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Jameco Part Number 1976751



## PRODUCT SPECIFICATION



## LANGUAGE

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## ENGLISH

**TITLE :**

### 75 OHM BNC R/A PCB RECEPTACLE



# PRODUCT SPECIFICATION



LANGUAGE  
ENGLISH

## 1.0 SCOPE

This specification covers the performance requirements and characteristics for  
75 OHM BNC R/A PCB RECEPTACLE

## 2.0 APPLICABLE DOCUMENTS

### 2.1 Molex Drawing

Per applicable Molex Sales Drawing

### 2.2 The following document form a part of this specification to the extent specified herewith.

In the event of conflict between the requirements of the specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of the specification and he referenced documents, this specification shall take precedence.

**MIL-STD-202** Test Methods for Electronic and Electrical Component Parts

**MIL-STD-1344** Test Methods for Electrical Connectors

**MIL-STD-39012** Test Sequence

## 3.0 MATERIAL SPECIFICATIONS

### 3.1 Design and Construction

Connector shall be of the design, construction and physical dimensions specified on the applicable sales drawing

### 3.2 Materials

Refer to Molex Sales Drawing

### 3.3 Finish

Specification detail shown on sales drawing

### 3.4 Performance and Test Description

Connector shall be designed to meet the electrical, mechanical and environmental performance

## 4.0 RATING

| Item              | Rating                    |
|-------------------|---------------------------|
| Working Voltage   | 500 VRMS max. @ Sea Level |
| Impedance         | 75 Ohms Nominal           |
| Frequency Range   | dc to 2 GHz               |
| Temperature Range | -20° C to +70° C          |

|                               |                  |                                      |                                    |  |  |
|-------------------------------|------------------|--------------------------------------|------------------------------------|--|--|
| REVISION PC ONLY              |                  | TITLE: 75 OHM BNC R/A PCB RECEPTACLE |                                    |  |  |
| D                             | PER ECN RF98-005 |                                      |                                    |  |  |
| REV                           | DESCRIPTION      |                                      |                                    | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |  |
| DESIGN CENTER<br>MOLEX TAIWAN |                  | STATUS<br>M                          | WRITTEN BY:<br>RANDY<br><i>Sam</i> | CHECK BY:<br><i>Sam</i>  | APPROVED BY:<br>Wally<br>DATE: YR/MO/DAY<br>94/06/14 |
| DOCUMENT NO.<br>PS-73598-0051 |                  |                                      |                                    |  | FILE NAME<br>PS980051.SAM                            |
|                               |                  |                                      |                                    |  | SHT NO.<br>2 OF 8                                    |



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## ELECTRICAL

| Item                                  | Requirement   | Test Methods  |
|---------------------------------------|---|---|
| 5.1.1 Contact Resistance              | Center Contact :<br>a) Initial : 15.0 milliohms max.<br>b) After various tests :<br>15.5 milliohms max.<br><br>Outer Contact :<br>a) Initial : 3.0 milliohms max.<br>b) After various tests :<br>Not applicable | According to MIL-STD-202F,<br>Method 307.                   |
| 5.1.2 Insulation Resistance           | 5000 Megaohms min.  | According to MIL-STD-202F,<br>Method 302, Test condition A. |
| 5.1.3 Dielectric Withstanding Voltage | 1500 VRMS min. @ Sea Level  | According to MIL-STD-202F,<br>Method 301.                   |

|              |                              |                  |  |                         |                              |                             |  |
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## MECHANICAL

| Item  | Requirement  | Test Methods  |
|---|--|---|
| 5.2.1 Force to Engage/Disengage                   | Longitudinal Force : 3 pounds max.<br>Radial Torque : 2.5 inch-pounds max. |   |
| 5.2.2 Insertion / Withdraw Force (Center Contact) | Insertion : 3 pounds max.<br>Withdraw : 2 ounce min.                       |   |
| 5.2.3 Durability                                  | a) No damage to interface<br>b) Meet the requirements of 5.2.1             | After 500 mating cycles @ 12 cycles per minute<br>According to MIL-STD-1344A, Method 2016.1 |
| 5.2.4 Center Contact Retention Force              | 6.0 pounds axial force min.  | According to MIL-STD-1344A, Method 2007.1   |

|                               |                  |  |                         |                              |                             |  |
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| DOCUMENT NO.<br>PS-73598-0051 |                  |  |                         | FILE NAME<br>PS980051.SAM    | SHT NO.<br>4 OF 8           |  |



