 90% ~95% for 96 hours after testing jack shall be left alone for 1 to 2 hours in a room ambient.		Dimensional requirements shall be satisfied. Electrical and mechanical characteristics shall be satisfied.
		Contact resistance		50mΩ MAX.
		Insulation resistance		50MΩ MIN.
		Contact pressure		0.5N (50gf) MIN.
		Insertion force		3N~30N (0.3kgf~3.0kgf)
		Withdrawal force		

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Item	Condition		Specifications		
2	Cold	The jack shall be stored for 96 hours at a temperature of $-25\pm 2^{\circ}\text{C}$ immediately after which measurement shall be made.		Dimensional requirements shall be satisfied. Electrical and mechanical characteristics shall be satisfied.	
		Insertion force		3N~30N (0.3kgf~3.0kgf)	
		Withdrawal force			
3	Dry heat	The jack shall be stored for 96 hours at a temperature of $85\pm 2^{\circ}\text{C}$ immediately after which measurement shall be made.		Dimensional requirements shall be satisfied. Electrical and mechanical characteristics shall be satisfied.	
		Insertion force		3N~30N (0.3kgf~3.0kgf)	
		Withdrawal force			
4	Operating endurance	Jack shall withstand 5000 cycles inserting and withdrawing shall be made by the following mating plug or standard dimension gauge, at a speed of 10 to 30 times / min.		Dimensional requirements shall be satisfied. Electrical and mechanical characteristics shall be satisfied.	
		Contact pressure		0.5N (50gf) MIN.	
		Contact resistance	Each closed contact	60mΩ MAX.	
Between plug and contact	100mΩ MAX.				
5	Soldering test	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)		The soldered area shall be covered a minimum of 90% of the surface being immersed.	
6	Sleeve strength (for sleeve items only)	As shown the below drawing, before you insert the plug to our jack, you must put it in fixed location. Then you use the 2Kg strength into its front side with 4 directions (up, down, left, right) . Note : P = 19.8N (2Kg) , L = 20mm		The sleeve should not be loosen after the test for 1000 circles.	

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Item	Condition	Specifications		
7 Resistance to Soldering Heat Test	Wave soldering Process	Electrical and mechanical characteristics shall be satisfied, and not show remarkable failure.		
	Profile Feature		Pb-Free Assembly	
			Topside PCB	Padside PCB
	Preheat -Temperature min -Temperature max -Time (t _s min to max)		120°C (T _{sl} max)	110°C (T _s min) 150°C (T _s max) 75 sec
	Peak/Classification Temperature		165°C (T _{pl} max)	260°C ±5°C (T _p)
	Time within 5°C of actual Temperature (t _p)			10 sec (within 2 times every time 2-3 sec)
	Time 25°C to Peak temperature			3 minutes max
	Wave Soldering Temperature Profile are as below About the plastic properties, Please refer to the data sheet of plastic.			
	<p>Temperature vs Time graph showing wave soldering profiles for Topside PCB (dashed red line) and Padside PCB (solid blue line). The graph includes parameters: Ts min., Ts max., Tp, Tp1 max., Ts1 max., ts (Time to Peak), and tp (Peak Time, 2~3 sec).</p>			
	Soldering Iron Test Temperature of soldering Iron : 380±10°C Soldering time : 3±1 seconds		Same as Wave soldering Process	
Insertion force		4N~30N (0.4kgf~3.0kgf)		
Withdrawal force		3N~30N (0.3kgf~3.0kgf)		

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Item	Condition	Specifications
8 Composite temperature/humidity cyclic test	<p>The jack shall be subjected to 10 continuous cycles, each as shown in figure below. Then the jack shall be stored at standard atmospheric conditions for 24 hours for recovery, after which measurement shall be made.</p> <p>*Temperature shall be reduced from 25°C to -10°C within 30 min.</p> <p>*Humidity uncontrolled at a temperature less than 25°C</p>	<p>Electrical and mechanical characteristics shall be satisfied, and the jack shall not show remarkable failure.</p>

5. Warning :

Miniature jack shall be dipped, warning to inferior contact by flux and transform mold.

Resistance to flux : It shall be prevention between PCB and housing.

Transform mold : It must not add direct heat to miniature jack.

Temperature of solder : 265°C MAX.

