

## QMA Connectors

### Snap-On SMA Series of RF Connectors

#### Product Facts

- Positive snap-on interface facilitates assembly
- Intermateable with competitor product
- Excellent RF performance to 6 GHz
- Ideal for Communications and Industrial Applications

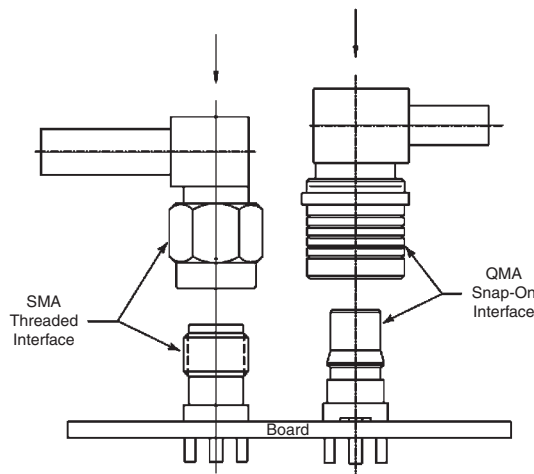


Tyco Electronics' next generation high performance RF products QMA (Snap-On SMA) connectors series offers the same high quality and performance currently found in the standard Tyco Electronics SMA series but does not require the coupling nut torque. By integrating a snap-on feature to the design, denser packaging can be achieved, and the overall applied cost is dramatically reduced. The QMA connector series is excellent for communications as well as industrial applications. The QMA offering is designed for 100 mating cycles, operates through 6 GHz, and is completely intermateable with competitive QMA offerings. This new QMA product is not intermateable with standard SMA interfaces. QMA connectors are available in a broad range of standard configurations,

including PCB and panel mount, flexible and semi-rigid cable, and adapters. Other options can be reviewed as well, including additional cable sizes, PCB surface mounting, and tape and reel packaging.

The QMA connector series is a cost effective solution for the challenging demands of today's commercial marketplace, with applications including cellular base station, handsets, and test and measurement. Call your local sales office or authorized distributor for additional information or samples of the QMA connector series.

Tyco Electronics is a leading supplier of RF and Microwave connectors and cable assemblies, and provides advanced technology products from well known and industry leading brands, including AMP and M/A-COM.



#### Material and Finish

**Shells and Bodies** — Brass, nickel plated

**Collars** — Phosphor bronze, white bronze plated

**Outer Contacts** — Beryllium copper, nickel plated

**Center Contacts** — Beryllium copper, gold plated

**Dielectrics** — PTFE

#### Electrical Characteristics

**Frequency** — dc – 6 GHz

**Nominal Impedance** — 50 ohms

**Voltage Rating** — 335 Volts (VRMS max.) @ Sea Level

**VSWR** — 1.15 : 1 max. @ 6 GHz

**Insulation Resistance** — 5,000 megohms min.

**Insertion Loss** — .25 dB Max @ 6 GHz

**Dielectric Withstanding Voltage** — 1000 Volts (VRMS max.) @ Sea Level

**Contact Resistance** —

Center Contact — 5 milliohms max.

Outer Contact — 4 milliohms max.