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## ENVIRONMENT

| Item                         | Requirement  | Test Methods   |
|------------------------------|--|--|
| 5.3.1 Corrosion (Salt Spray) | No evidence of surface degradation when inspected at 10x magnification.  | According to MIL-STD-202F, Method 101D. Test condition B |
| 5.3.2 Mechanical Shock       | No discontinuity greater than 1m.sec. when subjected to a shock pulse with a peak value of 50 G for a 11m.sec. duration.                           | According to MIL-STD-202F, Method 213B. Test condition G |
| 5.3.3 Vibration              | No discontinuity greater than 1m.sec. when subjected to sinusoidal vibration with a 0.03 inch amplitude using a swept frequency range of 10-55 Hz. | According to MIL-STD-202F, Method 204D. Test condition A |

|                               |                  |  |                                    |                         |                              |                             |
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|                           |  |  |
|---------------------------|--|--|
| 5.3.4 Moisture Resistance | <p>Insulation Resistance shall be at least 200 megohms within 5 minutes after removal from chamber.</p> <p>Parts will be tested for insulation resistance followed by initial conditioning @ 50°C drying oven (humidity uncontrolled) for 4 hours, followed by 25°C (humidity uncontrolled) for 2-3 hours.</p> <p>Parts will then be subjected to the following conditions :</p> <ul style="list-style-type: none"> <li>[Step 1] Temperature ramp (25-65)°C during a 2.5 hr period @ (90-100)%RH</li> <li>[Step 2] Temperature = (65)°C during a 3 hr period @ (90-100)%RH</li> <li>[Step 3] Temperature ramp (65-25)°C during a 2.5 hr period @ (80-100)%RH</li> <li>[Step 4] Temperature ramp (25-65)°C during a 2.5 hr period @ (90-100)%RH</li> <li>[Step 5] Temperature = (65)°C during a 3 hr period @ (90-100)%RH</li> <li>[Step 6] Temperature ramp (65-25)°C during a 2.5 hr period @ (80-100)%RH</li> <li>[Step 7] Temperature = (25)°C during a (2+/-1)hr period @ (90-100)%RH</li> </ul> | According to MIL-STD-202F, Method 106F. (Less step 7a&b) |
|---------------------------|--|--|

|                               |                  |  |                           |                              |                               |
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| DOCUMENT NO.<br>PS-73598-0051 |                  |  | FILE NAME                 | SHT NO.                      |                               |
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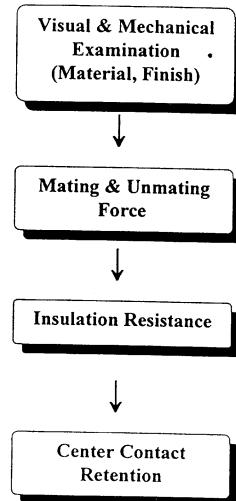
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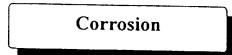
## 6. Test Groups and Test Sequences :

The tests are categorized into 4 major Groups. The test sequences are defined as follow .

### GROUP I



### GROUP II



|                               |                  |  |                         |                              |  |
|-------------------------------|------------------|--|-------------------------|------------------------------|--|
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| DOCUMENT NO.<br>PS-73598-0051 |                  |  |                         |                              | FILE NAME   SHT NO.<br>PS980051.SAM   7 OF 8 |



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GROUP III

Durability

GROUP IV

Center Contact  
&  
Outer Contact  
ResistanceDielectric Withstanding  
Voltage

Vibration



Mechanical Shock



Moisture Resistance

|                               |                  |  |                         |                              |                             |  |
|-------------------------------|------------------|--|-------------------------|------------------------------|-----------------------------|--|
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| DOCUMENT NO.<br>PS-73598-0051 |                  |  |                         | FILE NAME                    | SHT NO.                     |  |
|                               |                  |  |                         | PS980051.SAM                 | 8 OF 8                      |  |

13                    12                    11                    10                    9                    8                    7                    6                    5                    4                    3                    2                    1

