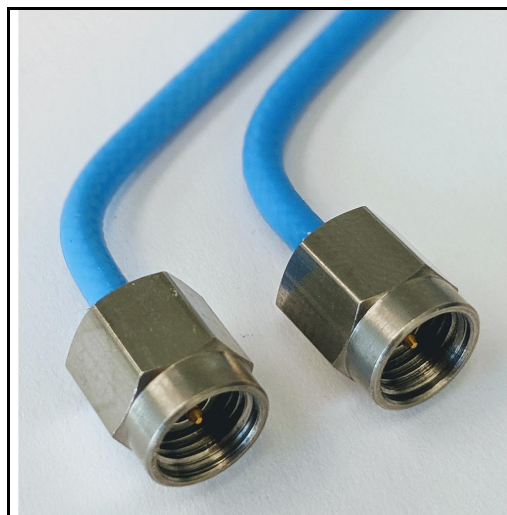


## Product Features

P1CA-STMSTM-ST085-8 is an RF Cable that is part of P1dB's Tight-Flex™ cable assembly series. With a minimum bend radius of 0.2 inch, the cable allows bends at the connector end eliminating the need for a right angle connector. This assembly is an 8 inch SMA Male to SMA Male cable assembly that utilizes ST085 Tight-Flex, Triple Shielded coax, which is 0.104 inches in diameter. The Tight-Flex™ cable assembly operates to 18 GHz with a max VSWR of 1.30:1.

Tight-Flex™ cable assemblies are a flexible version of RG405 semi-rigid and 085 conformable coax cables that meet RG405 dimensional and electrical specifications. Tight-Flex™ cable assemblies can operate up to 40 GHz, depending on the installed connectors. The advantage of Tight-Flex™ cables over other 085 flex cables are their triple shielding that add additional RF stability even during tight bends.



## Electrical Specification: T<sub>Ambient</sub> = 25° C

| Parameter               | Frequency Range | Units  | Min | Typical | Max  | Notes |
|-------------------------|-----------------|--------|-----|---------|------|-------|
| Frequency Range         |                 | GHz    | DC  |         | 18.0 |       |
| VSWR                    | DC to 1.0       | 1:     |     |         | 1.15 |       |
|                         | 1.0 to 5.0      |        |     |         | 1.2  |       |
|                         | 5.0 to 10.0     |        |     |         | 1.25 |       |
|                         | 10.0 to 18.0    |        |     |         | 1.3  |       |
| Insertion Loss          | DC to 1.0       | dB/ft. |     |         | 0.21 |       |
|                         | 1.0 to 5.0      |        |     |         | 0.51 |       |
|                         | 5.0 to 10.0     |        |     |         | 0.75 |       |
|                         | 10.0 to 18.0    |        |     |         | 1.04 |       |
| Velocity Of Propagation |                 | %      |     | 70.0    |      |       |

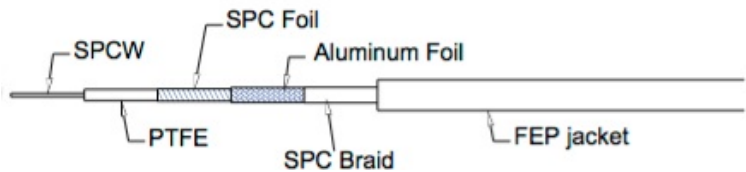
## Mechanical And Environmental Specifications:

| Parameter                | Description                           | Notes |
|--------------------------|---------------------------------------|-------|
| Connector 1              | SMA Male                              |       |
| Connector 1 Coupling Nut | Passivated Stainless Steel            |       |
| Connector 1 Body         | Passivated Stainless Steel            |       |
| Connector 1 Contact      | Gold Plated Brass                     |       |
| Connector 2              | SMA Male                              |       |
| Connector 2 Coupling Nut | Passivated Stainless Steel            |       |
| Connector 2 Body         | Passivated Stainless Steel            |       |
| Connector 2 Contact      | Gold Plated Brass                     |       |
| Coax Cable               | Tight-Flex, Triple Shielded           |       |
| Cable Type               | ST085                                 |       |
| Cable Inner Conductor    | SPCW                                  |       |
| Dielectric               | PTFE                                  |       |
| Shield                   | 1. SPC Tape, Aluminum Tape, SPC Braid |       |