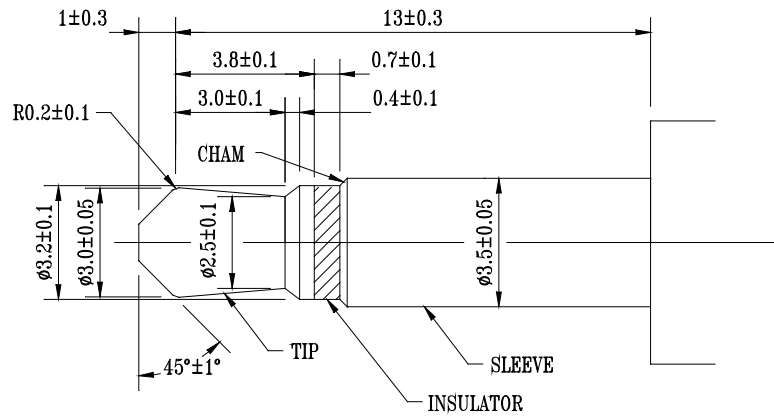
Preheat temperature : 90°C MAX.

6. Preheat time : 1 minute MAX.

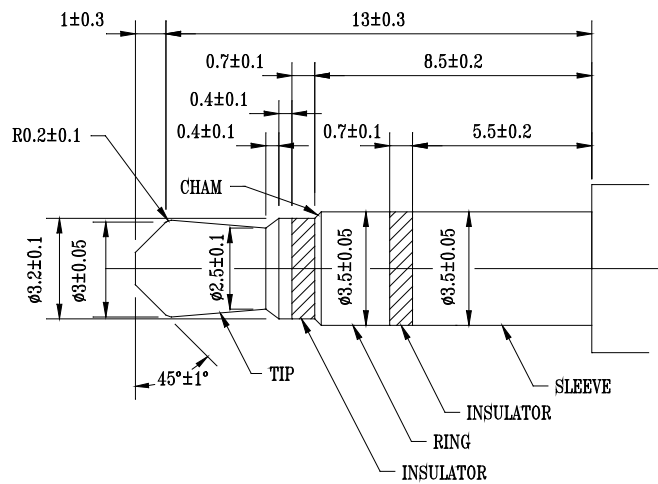
7. Soldering condition shelf life about 6 months depend on storage condition of humidity, temperature and others factors.

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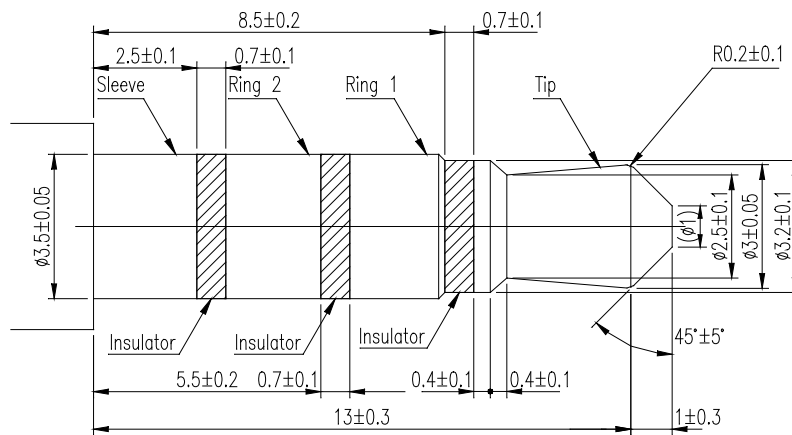
8. Mating plug dimension



2 Conductors Type



3 Conductors Type



4 Conductors Type

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9. Endurance test sequence :

Test sequence		Test group								
		A	B	C	D	E	F	G	H	I
2.2	Contact resistance		1	1,6	1,6	1	1,6		1,6	1,6
2.3	Insulation resistance		2	2,7	2,7	2,7	2,7		2,7	2,7
2.4	Dielectric strength		3,7	3,8	3,8	3,8	3,8		3,8	3,8
3.1	Operating force		4	4	4	4,9	4,9		4	4,9
3.2	Contact pressure	1	5			5				
4.1	Humidity test		6							
4.2	Cold			5						
4.3	Dry heat				5					
4.4	Operating endurance					6				
4.5	Soldering test						1			
4.6	Sleeve strength (for sleeve items only)							1		
4.7	Resistance to Soldering Heat Test								5	
4.8	Composite temperature / humidity cyclic test									5

Test sample quality : 2 pcs min. / group