

Product Features

P1CA-STMSTM-ST085-16 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 a 16 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_{Ambient} = 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 | | | | 1.29 | |
| 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 | |

| Parameter | Description | Notes |
|-----------------------|-------------------|-------|
| Jacket | FEP | |
| Coax Diameter | 0.104 | |
| Minimum Bend Radius | 0.2 | |
| Length | 16.0 | |
| Operating Temperature | -55.0 to 125.0 °C | |
| RoHS Compliance | Yes | |

Drawing



Graph

| DIMENSIONS | | | |
|-----------------------------|--|----------------------------|---------|
| Center Conductor Diameter | | | |
| (inch) | | 0.0201 | |
| (mm) | | 0.51 | |
| Dielectric Diameter | | | |
| (inch) | | 0.0641 | |
| (mm) | | 1.63 | |
| Diameter Over Inner Foil | | | |
| (inch) | | 0.0708 | |
| (mm) | | 1.80 | |
| Diameter Over Outer Foil | | | |
| (inch) | | 0.0748 | |
| (mm) | | 1.90 | |
| Diameter over Braid | | | |
| (inch) | | 0.0885 | |
| (mm) | | 2.25 | |
| Jacket Diameter | | | |
| (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) | | | |
| (pF/ft) | | 29.4 | |
| (pF/m) | | 96.4 | |
| Velocity of Propagation (%) | | 70 | |
| Cutt Off Frequency (GHz) | | 63 | |
| Shielding Effectiveness | | > -110dB | |
| Max. Attenuation | | Attenuation | |
| Max Power (Watts) | | dB/100Ft | Power |
| | | | dB/100M |
| 400MHz | | 14 | 45.9 |
| 1GHz | | 23 | 75.4 |
| 3GHz | | 39 | 128 |
| 5GHz | | 52 | 170.6 |
| 10GHz | | 80 | 262.4 |
| 18GHz | | 110 | 361 |
| 25GHz | | 131 | 430 |
| 30GHz | | 146 | 479 |
| 35GHz | | 160 | 525 |
| 40GHz | | 173 | 567 |
| 45GHz | | 183 | 600 |
| 50GHz | | 195 | 640 |

Product Notes

Temp range: -55 to +125 deg C

Minimum bend radius: 0.2 inch (5.1 mm)