P1CA-SAMSAM-SS141-48

SMA Male to SMA Male test cable using SS141 High Performance Coax, 48 inches long, Operating to 27 GHz.



Product Features

P1CA-SAMSAM-SS141-48 is a test cable that is part of P1dB's SS141 series, high performance cable assemblies. It is a 48 inch SMA Male to SMA Male cable assembly that utilizes SS141 High Performance coax, which is 0.163 inches in diameter. The SS141 test cable operates to 27 GHz with a max VSWR of 1.3:1. 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.

Insertion Loss for this 48 inch assembly is 2.3 dB max to 18 GHz. RF shielding is >110 dB.

Phase stability vs flexure is 4 degree max to 18 GHz.

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				1.3	
Insertion Loss	DC to 1.0	dB/ft.			0.13	
	1.0 to 10.0				0.38	
	10.0 to 18.0				0.52	
	18.0 to 27.0				0.65	
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	

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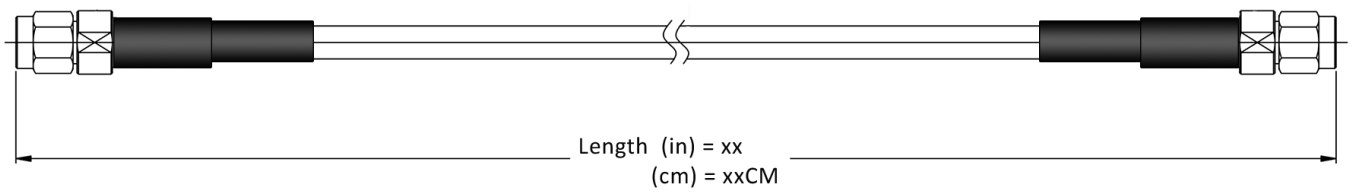
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Parameter	Description	Notes
Cable Type	SS141	
Cable Inner Conductor	SPC	
Dielectric	PTFE	
Shield	1. SPC Braid, SPC Ribbon	
Jacket	FEP	
Coax Diameter	0.163	
Minimum Bend Radius	0.8	
Length	48.0	
Operating Temprature	-55.0 to 125.0 °C	
RoHS Compliance	Yes	

Drawing



Graph

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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

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MECHANICAL CHARACTERISTICS		
Max. Operating Temperature (°C)	-55/ +200	
Min. Bend Radius	Static	Dynamic
(inch)	0.48	0.8
(mm)	12	20
Weight		
(g/Ft)	13.5	
(g/M)	44.3	

Product Notes

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