SMA Male to SMA Male cable assembly using ST085 Tight-Flex, Triple Shielded Coax, 8 inches long, Operating to 18 GHz.

| Parameter             | Description       | Notes |
|-----------------------|-------------------|-------|
| Jacket                | FEP               |       |
| Coax Diameter         | 0.104             |       |
| Minimum Bend Radius   | 0.2               |       |
| Length                | 8.0               |       |
| Operating Temperature | -55.0 to 125.0 °C |       |
| RoHS Compliance       | Yes               |       |

Drawing



Graph

| DIMENSIONS                            |                            |         |       |     |
|---------------------------------------|----------------------------|---------|-------|-----|
| Center Conductor Diameter<br>(inch)   | 0.0201                     |         |       |     |
| (mm)                                  | 0.51                       |         |       |     |
| Dielectric Diameter<br>(inch)         | 0.0641                     |         |       |     |
| (mm)                                  | 1.63                       |         |       |     |
| Diameter Over Inner Foil<br>(inch)    | 0.0708                     |         |       |     |
| (mm)                                  | 1.80                       |         |       |     |
| Diameter Over Outer Foil<br>(inch)    | 0.0748                     |         |       |     |
| (mm)                                  | 1.90                       |         |       |     |
| Diameter over Braid<br>(inch)         | 0.0885                     |         |       |     |
| (mm)                                  | 2.25                       |         |       |     |
| Jacket Diameter<br>(inch)             | 0.104                      |         |       |     |
| (mm)                                  | 2.64                       |         |       |     |
| MATERIAL SPECIFICATIONS               |                            |         |       |     |
| Jacket                                | FEP(BLUE)                  |         |       |     |
| Braid                                 | Round Silver Plated Copper |         |       |     |
| Outer Foil                            | Aluminium Tape             |         |       |     |
| Inner Foil                            | Silver Plated Copper Tape  |         |       |     |
| Dielectric                            | Solid PTFE                 |         |       |     |
| Center Conductor                      | Solid SPCW                 |         |       |     |
| ELECTRICAL CHARACTERISTICS            |                            |         |       |     |
| Impedance                             | 50±2                       |         |       |     |
| Capacitance (Nominal)<br>(pF/ft)      | 29.4                       |         |       |     |
| (pF/m)                                | 96.4                       |         |       |     |
| Velocity of Propagation (%)           | 70                         |         |       |     |
| Cutt Off Frequency (GHz)              | 63                         |         |       |     |
| Shielding Effectiveness               | > -110dB                   |         |       |     |
| Max. Attenuation<br>Max Power (Watts) | Attenuation                |         | Power |     |
|                                       | dB/100Ft                   | dB/100M |       |     |
|                                       | 400MHz                     | 14      | 45.9  | 240 |
|                                       | 1GHz                       | 23      | 75.4  | 160 |
|                                       | 3GHz                       | 39      | 128   | 80  |
|                                       | 5GHz                       | 52      | 170.6 | 57  |
|                                       | 10GHz                      | 80      | 262.4 | 44  |
|                                       | 18GHz                      | 110     | 361   | 33  |
|                                       | 25GHz                      | 131     | 430   | 29  |
|                                       | 30GHz                      | 146     | 479   | 26  |
|                                       | 35GHz                      | 160     | 525   | 23  |
|                                       | 40GHz                      | 173     | 567   | 22  |
|                                       | 45GHz                      | 183     | 600   | 20  |
|                                       | 50GHz                      | 195     | 640   | 18  |

## Product Notes

Temp range: -55 to +125 deg C

Minimum bend radius: 0.2 inch (5.1 mm)