

TITLE MINIATURE JACK	SPC. NO. KM35011	PAGE : 1 OF 7 DATE : 2013.10.09
--------------------------------	----------------------------	--

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	WRTN	CHKD	APVD	DESCRIPTIONS
	2013.10.09	黃健瑋	郭素玲	郭遠峰	

TITLE MINIATURE JACK	SPC. NO. KM35011	PAGE : 2 OF 7 DATE : 2013.10.09
--------------------------------	----------------------------	--

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.)	30m Ω max.
3	Insulation resistance	A voltage of 500 V DC shall be applied to 1 minute. After which measurement shall be made.	100M Ω min.
4	Dielectric strength	A voltage of 500V AC(50 to 60Hz)shall be applied to 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	2.94N~29.4N (0.3Kgf~3Kgf)
		Withdrawal force	2.94N~29.4N (0.3Kgf~3Kgf)
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.

TITLE MINIATURE JACK	SPC. NO. KM35011	PAGE : 3 OF 7 DATE : 2013.10.09
--------------------------------	----------------------------	--

4. Endurance characteristics

Item	Condition	Specifications
1 Resistance to soldering heat	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
	<p>Reflow Temp Profile Temperature Profile are as below About the plastic properties , Please refer to the data sheet of plastic.</p>	
Soldering Iron Test Temperature of soldering Iron : 380±10 °C Soldering time : 3±1 seconds		Same as Wave soldering Process
Insertion force		2.94N~29.4N (0.3Kgf~3Kgf)
Withdrawal force		2.94N~29.4N (0.3Kgf~3Kgf)

TITLE		SPC. NO.	PAGE : 4 OF 7
MINIATURE JACK		KM35011	DATE : 2013.10.09
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.	
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.	
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.	
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.	

TITLE MINIATURE JACK	SPC. NO. KM35011	PAGE : 5 OF 7 DATE : 2013.10.09
--------------------------------	----------------------------	--

Item	Condition	Specifications
7 Operating endurance	Inserting and withdrawing shall be made by the following mating plug or standard dimension gauge, 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	50mΩ max.

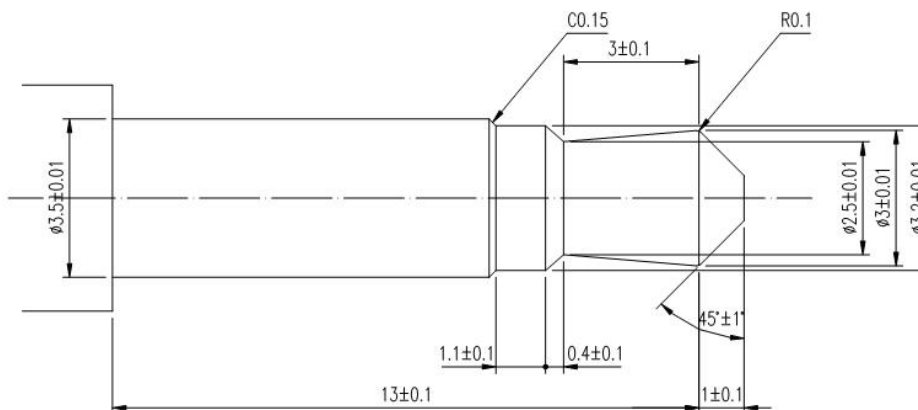
5. Soldering condition shelf life about 6 months depend on storage condition of humidity, temperature and others factors.

