SPECIFICATIONS

CUSTOMER MODEL NO. / TITLE 3.5∅ PHONE JACK	SPECIFICATION NO.	PAGE: 1 OF 3 DATE： MAR,07.2005

1. Scope

This specification covers the requirements for:

FC68131 - Ø3.5mm JACK SOCKET JY039-3P

FC61833 - Ø3.5mm JACK SOCKET JY039-5P

2. Rated

2.1 Rated voltage DC 12V

2.2 Rated current DC 1A

2.3 Temperature range -25~70℃

2.4 Humidity range 85% RH MAX

2.5 Test condition

Unless otherwise specified herein, all measurements and tests shall be made at temperature of 5℃～35℃and relative humidity of 45%～85%.

3. Electrical efficiency

Item	Condition	Result/Value
Dielectric strength	500V AC applied between mutual insulated metal parts for one minute.	Not breaking insulation.
Insulation resistance	500V DC applied between mutual insulated metal parts. Initial After heat test After cold test After resistance to soldering test After life test After temperature cycling test After humidity test	≧100MΩ ≧50MΩ
Contact resistance	Measure at a current of less than 100mA 1KHz. The Gauge plug used shall be cleaned and free from oxidation film of the surface. Initial After humidity test After heat test After cold test After resistance to soldering test After life test After temperature cycling test After humidity test	≤ 50mΩ ≤ 100mΩ

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4.Mechanical efficiency

Item	Condition	Insertion force	Withdrawal force
Insertion force and withdrawal force	With the gauge plug as show in 8. Initial After humidity test After heat test After cold test After resistance to soldering heat test After life test After temperature cycling test	0.3~3.0kgf (2.94~29.4N)	0.3~3.0kgf (2.94~29.4N)

4.1 Terminal strength

Every terminal shall be capable of withstand a force of 500g(4.9N) on 10 seconds without loosing and breakdown, but deformation of terminal is authorized.

The jack fixed on PCB, then shall be capable of inserted the gauge plug at 150 times, without loosing and breakdown, but force of inserted the gauge plug shall be less than 3kgf.(29.4N)

5.Construction

5.1 Mating limit

Mating limit or range of between the plug and spring of 3.5∅ jack shall be not regulated.

5.2 Connection timing

The 3.5∅ jack shall be permitted with connection timing whether shorting or not between the mutually separated terminals or spring of the 3.5∅ jack, during the plug inserting and extracting.

5.3 Creep age distance and spacing

Creep age distance and spacing between mutually insulated parts be 0.2mm minimum, these distance and spacing shall be maintained with or without the gauge plug inserted.

6.Environmental test

6.1 Life test

The life test shall consist of 5000 cycles of insertion and withdrawal with gauge plug covered with a thin coat of grease in order to prevent from heating or wearing, at a rate of 20 to 30 cycles per minute under no load. At the conclusion of this test, the jack shall comply with paragraph 3 & 4, and be in operating condition.

6.2 Humidity test

The 3.5∅ jack shall be subjected to temperature of 40±2℃ and relative humidity of 90% to 95% for a period of 96 hours.

Upon completion of the exposure, dewdrops shall be blown out and removed from the jack, after which the jack shall be conditioned at room ambient conditions for 30 minutes.At the conclusion of this test, the 3.5∅ jack shall comply with paragraph 3 & 4.

6.3 Heat test

The 3.5∅ jack shall be subjected to temperature of 70±2℃ for a period of 96 hours, then shall be allowed to remain in room ambient conditions for 30 minutes. At the conclusion of this test, the pin jack shall comply with paragraph 3 & 4.

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6.4 Cold test

The 3.5∅ jack shall be subjected to temperature of –40±3℃ for a period of 96 hours, then shall be allowed to remain in room ambient conditions for 30 minutes. At the conclusion of this test, the pin jack shall comply with paragraph 3 & 4.

6.5 Resistance to soldering heat test

The jack terminal shall be dipped in solder under the condition as specified bellow. At the conclusion of this test, the 3.5∅ jack shall comply with paragraph 3 & 4, and not show remarkable failure.

6.5.1 The terminal for a printed circuit board.

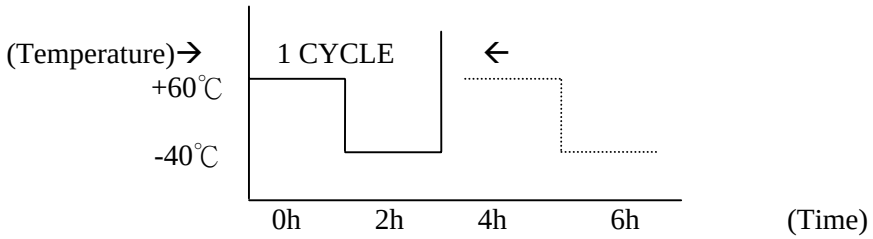
Temperature of solder:260±5℃; Dip time:5±1 seconds.

6.5.2 The terminal for a lead wire.

Temperature of solder: 350±10℃; Dip time: 3±0.5 seconds.

