JNPS-0846

製 品 仕 様 書
Product Specification

3M 印
1.27mm ピッチ
フラットケーブル用コネクタ
DIP コネクタ
(X)3XXX-0X00 PR、
(X)3XXX-0X00 SC、(X)3XXX-0X00 S

3M Brand
Cnnector for
1.27mm Pitch Flat Cable
DIP Connector
(X)3XXX-0X00 PR,
(X)3XXX-0X00 SC, (X)3XXX-0X00 S

APRV. 6/10 2005
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SUMITOMO 3M LIMITED

ELECTRONIC SOLUTIONS DIVISION
TECHNICAL DEPARTMENT

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1. FUNCTION

This connector is designed for IDC (Insulation Displacement Connector) connection with 1.27mm pitch flat cable. This connector has 2 rows of plural U-elements at topside and 2 rows of contact tails at bottom side.
Then, this connector has the function of electrical connection between cable and PC board or cable and compatible IC socket (Plating Suffix : SC or S).

2. COMPATIBLE OBJECTS

2-1 WIRE ACCOMODATION

28 AWG Stranded *corresponding with UL Style 2651

2-2 COMPATIBLE BOARD

Thickness: 1.6mm ± 0.2mm
Through hole diameter: ϕ1.0mm ± 0.1mm

* Refer to the drawing 4U-0010-0940-6.
* In the case that (X)3406-0000 XX (14 pos.) or (X)3416-0000 XX (16 pos.) is mounted on the PC board by soldering, more than 0.5mm thickness spacers (ex. plastic washer with high temperature resistance) should be used for spacing between the connector body and PC board.

2-3 COMPATIBLE IC SOCKET

IS socket should have the compatibility with the following specification of the terminals.

PRODUCT No.	LEAD LENGTH	LEAD SECTION
(X)3406-0000 XX (14Pos.) and (X)3416-0000 XX (16Pos.)	4.4 ± 0.3mm * These connectors don't have standoff bumps.	0.46 ± 0.05mm × 0.36 ± 0.05mm
(X)3460-0000 XX (24Pos.)	3.8 ± 0.3mm * Lower side from the bottom of the standoff bumps (Height: 0.6mm).	
(X)3508-0000 XX (40Pos.)	3.9 ± 0.3mm * Lower side from the bottom of the standoff bumps (Height: 0.5mm).	

* IC socket should be used for (X)3XXX-0000 SC and (X)3XXX-0000 S.
  IC socket can not be used for (X)3XXX-0000 PR.

3. RELATED SPECIFICATION DRAWINGS

See the drawings described in JNPD-0846.

4. RELATED TEST STANDARDS

MIL-STD-202
JEIDA-38-1984
JIS C 0050
JNTM-0039, JNTM-0040
*JNTM: Test Method Standard of Sumitomo 3M for Electronic and Electrical Component Parts.

5. APPLICATION

PRODUCT NUMBER INFORMATION

(X) 3XXX – 0 X 0 0 XX

PLATING SUFFIX
- PR : U-ELEMENT AREA & TAIL AREA / Gold Flash Plating
- SC : U-ELEMENT AREA / Nickel Plating
  TAIL AREA / Gold Plating 0.2μm Min
- S : U-ELEMENT AREA / Nickel Plating
  TAIL AREA / Gold Plating 0.76μm Min.

SHAPE OF TAIL SECTION
- 0 : Rectangular Pin (0.46mm × 0.36mm)

CONTACT DISPOSITION
- 0 : Standard (Body Color : Gray)
- 1 : Mirror Image Type (Body Color : Black)

CONTACT QUANTITY
- 3406: 14P (Distance of terminal row : 7.62mm)
- 3416: 16P (Distance of terminal row : 7.62mm)
- 3460: 24P (Distance of terminal row : 15.24mm)
- 3508: 40P (Distance of terminal row : 15.24mm)

BODY COLOR
- Blank : Gray (Contact Disposition : Standard)
- D : Black (Contact Disposition : Mirror Image Type)

6. QUALITY PERFORMANCE

6-1 RATING

ITEM	RATING
CURRENT	1.0A Max.
VOLTAGE	AC: 250V Max. / DC: 300V Max.
TEMPERATURE	-55°C ~ 105°C

6-2 PHYSICAL SPECIFICATIONS

* The value in ( ) is reference.