#### Mechanical Characteristics

**Connector Durability** —

100 mating cycles

**Force to Engage** — 27 Newtons

**Force to Disengage** — 20 Newtons

**Retention Force (mated pair)** — 60 Newtons min.

**Cable Retention** — Dependent upon cable type

#### Environmental Characteristics

**Temperature Rating** —

-40 to +125°C

**Vibration** — EIA-364-28, Test Condition VII, Condition D

**Shock** — EIA-364-27, Method H

**Moisture Resistance** — EIA-364-31, Method III

**Thermal Shock** — EIA-364-32

**Note:** Performance specifications are typical, but may not apply to all connector types.

#### Related Product Data

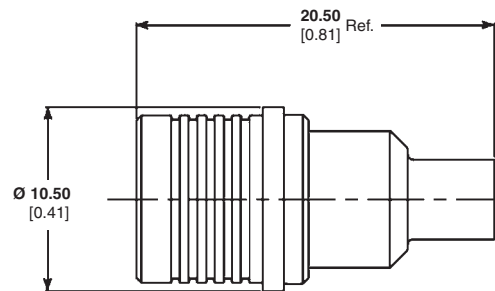
**Product Specification** — 108-2087

**Sample Kit** — 1654882

## QMA Connectors (Continued)

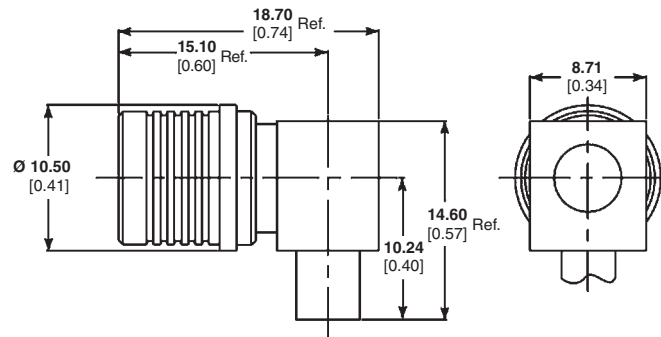
### Semi-Rigid Cable — Direct Solder Attachment

#### Straight Cable Plug



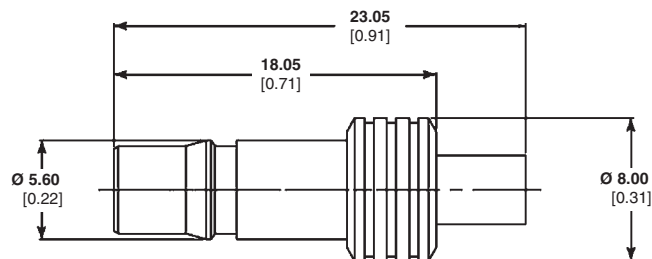
| Cable  | Part Number |
|--------|-------------|
| RG 402 | 1408346-1   |

#### Right-Angle Cable Plug



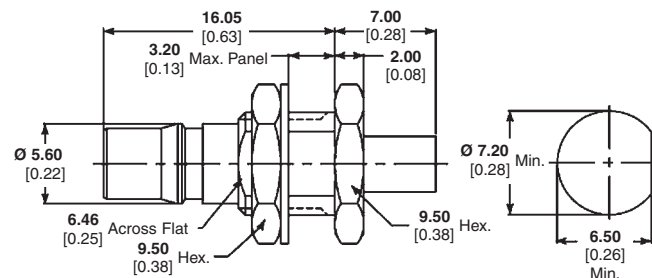
| Cable  | Part Number |
|--------|-------------|
| RG 402 | 1408347-1   |

#### Straight Cable Jack



| Cable  | Part Number |
|--------|-------------|
| RG 402 | 1408348-1   |

#### Bulkhead Cable Jack



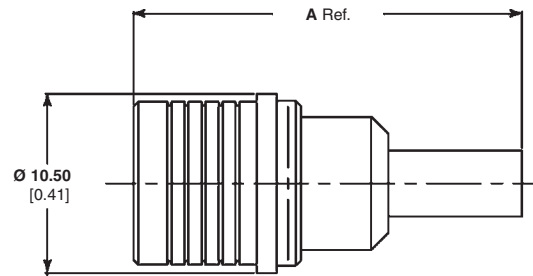
| Cable  | Part Number |
|--------|-------------|
| RG 402 | 1408349-1   |

