| INTERFACE DESIGN STANDARD | |
|---|---|
| IDS-178 | |
| SHEET 1 OF 1 | DATE: 03/19/15 |
| DRAWN: JEM | APPROVED: JEM |

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| REV. | DESCRIPTION | DATE | APPR. |
|---|---|---|---|
| B | PER ECN 12816 | 03/27/18 | JEM |
| C | PER ECN 13033 | 07/18/18 | JEM |
| D | PER ECN 13292 | 04/23/19 | JEM |
| E | PER ECN 13787 | 06/22/20 | JEM |
| F | PER ECN 14215 | 11/26/24 | DW |

Description: 178 Series, PkZ ®, Size 12

## MATERIALS

### BODIES

Plug: Brass Per ASTM B16
Receptacle: Brass Per ASTM B16

### CONTACTS

Male Contact: Beryllium Copper Per ASTM B196
Female Contact: Beryllium Copper Per ASTM B196

### INSULATORS

Virgin Teflon (PTFE) Per ASTM D1710

### PLATING

Gold Per MIL-DTL-45204 (Electro Deposited)
Copper Per SAE AMS 2418 (Electro Deposited)
Nickel Per QQ-N-290

## FINISH (Ending Letter of Part Number)

A: .000050" Min. Gold Over Nickel

Other Metal Parts: Plated To Meet The Environmental Requirements

## MATING CHARACTERISTICS

| | |
|---|---|
| Bodies: | 24 oz. (1.5 lbs.) Max. Insertion<br>2 oz. (0.125 lbs.) Min. Withdrawal |
| Contacts: | 14 oz. (0.875 lbs.) Max. Insertion<br>.5 oz. (0.032 lbs.) Min. Withdrawal |
| Axial Mating: | .070" |
| Housing Retention: | 160 oz. (10 lbs.) Min. |

## ELECTRICAL

| | |
|---|---|
| Frequency Range: | DC To 50 GHz |
| Voltage Rating Straight: | 800 VRMS |
| Voltage Rating Angled: | 600 VRMS |
| Insulation Resistance: | 2000 Megohms Min. |
| Insertion Loss: | $.06\sqrt{f(GHz)}$ dB |
| Current Rating: | 1.5 AMPS |
| Impedance: | 50 Ohms |
| Contact Resistance: | Center Contact 6 Milliohms |
| Contact Resistance: | Outer Contact 4 Milliohms |
| VSWR: | Configuration Dependent |
| RF Leakage: | -90 dB Min. @ 2-3 GHz |

## ENVIRONMENTAL

| | |
|---|---|
| Operating Temperature: | -55°C To +165°C |
| Insulation Resistance: | 2000 Megohms Post Humidity |
| Vibration: | MIL-STD-202, Method 204, Test Condition D |
| Shock: | MIL-STD-202, Method 213, Test Condition I |
| Thermal Shock: | MIL-STD-202, Method 107, Test Condition B, Except High Temperature Shall Be +85°C |
| Durability: | 500 Cycles |
| Moisture Resistance: | MIL-STD-202, Method 106 |
| Salt Spray: | MIL-STD-1344, Method 1001, Condition B |

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