6. Applicable plug and standard dimensions gauge :

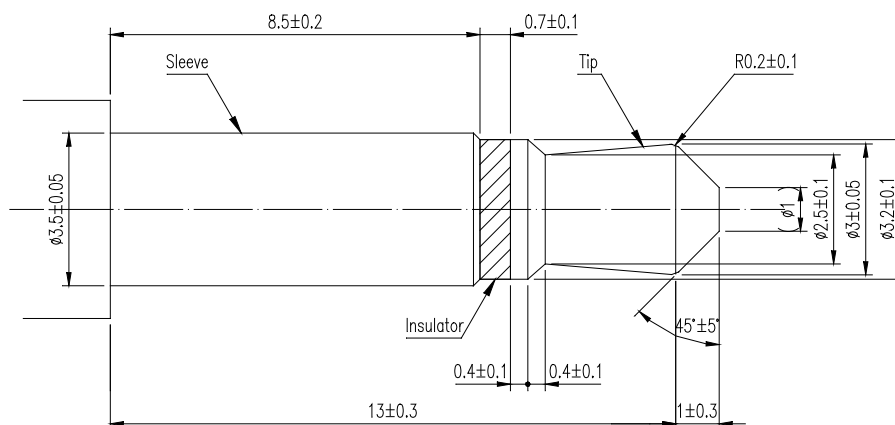
6.1 Standard dimension

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

Materials : Stainless steel

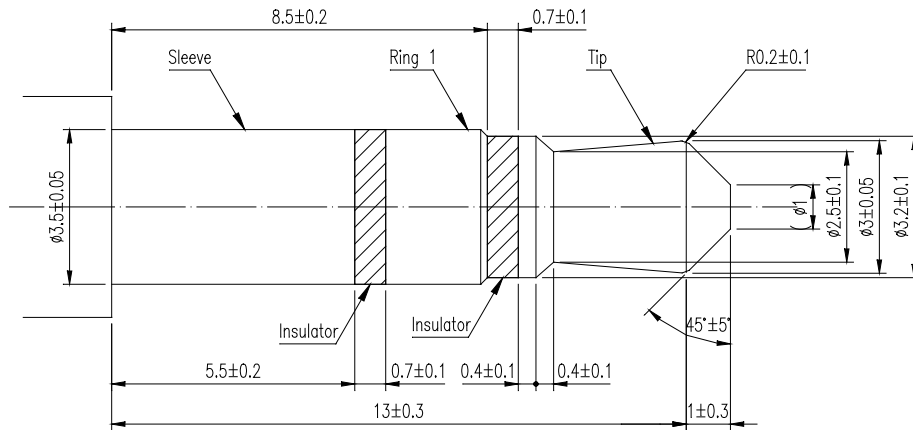


6.2 Mate plug : 2 points mini-plug

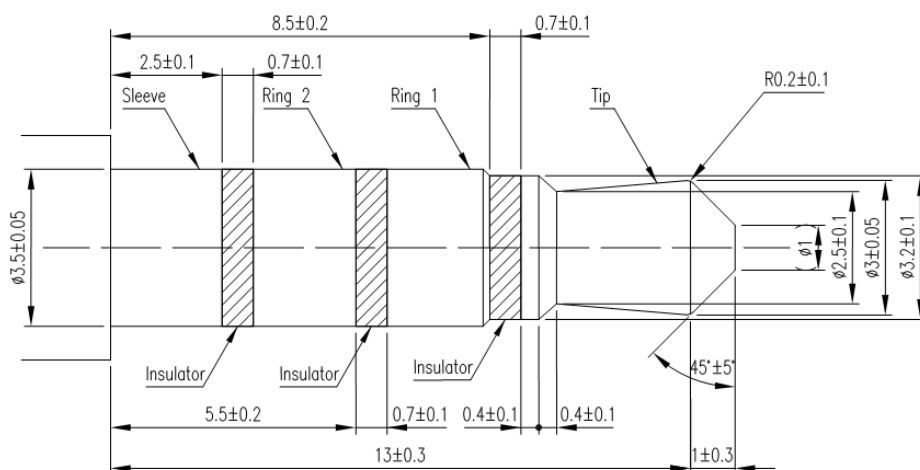


TITLE MINIATURE JACK	SPC. NO. KM35011	PAGE : 6 OF 7 DATE : 2013.10.09
--------------------------------	----------------------------	--

6.3 Mate plug : 3 points mini-plug



6.4 Mate Plug : 4 points mini-plug



TITLE MINIATURE JACK	SPC. NO. KM35011	PAGE : 7 OF 7 DATE : 2013.10.09
--------------------------------	----------------------------	--

7. Endurance test sequence :

Test Item		Test group									
		A	B	C	D	E	F	G	H	I	
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									
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	

Test sample quality : 2 pcs min. / group