6.6 Temperature cycling test

The jack shall be subjected to the conditions as shown in fig as follows, and then Shall returned and allowed to remain in room ambient condition for 30 minutes.At the conclusion of this test, the pin jack shall comply with paragraph 3 & 4.



6.7 Soldering test

Area of soldering shall be capable of 3/4 or more of dip terminal area. Condition: Terminal of solder:230±5℃;Time of dip:3±0.5sec. Length of dip:2±0.5mm(from top of terminal)

7.Others

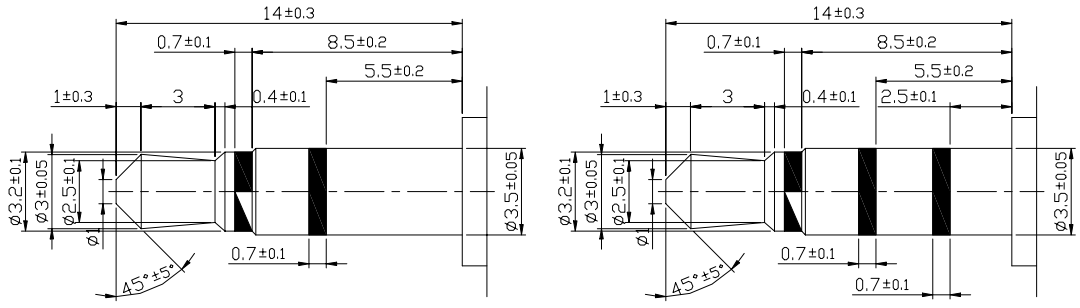
When the amendment of this specification comes into necessity, it shall be made by the Mutual consultation and agreement between manufacturer and customer.

8.Mated plug

Surface roughness : Peak-to-valley height of 0.8 micron MAX.

For insertion and drawing force. Material: Stainless steel; finish: Chromium plated.

For contact resistance. Material: Brass; Finish: Silver plated.



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1. This part should not contain any substances which are specified in follow .(Except cadmium is less than 5ppm, Lead is under 90ppm)

2. In this case, pre-processing methods and measurement methods shall conform to ROHS.

3. List of "Environment-related Substances to be Controlled ('The Controlled Substances')"

Substances		Allowable concentration
Heavy metals	Cadmium and cadmium compounds	Less 5ppm
	Lead and lead compounds	Less 90ppm
	Lead in the plastic,rubber,paints,ink	Less 50ppm
	Mercury and mercury compounds	
	Hexavalent chromium compounds	
	Nickel and Nickel compounds (at present only ASUS and Silitek)	
Chlorinated organic compounds	Polychlorinated biphenyls (PCB)	
	Polychlorinated naphthalenes (PCN)	
	Short-chain chlorinated paraffins (SCCP)	
	Polychlorinated terphenyls (PCT)	
	Other chlorinated organic compounds	
Brominated organic compounds	Polybrominated biphenyls (PBB)	
	Polybrominated diphenylethers (PBDE)(including decabromodiphenyl ether [DecaBDE])	
	Other brominated organic compounds	
Organic tin compounds (tributy tin compounds, Triphenyl tin compounds)		
Asbestos		
Specific azo compounds		
Formaldehyde		
Polyvinyl chloride (PVC) and PVC blends		
Foaming cushion material (EPS、EPE、EPP)		

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List of "Environment-related Substances to be Controlled ('The Controlled Substances')"

Substances
Beryllium oxide
Specific phthalates (DEHP、DBP、BBP、DINP、DIDP、DNOP、DNHP)
Hydrofluorocarbon (HFC)、Perfluorocarbon (PFC)
Phosphorus certificate
Perfluorooctane sulfonates (PFOS)
Specific benzotriazole
Cobalt dichloride
Ozone depleting substance (ODS)

4. Allowable concentrations:
   Less than 90ppm is determined as an allowable total-concentration of four heavy metals (mercury, cadmium, hexavalent chromium, and lead). Less than 5ppm is determined as an allowable cadmium-concentration in a plastic (including rubber) part.

E I DUPONT DE NEMOURS & CO INC

ENGINEERING POLYMERS CHESTNUT RUN PLAZA PO BOX 80713 WILMINGTON DE 19880

Material Designation: **101(+)(f1), 101F(+)(f1), 101L(+)(f1), E101(+)(f1), E101L(f1), 132F(+)(f1), 135F(+)(f1)**

Product Description: Polyamide 66 (PA66), designated "Zytel" furnished as pellets.

Color	Min. Thick. (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str	IEC GWIT	IEC GWFI
ALL	0.71	V-2	4	0	130	75	85	725	960
	1.5	V-2	3	0	130	75	85	750	850
	3.0	V-2	2	0	130	75	85	800	950
	6.0	V-2	2	0	130	75	85	-	-

CTI: 0 **HVTR:** 0 **D495:** 6 **IEC BP:** -

(+) Virgin and Regrind up to 50% by weight inclusive, have the same basic material characteristics.

(f1) Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.

NOTE (1) Material designations that are color pigmented may be followed by suffix letters and numbers. (2) Material designations may be prefixed by "ZYT" or "MIN".