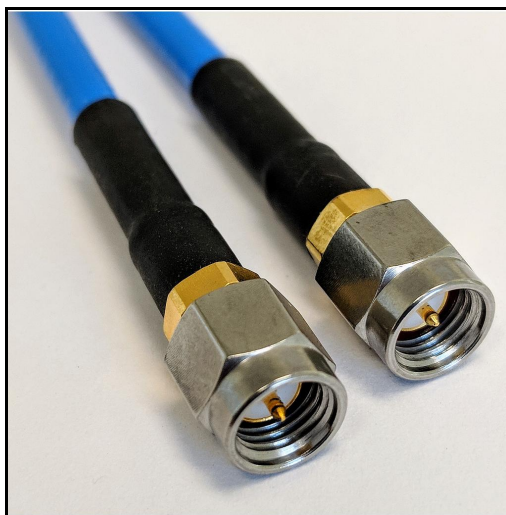


## Product Features

P1dB's P1CA-SAMSAM-SS141-48-PM is a 50 Ohm RF cable assembly, supplied as TBD # of phase matched cables. It is an SMA male to SMA male cable using P1dB's SS141 flex coax which is a phase stable RF cable with 0.160 inch (4 mm) outer diameter. This cable is 48 inches long and the cables are phase matched to 5 degrees measured at 10 GHz. Operating to 18 GHz, the P1CA-SAMSAM-SS141-48-PM is a low loss flex cable with a minimum bend radius of 0.4 inches.

Typical delivery for a set of phase matched cables is 4 weeks.  
Maximum VSWR up to 18 GHz is 1.25.



## 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:     |     |         | 1.1  |       |
|                         | 1.0 to 10.0     |        |     |         | 1.2  |       |
|                         | 10.0 to 18.0    |        |     |         | 1.25 |       |
| Insertion Loss          | DC to 1.0       | dB/ft. |     |         | 0.13 |       |
|                         | 1.0 to 10.0     |        |     |         | 0.45 |       |
|                         | 10.0 to 18.0    |        |     |         | 0.64 |       |
| 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               | High Performance           |       |
| Cable Type               | SS141                      |       |
| Cable Inner Conductor    | SPC                        |       |
| Dielectric               | PTFE                       |       |
| Shield                   | 1. SPC Braid, SPC Ribbon   |       |
| Jacket                   | FEP                        |       |
| Coax Diameter            | 0.163                      |       |
| Minimum Bend Radius      | 0.8                        |       |
| Length                   | 48.0                       |       |
| Operating Temperature    | -55.0 to 125.0 °C          |       |
| RoHS Compliance          | Yes                        |       |

RF cable assembly, SMA Male to SMA Male, SS141 flexible coaxial cable, 48 inch.  
Supplied as TBD # of cables phase matched +/- 5 degrees at 10 GHz, operating to 18 GHz.

## Drawing

| DIMENSIONS                          |                                |
|-------------------------------------|--------------------------------|
| Center Conductor Diameter<br>(inch) | 0.037                          |
| (mm)                                | 0.94                           |
| Dielectric Diameter<br>(inch)       | 0.117                          |
| (mm)                                | 2.96                           |
| Diameter Over Foil<br>(inch)        | 0.124                          |
| (mm)                                | 3.14                           |
| Diameter over Braid<br>(inch)       | 0.136                          |
| (mm)                                | 3.46                           |
| Jacket Diameter<br>(inch)           | 0.163                          |
| (mm)                                | 4.14                           |
| MATERIAL SPECIFICATIONS             |                                |
| Jacket                              | FEP                            |
| Braid                               | Round silver plated copper     |
| Foil                                | Flat silver plated copper foil |
| Dielectric                          | Solid PTFE                     |
| Center Conductor                    | Solid SPC                      |

## Graph

| ELECTRICAL CHARACTERISTICS  |             |         |       |
|-----------------------------|-------------|---------|-------|
| Impedance                   | 50±2        |         |       |
| Capacitance (Nominal)       |             |         |       |
| (pF/ft)                     | 29.4        |         |       |
| (pF/m)                      | 96.4        |         |       |
| Velocity of Propagation (%) | 70          |         |       |
| Cutt Off Frequency (GHz)    | 40          |         |       |
| Shielding Effectiveness     | > -110dB    |         |       |
| Max. Attenuation (dB/100Ft) | Attenuation |         | Power |
| Max Power (Watts)           | dB/100Ft    | dB/100M |       |
| 400MHz                      | 8           | 26.24   | 1100  |
| 1GHz                        | 13          | 42.6    | 550   |
| 3GHz                        | 23          | 75.4    | 350   |
| 5GHz                        | 30          | 98.4    | 245   |
| 10GHz                       | 45          | 147.6   | 140   |
| 18GHz                       | 64          | 209.9   | 87    |

## Product Notes

P1dB, Inc.

188 Martinvale Lane, San Jose, CA 95119

+1(408)613-4857

sales@p1dB.com

## **P1CA-SAMSAM-SS141-48-PM**

RF cable assembly, SMA Male to SMA Male, SS141 flexible coaxial cable, 48 inch.  
Supplied as TBD # of cables phase matched +/- 5 degrees at 10 GHz, operating to 18  
GHz.