## MATERIALS AND FINISHES

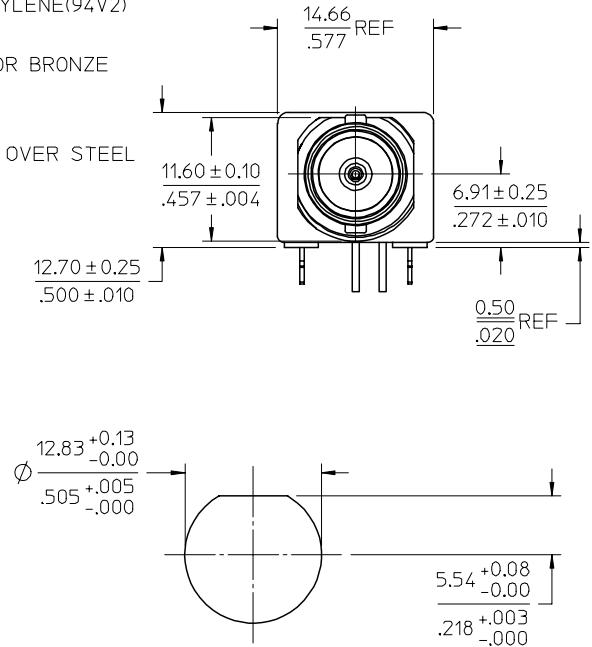
BODY ZINC ALLOY  
PLATED NICKEL

CENTER CONTACT PHOSPHOR BRONZE  
PLATED GOLD

#### INSULATOR POLYPROPYLENE(94V2)

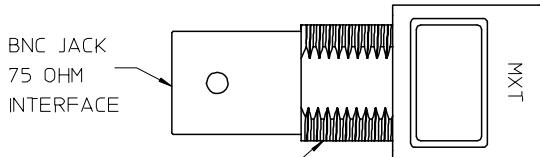
BOARD LOCK PHOSPHOR BRONZE  
PLATED TIN

SOLDER TAIL COPPER OVER STEEL  
PLATED TIN

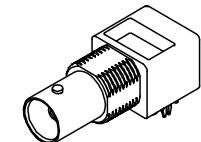


PART #73101-0120

| PS-73598-0051 | PRODUCT SPECIFICATION |
|---------------|-----------------------|
| SPECIFICATION | DESCRIPTION           |
|               |                       |



1/2-28 UNEF-2A



Technical drawing of a lead assembly. The drawing shows a vertical lead structure on the left and a rectangular lead frame on the right. Several dimensions are indicated with callouts:

- Vertical lead height:  $4.15 \pm 0.30$  inches
- Vertical lead width:  $.163 \pm .012$  inches
- Horizontal lead width:  $3.38 \pm 0.30$  inches
- Horizontal lead height:  $.133 \pm .012$  inches
- Vertical lead thickness:  $5.08 \pm .200$  inches (labeled REF)
- Horizontal lead thickness:  $2.54 \pm .100$  inches (labeled REF)
- Bottom lead thickness:  $10.16 \pm 0.20$  inches
- Bottom lead width:  $400 \pm .008$  inches
- Text at the bottom left: "LEADS ARE TO BE"

## RECOMMENDED PCB HOLE CONFIGURATION

|  |            |  |            |  |            |                          |                        |                             |  |
|--|------------|--|------------|--|------------|--------------------------|------------------------|-----------------------------|--|
| CHG: REDREW IN SD  |            | GENERAL TOLERANCES<br>(UNLESS SPECIFIED) |            | DIMENSION STYLE<br>MM/IN   |            | SCALE                    | DESIGN UNITS<br>METRIC | ④ THIRD ANGLE<br>PROJECTION |  |
| EC NO: URF2007-04-16                                       | 2007/04/19 | DRAWN:TELAHERTY                          | 2007/04/19 | DRAWN:TELAHERTY  | 2007/04/19 | DRAWN:TELAHERTY          | 2007/04/19             | APPR:WENNER                 |  |
| QUALITY SYMBOLS  |            | mm                                       | INCH       | DRAWN BY   | DATE       | TITLE                    |                        |                             |  |
| ▼=0  |            | 4 PLACES                                 | ±---       | LYNN LIN   | 1996/07/12 | BNC JACK,R/A PCB,75 OHMS |                        |                             |  |
| △=0  |            | 3 PLACES                                 | ±---       | CHECKED BY   |            | DIE CAST, RECEPTACLE     |                        |                             |  |
| △=0  |            | 2 PLACES                                 | ±---       | APPROVED BY  |            | BNC-J/R/A/PCB            |                        |                             |  |
| △=0  |            | 1 PLACE                                  | ±---       | DATE   |            | molex MOLEX INCORPORATED |                        |                             |  |
| △=0  |            | ANGULAR ±--°                             |            |  |            |                          |                        |                             |  |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |            | MATERIAL NO.                             |            | DOCUMENT NO.   |            | SHEET NO.<br>1 OF 1      |                        |                             |  |
|  |            | 731010120                                |            | SD-73101-0120  |            |                          |                        |                             |  |
| REV: B1  |            | SIZE                                     |            | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |            |                          |                        |                             |  |