# P1CA-SAMSAM-SS141-1M

SMA Male to SMA Male test cable using SS141 High Performance Coax, 1 meter.



**Product Features**

P1CA-SAMSAM-SS141-1M is an RF test Cable that is part of P1dB's SS141 series, high performance cable assemblies. It is a 1 meter (39 inch) SMA Male to SMA Male cable assembly that utilizes SS141 High Performance coax, which is 0.163 inches (4.14 mm) in diameter. The SS141 test cable operates to 27 GHz with a max VSWR of 1.35. Insertion Loss is 1.7 dB max for this 1 meter assembly.

P1dB's SS141 cable assemblies are general purpose test cables that are dimensionally equivalent to RG402 semi-rigid and 141 conformable coax cables and RG402 electrical specifications. SS141 test cables can operate up to 40 GHz, depending on the installed connectors. The advantage of SS141 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: $T_{Ambient}$ = 25° C**

| Parameter | Frequency Range | Units | Min | Typical | Max | Notes |
|---|---|---|---|---|---|---|
| Frequency Range | | GHz | DC | | 27.0 | |
| VSWR | DC to 1.0 | 1: | | | 1.1 | |
| | 1.0 to 10.0 | | | | 1.2 | |
| | 10.0 to 18.0 | | | | 1.25 | |
| | 18.0 to 27.0 | | | | 1.35 | |
| Insertion Loss | DC to 1.0 | dB/ft. | | | 0.13 | |
| | 1.0 to 10.0 | | | | 0.39 | |
| | 10.0 to 18.0 | | | | 0.52 | |
| | 18.0 to 27.0 | | | | 0.71 | |
| 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 | |

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| Parameter | Description | Notes |
|---|---|---|
| Shield | 1. SPC Braid, SPC Ribbon | |
| Jacket | FEP | |
| Coax Diameter | 0.163 | |
| Minimum Bend Radius | 0.08 | |
| Operating Temprature | -55.0 to 125.0 °C | |
| RoHS Compliance | Yes | |

**Drawing**

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| | | | |
|---|---|---|---|
| **DIMENSIONS** | | | |
| Center Conductor Diameter | | | |
| (inch) | 0.04 | | |
| (mm) | 1.02 | | |
| Dielectric Diameter | | | |
| (inch) | 0.116 | | |
| (mm) | 2.95 | | |
| Diameter Over Foil | | | |
| (inch) | 0.124 | | |
| (mm) | 3.14 | | |
| Diameter over Braid | | | |
| (inch) | 0.136 | | |
| (mm) | 3.46 | | |
| Jacket Diameter | | | |
| (inch) | 0.163 | | |
| (mm) | 4.14 | | |
| **MATERIAL SPECIFICATIONS** | | | |
| Jacket | FEP | | |
| Braid | Round silver plated copper | | |
| Foil | Flat silver plated copper foil | | |
| Dielectic | LD PTFE | | |
| Center Conductor | Solid SPC | | |
| **ELECTRICAL CHARACTERISTICS** | | | |
| Impedance | 50±2 | | |
| Capacitance (Nominal) | | | |
| (pF/ft) | 29.4 | | |
| (pF/m) | 96.4 | | |
| Velocity of Propagation (%) | 78 | | |
| Cutt Off Frequency (GHz) | 40 | | |
| Shielding Effectiveness | >-110dB | | |
| Max. Attenuation (dB/100Ft) | Attenuation | | Power |
| Max Power (Watts) | dB/100Ft | dB/100M | |
| 400MHz | 7 | 23 | 1100 |
| 1GHz | 11 | 36 | 550 |
| 3GHz | 18.9 | 62 | 350 |
| 5GHz | 25.3 | 83 | 245 |
| 10GHz | 37.5 | 123 | 140 |
| 18GHz | 51.9 | 170 | 87 |
| 25GHz | 63.5 | 208 | 75 |
| 30GHz | 71.4 | 234 | 68 |
| 35GHz | 78.4 | 257 | 61 |
| 40GHz | 87.8 | 288 | 56 |

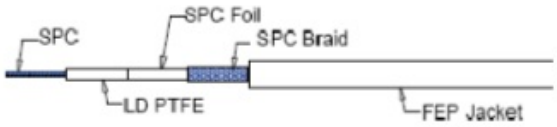
**Graph**

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**Product Notes**

Operating temp: -55 to +125 deg C

Bend radius 0.8 inch (20 mm)

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