**Note:** Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

## QMA Connectors (Continued)

### Flexible Cable — Crimp Attachment

#### Straight Cable Plug

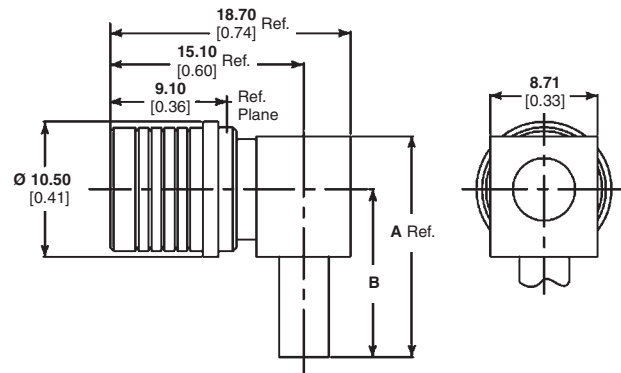


| Cable               | Dim. A               | Part Number      |
|---------------------|----------------------|------------------|
| RG 174,<br>188, 316 | <b>22.90</b><br>0.90 | <b>1408333-1</b> |
| RD 316              | <b>22.90</b><br>0.90 | <b>1408333-3</b> |
| RG 400              | <b>25.20</b><br>0.99 | <b>1408333-5</b> |
| RG 58               | <b>25.20</b><br>0.99 | <b>1408333-7</b> |

#### Right-Angle Cable Plug



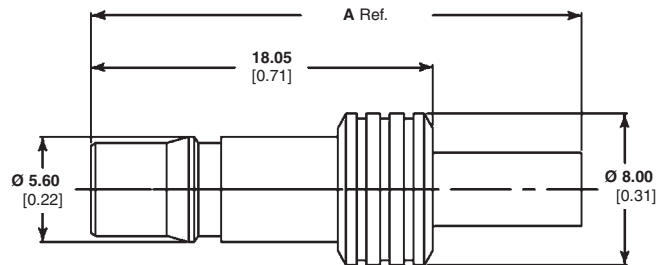
| Cable               | Dim. A               | Dim. B               | Part Number      |
|---------------------|----------------------|----------------------|------------------|
| RG 174,<br>188, 316 | <b>17.20</b><br>0.68 | <b>13.10</b><br>0.52 | <b>1408336-1</b> |
| RD 316              | <b>17.20</b><br>0.68 | <b>13.10</b><br>0.52 | <b>1408336-3</b> |
| RG 400              | <b>19.50</b><br>0.77 | <b>15.40</b><br>0.61 | <b>1408336-5</b> |
| RG 58               | <b>19.50</b><br>0.77 | <b>15.40</b><br>0.61 | <b>1408336-7</b> |



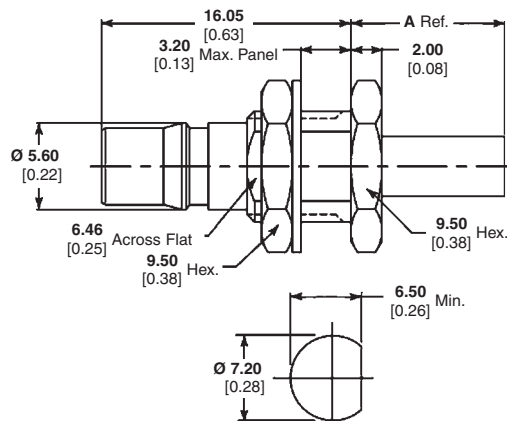
#### Straight Cable Jack



| Cable               | Dim. A               | Part Number      |
|---------------------|----------------------|------------------|
| RG 174,<br>188, 316 | <b>25.90</b><br>1.02 | <b>1408338-1</b> |
| RD 316              | <b>25.90</b><br>1.02 | <b>1408338-3</b> |
| RG 400              | <b>28.20</b><br>1.11 | <b>1408338-5</b> |
| RG 58               | <b>28.20</b><br>1.11 | <b>1408338-7</b> |



#### Bulkhead Cable Jack



| Cable               | Dim. A               | Part Number      |
|---------------------|----------------------|------------------|
| RG 174,<br>188, 316 | <b>9.90</b><br>0.39  | <b>1408339-1</b> |
| RD 316              | <b>9.90</b><br>0.39  | <b>1408339-3</b> |
| RG 400              | <b>12.20</b><br>0.48 | <b>1408339-5</b> |
| RG 58               | <b>12.20</b><br>0.48 | <b>1408339-7</b> |