TEST DESCRIPTION	REQUIREMENT	TEST CONDITION	RELATED STANDARD
VIBRATION	Electrical discontinuity: Less than 1μs	Sweep Freq.: 10~55Hz, Amplitude: 1.52mm(or 98 m/s^2), Sweep Cycle: 1min., Sweep time: 2 hours Sweep in each direction: (X,Y,Z)	MIL-STD-202F 101A
MECHANICAL SHOCK	Electrical discontinuity: Less than 1μs	490 m/s^2, 11ms, Half sine shock pulse. 3 times / X,Y,Z directions (Total 18 times)	MIL-STD-202E 213B
SOLDERABILITY	Wetting: 95% Min. or Zero cross time: 3 seconds Max.	Solder: Sn-3Ag-0.5Cu - Wetting Measurement: 245°C, 3 seconds - Wetting Balance Method: 245°C	JNTM-0039 JIS C 0050
SOLDERING HEAT RESISTANCE	Connector should not have any defect portions after test.	Dip soldering: 260°C, 10 seconds, 2 times or 263°C, 5 seconds, 2 times * without Pre-heating Soldering Iron: Dependence on soldering conditions. * It need the evaluation under actual conditions.	JNTM-0040

6-3 ELECTRICAL SPECIFICATIONS

TEST DESCRIPTION	REQUIREMENT	TEST CONDITION	RELATED STANDARD
DIELECTRIC WITHSTANDING VOLTAGE	No appearance of arcing and break down. Leak current: 1mA Max.	Impressed voltage is AC 1000V rms. between adjacent two contacts for one minute.	————
INSULATION RESIDENSE	1000MΩ Min.	Impressed voltage is DC 500V between adjacent two contacts for one minute.	————
CONTACT RESISTANCE	- Initial / 25 mΩ Max. - Change of contact resistance after environmental tests / 20 mΩ Max.	Contact resistance is measured at Short Circuit. Current: 1.5mA Open Circuit Voltage: 20mV by 4 terminal method. * Measurement values include the resistance of contact pins as conductive material. * Refer to Table 1 regarding the conditions of each environmental test.	See Table 1.

Table 1: ENVIROMENTAL TEST

ITEM	TEST CONDITION	RELATED STANDARD
MOISTURE	-10 ~ 65°C, Relative Humidity 95% / 10 cycles	MIL-STD-202F106D
SALT SPRAY	NaCl 5% solution, 35°C / 48 hours	MIL-STD-202F101D
THERMAL SHOCK	-55°C→25°C→85°C→25°C / 5 cycles	MIL-STD-202F107G
HUMIDITY (STEADY STATE)	40°C, Relative Humidity 95% / 96 hours	MIL-STD-202F103B
THERMAL LIFE	Steady Current: Current Rating × 110%, 85°C / 1000 hours	————
H_2S GAS	3 ± 1 ppm, 40°C, Relative Humidity 70 ~ 80% / 96 hours	JEIDA-38-1984

7. PLATING SPEC INDICATION ON CONNECTOR

The first letter, in stamped 3 letters on the connector body for lot numbering, identified the following plating specs.

N XX or n XX : PR plating
C XX or c XX : SC plating
S XX or s XX : S plating
* XX : two alphabet letters

8. PACKAGE & IDENTIFICATION

These products are packed with plastic tray and carton box for transit.
Carton box are identified by part number, quantity, maker name and lot number.

9. STORAGE

This products shall be stored in a room, ambient temperature 5 ~ 35°C, and ambient humidity 40 ~ 70%.

10. ATTENTIONS

10-1 BOARD MOUNTING

In the case that (X)3406-0000 XX (14 pos.) or (X)3416-0000 XX (16 pos.) is mounted on the PC board by soldering, more than 0.4mm thickness spacers (ex. plastic washer with high temperature resistance) should be used for spacing between the connector body and PC board.

10-2 COMPATIBILITY WITH IC SOCKET

IC socket should be used for (X)3XXX-0000 SC and (X)3XXX-0000 S.
IC socket can not be used for (X)3XXX-0000 PR.