

## SMA and Reverse Polarity SMA Specifications

### Materials

| Connector Part | Material                 | Finish             |
|----------------|--------------------------|--------------------|
| Bodies         | Brass                    | Nickel or Gold     |
|                | Stainless Steel          | Passivated or Gold |
| Center contact | Male: Brass              | Gold               |
|                | Female: Beryllium Copper |                    |
| Insulator      | PTFE                     | N/A                |
| Crimp ferrule  | Annealed Copper          | Nickel or Gold     |

### Electrical

| Electrical Data                 | Detail                                       |             |             |
|---------------------------------|----------------------------------------------|-------------|-------------|
| Impedance                       | 50 ohm                                       |             |             |
| Frequency range                 | Flexible cable: 0~12.4GHz                    |             |             |
|                                 | Semi-rigid cable: 0~18GHz                    |             |             |
| Working voltage                 | RG402 (.141") » 500 volts rms max.           |             |             |
|                                 | RG405 (.085") » 335 volts rms max.           |             |             |
|                                 | RG58, 141, 142, 223/U » 500 volts rms max.   |             |             |
|                                 | RG174, 188, 316/U » 335 volts rms max.       |             |             |
|                                 | RG178, 196/U » 250 volts rms max.            |             |             |
| Insulation resistance           | 5,000 megaohms min.                          |             |             |
| Dielectric withstanding voltage | RG402 (.141") » 1,000 volts rms max.         |             |             |
|                                 | RG405 (.085") » 750 volts rms max.           |             |             |
|                                 | RG58, 141, 142, 223/U » 1,000 volts rms max. |             |             |
|                                 | RG174, 188, 316/U » 750 volts rms max.       |             |             |
|                                 | RG178, 196/U » 500 volts rms max.            |             |             |
| Contact resistance              | Center contact: 3.0 milliohms max.           |             |             |
|                                 | Outer contact: 2.0 milliohms max.            |             |             |
| VSWR: f(GHz)                    |                                              | Straight    | Right angle |
|                                 | RG178/U                                      | 1.20+0.025f | 1.20+0.03f  |
|                                 | RG174, 316/U                                 | 1.15+0.02f  | 1.15+0.03f  |
|                                 | RG58, 141, 142, 223/U                        | 1.10+0.01f  | 1.15+0.02f  |
|                                 | RG402 (.141")                                | 1.05+0.005f | 1.15+0.15f  |
|                                 | RG405 (.085")                                | 1.05+0.005f | 1.18+0.15f  |
| Insertion loss                  | 0.04dB max. x $\sqrt{f}$ GHz (straight)      |             |             |
|                                 | 0.06dB max. x $\sqrt{f}$ GHz (right angle)   |             |             |

## Mechanical

| Mechanical Data       | Detail                             |
|-----------------------|------------------------------------|
| Engagement force      | 60lbs min.                         |
| Disengagement force   | 15 inch-pound                      |
| Connector durability  | 500 cycles min.                    |
| Cable retention force | RG58, 141, 142, 223/U » 40lbs min. |
|                       | RG174, 188, 316/U » 20lbs min.     |

## Environmental

| Environmental Data     | Detail                                  |
|------------------------|-----------------------------------------|
| Corrosion (salt spray) | MIL-STD-202 METHOD 101 TEST CONDITION B |
| Thermal shock          | MIL-STD-202 METHOD 107 TEST CONDITION B |
| Vibration              | MIL-STD-202 METHOD 204 TEST CONDITION D |
| Mechanical shock       | MIL-STD-202 METHOD 213 TEST CONDITION I |
| Temperature Range      | -65°C to 165°C                          |

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