**Note:** Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

#### Recommended Mounting Hole

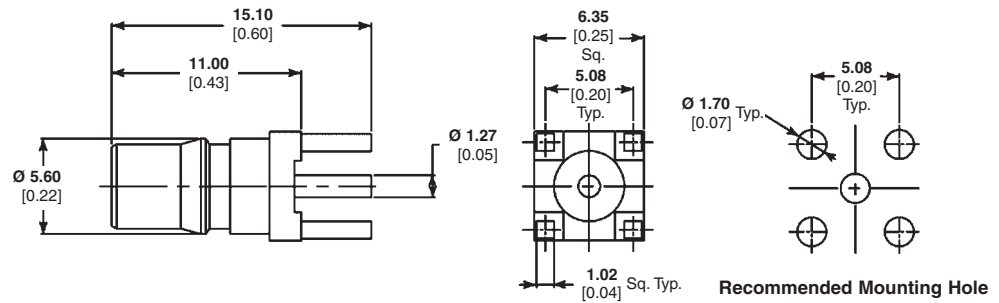
## QMA Connectors (Continued)

### Printed Circuit Board

#### Straight Jack Receptacle



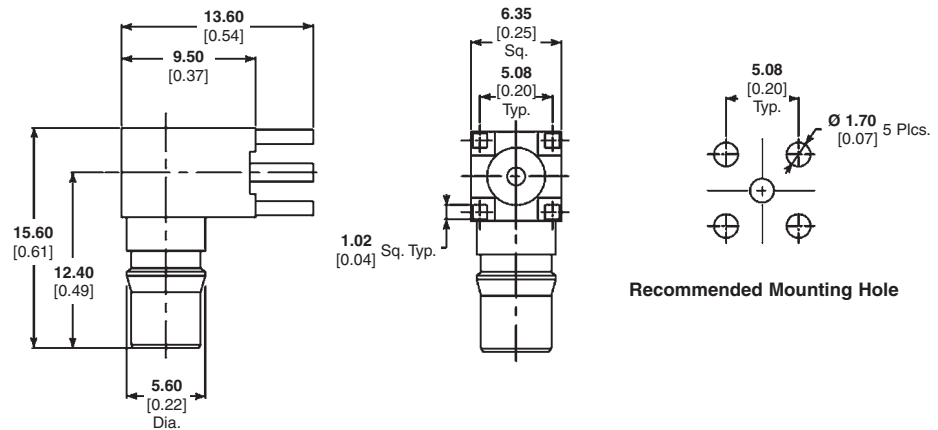
| Part Number |
|-------------|
| 1408332-1   |



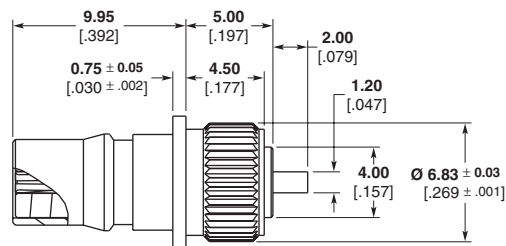
#### Right-Angle Jack Receptacle



| Part Number |
|-------------|
| 1408337-1   |



#### Straight Terminal Press-In Jack



| Body Material & Finish | Contact Captivation | RF Leakage db min. | Temperature Range | Part No. |
|------------------------|---------------------|--------------------|-------------------|----------|
| Brass, Gold            | Mechanical          | N/A                | -65 to 125° C     | 619215-1 |

