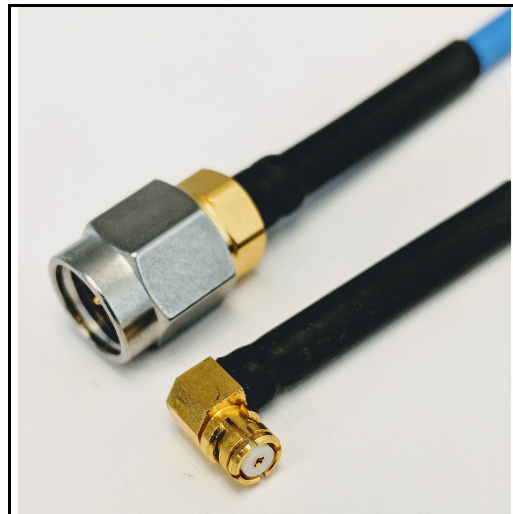


## Product Features

P1CA-SAMSPFRA-SS085-9 is an RF Flex Cable that is part of P1dB's SS085 series, high performance cable assemblies. It is a 9 inch SMA Male to SMP Female Right Angle cable assembly that utilizes SS085 High Performance coax, which is 0.104 inches in diameter. The SS085 high performance flex cable operates to 18 GHz with a max VSWR of 1.35:1. P1dB's SS085 cable assemblies are high performance RF cables that are dimensionally equivalent to RG405 semi-rigid and 085 conformable coax cables, and have similar electrical specifications to RG405 coax. SS085 RF flex cables can operate up to 50 GHz, depending on the installed connectors. The advantage of SS085 test cables over other test cables are their cost-effective design that still offer good phase and amplitude stability for general purpose test systems.



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

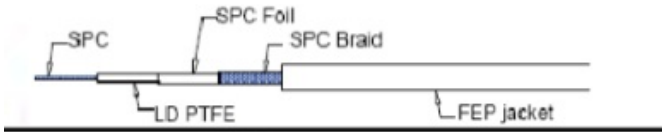
| Parameter               | Frequency Range | Units  | Min | Typical | Max  | Notes |
|-------------------------|-----------------|--------|-----|---------|------|-------|
| Frequency Range         |                 | GHz    | DC  |         | 18.0 |       |
| VSWR                    | DC to 1.0       | 1:     |     |         | 1.2  |       |
|                         | 1.0 to 5.0      |        |     |         | 1.25 |       |
|                         | 5.0 to 10.0     |        |     |         | 1.3  |       |
|                         | 10.0 to 18.0    |        |     |         | 1.35 |       |
| Insertion Loss          | DC to 1.0       | dB/ft. |     |         | 0.23 |       |
|                         | 1.0 to 5.0      |        |     |         | 0.52 |       |
|                         | 5.0 to 10.0     |        |     |         | 0.8  |       |
|                         | 10.0 to 18.0    |        |     |         | 1.1  |       |
| 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              | SMP Female Right Angle       |       |
| Connector 2 Coupling Nut | None                         |       |
| Connector 2 Body         | Gold Plated Beryllium Copper |       |
| Connector 2 Contact      | Gold Plated Beryllium Copper |       |
| Coax Cable               | High Performance             |       |
| Cable Type               | SS085                        |       |
| Cable Inner Conductor    | SPC                          |       |
| Dielectric               | PTFE                         |       |
| Shield                   | 1. SPC Ribbon                |       |
|                          | 2. SPC Braid                 |       |

| Parameter             | Description       | Notes |
|-----------------------|-------------------|-------|
| Jacket                | FEP               |       |
| Coax Diameter         | 0.104             |       |
| Minimum Bend Radius   | 0.25              |       |
| Length                | 9.0               |       |
| Operating Temperature | -55.0 to 200.0 °C |       |
| RoHS Compliance       | Yes               |       |

**Drawing**



**Graph**

| MECHANICAL CHARACTERISTICS      |           |         |
|---------------------------------|-----------|---------|
| Max. Operating Temperature (°C) | -55/ +200 |         |
| Min. Bend Radius                | Static    | Dynamic |
| (inch)                          | 0.25      | 0.6     |
| (mm)                            | 6.35      | 15      |
| Weight                          |           |         |
| (g/Ft)                          | 6         |         |
| (g/M)                           | 19.7      |         |

| <b>DIMENSIONS</b>                 |                                |         |       |
|-----------------------------------|--------------------------------|---------|-------|
| Center Conductor Diameter         | (inch)                         | 0.0224  |       |
|                                   | (mm)                           | 0.57    |       |
| Dielectric Diameter               | (inch)                         | 0.064   |       |
|                                   | (mm)                           | 1.63    |       |
| Diameter over Foil                | (inch)                         | 0.07    |       |
|                                   | (mm)                           | 1.76    |       |
| Diameter over Braid               | (inch)                         | 0.085   |       |
|                                   | (mm)                           | 2.15    |       |
| Jacket Diameter                   | (inch)                         | 0.104   |       |
|                                   | (mm)                           | 2.64    |       |
| <b>MATERIAL SPECIFICATIONS</b>    |                                |         |       |
| Jacket                            | FEP                            |         |       |
| Braid                             | Round silver plated copper     |         |       |
| Foil                              | Flat silver plated copper foil |         |       |
| Dielectric                        | LD PTFE                        |         |       |
| Center Conductor                  | Solid silver plated copper     |         |       |
| <b>ELECTRICAL CHARACTERISTICS</b> |                                |         |       |
| Impedance                         | 50±2                           |         |       |
| Capacitance (Nominal)             | (pF/ft)                        | 29.4    |       |
|                                   | (pF/m)                         | 96.4    |       |
| Velocity of Propagation (%)       | 80                             |         |       |
| Cutt Off Frequency (GHz)          | 63                             |         |       |
| Shielding Effectiveness           | >-110dB                        |         |       |
| Max. Attenuation (dB/100Ft)       | Attenuation                    |         | Power |
| Max Power (Watts)                 | dB/100Ft                       | dB/100M |       |
| 400MHz                            | 11.6                           | 38      | 240   |
| 1GHz                              | 18.3                           | 60      | 160   |
| 3GHz                              | 33.9                           | 111     | 80    |
| 5GHz                              | 42.7                           | 140     | 57    |
| 10GHz                             | 60.1                           | 197     | 44    |
| 18GHz                             | 82.4                           | 270     | 33    |
| 25GHz                             | 97.6                           | 320     | 29    |
| 30GHz                             | 108.3                          | 355     | 26    |
| 35GHz                             | 118                            | 387     | 23    |
| 40GHz                             | 129.3                          | 424     | 22    |
| 45GHz                             | 142.7                          | 468     | 20    |
| 50GHz                             | 157.1                          | 515     | 18    |