**Note:** Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

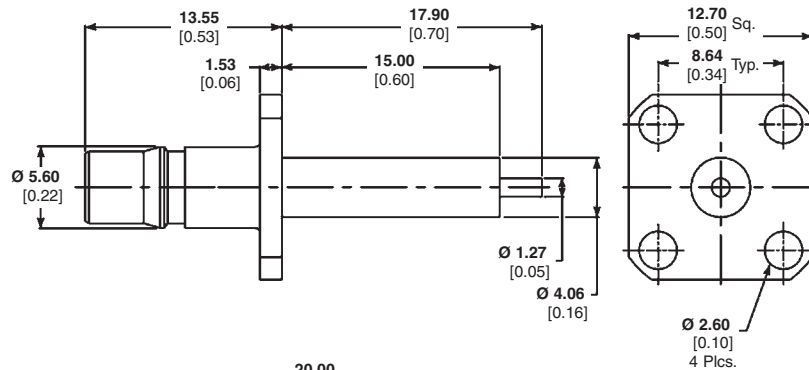
## QMA Connectors (Continued)

### Straight Terminal

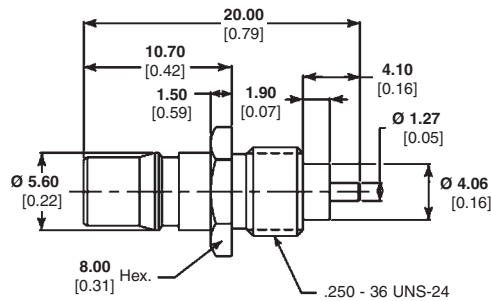
#### 4-Hole Flange Mount Jack Receptacle



Part Number  
1408341-1



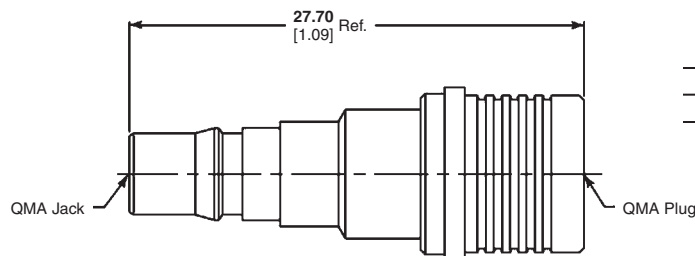
### Screw-In Front Mount Jack Receptacle



Part Number  
1408340-1

### Adapters — In Series

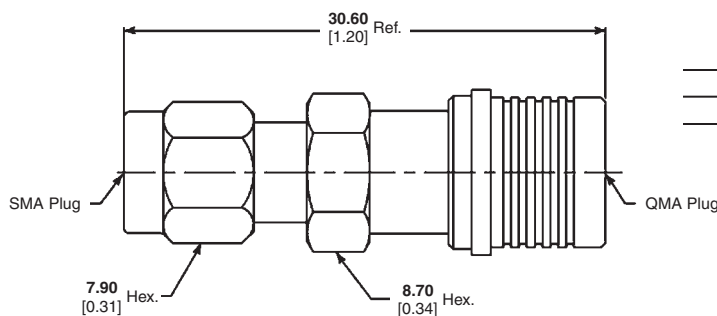
#### QMA Plug to QMA Jack



Part Number  
1408342-1

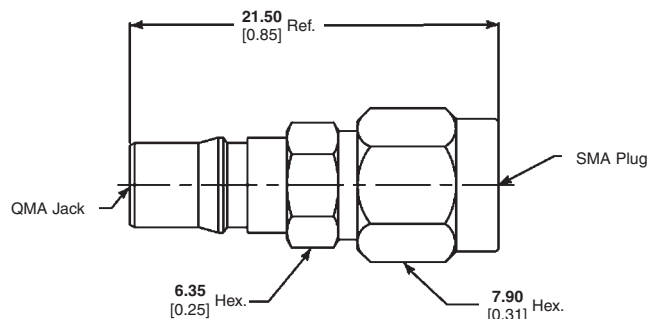
### Adapters — Between Series

#### QMA Plug to SMA Plug



Part Number  
1408393-1

#### QMA Jack to SMA Plug



Part Number  
1408343-1

**Note:** Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.