



RF Characterization Report

RF23S-92SJP-92SJP-0305

Test Date: 03 Jul. 2014



RF23S-92SPP-92SPP-0305

Test Date: 03 Jul. 2014



Description:
Microwave Cable Assembly, 2.92mm Connector End
23 AWG, 50 Ohm, Solid Dielectric

Cable Series: RF23S

Description: Microwave Cable Assembly, 2.92mm Connector End, 23 AWG, 50 Ohm, Solid Dielectric

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Cable Series: RF23S

Description: Microwave Cable Assembly, 2.92mm Connector End, 23 AWG, 50 Ohm, Solid Dielectric

Test Information

Scope:

Provide insertion loss, return loss, and standing wave ratio performance parameters for RF connector types terminated to RF23S series coaxial cable. Where requested, provide extended bandwidth and TDR information.

Instrument Setup & Test Accessories:

SAMTEC SIGNAL INTEGRITY GROUP
Mechanicsburg, PA USA
Agilent 8364B/N4421B 4-Port PNA, Front Panel, S2P file format
4000pts., 1 KHz RBW, 10MHz to 40.0 GHz,
Facility Capability: 67GHz

SAMTEC HUIZHOU
Huizhou City, Guangdong Province, China
Agilent N5230C 4-Port PNA, Front Panel, S2P file format
1601pts., 1 KHz RBW, 300KHz to 20.0 GHz,
Facility Capability: 20GHz

Calibration Type:

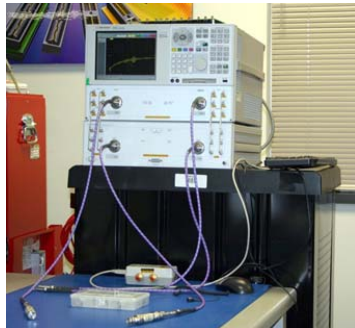
SAMTEC SIGNAL INTEGRITY GROUP
Mechanicsburg, PA USA
Mechanical Cal, Maury Microwave 8770D Economy Cal Kit, Full 2-Port SOLT Unknown Thru Adapter Calibration, DC-40 GHz

SAMTEC HUIZHOU
Huizhou City, Guangdong Province, China
Mechanical Cal, Agilent 85052D Economy Cal Kit, Full 2-Port SOLT Calibration, Adapter Inclusive, DC-26.5 GHz,

Adapter Use:

SAMTEC SIGNAL INTEGRITY GROUP
Mechanicsburg, PA USA
Huber-Suhner (Astrolabs) Model 16301, 2.92 male to 2.92 Male Unknown Thru Adapter, 53.4ps delay - [Two-port NA calibration Using an Unknown Thru.pdf](#).
Rule of Reciprocity, Negligent adapter effects

SAMTEC HUIZHOU
Huizhou City, Guangdong Province, China
Mechanical Calibration - Agilent 85052D Economy Cal Kit - Full 2-Port SOLT Calibration - DC-26.5 GHz - Utilizes Pasternack Enterprises RF type adapters, One applicable adapter at each test port – Measurements include adapter effects.



E8364B



N5230C

Typical Setup (Actual parts are not depicted)

Cable Series: RF23S

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RF23S-92SJP-92SJP-0305 Test Definition

Part Number	Length	End 1	End 2
RF23S-92SJP-92SJP-0305	305mm	SMA, 2.92 Straight Jack	SMA, 2.92 Straight Jack

Assembly under Test:

Rating Opportunity:

Not Available

Conclusion:

RF23S-92SJP-92SJP-0305 cable assemblies perform to expected insertion loss, return loss and SWR levels between 10 MHz and 40 GHz. All assemblies respond consistently and are free of resonance.

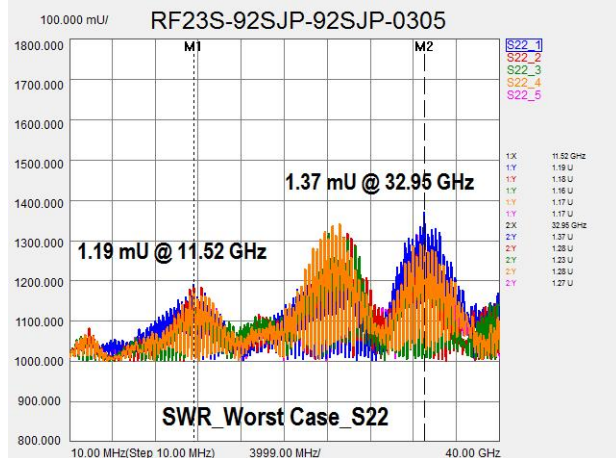
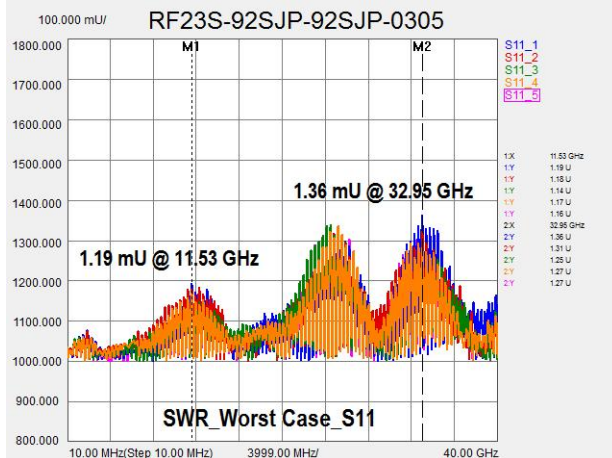
Results: RF23S-92SJP-92SJP-0305, Group R12

Description: SMA/2.92mm Jack to RF23S Microwave Cable to SMA/2.92mm Jack						
DUT	10 MHz to 20.0 GHz			20 GHz to 40.0 GHz		
	SWR (max)	RL (max)	IL (min)	SWR (max)	RL (max)	IL (min)
1 (S11,S21)	1.19 @ 11.53	-21.03 @ 11.53	-1.14 @ 19.42	1.36 @ 32.95	-16.26 @ 32.95	-1.80 @ 39.76
(S22,S12)	1.19 @ 11.52	-21.18 @ 11.52	-1.13 @ 20.00	1.37 @ 32.95	-16.13 @ 32.95	-1.80 @ 39.76
2 (S11,S21)	1.18 @ 12.24	-21.46 @ 12.24	-1.12 @ 19.65	1.33 @ 24.41	-17.08 @ 24.41	-1.77 @ 39.76
(S22,S12)	1.19 @ 12.27	-21.43 @ 12.27	-1.12 @ 20.00	1.32 @ 25.13	-17.19 @ 25.13	-1.78 @ 39.76
3 (S11,S21)	1.15 @ 12.25	-23.24 @ 12.25	-1.12 @ 19.70	1.34 @ 24.44	-16.76 @ 24.44	-1.77 @ 39.82
(S22,S12)	1.17 @ 11.56	-22.32 @ 11.56	-1.12 @ 19.96	1.32 @ 24.45	-17.13 @ 24.45	-1.76 @ 39.76
4 (S11,S21)	1.17 @ 11.55	-22.12 @ 11.55	-1.11 @ 19.99	1.34 @ 25.14	-16.83 @ 25.14	-1.75 @ 39.94
(S22,S12)	1.17 @ 11.56	-22.00 @ 11.56	-1.11 @ 20.00	1.34 @ 25.13	-16.73 @ 25.13	-1.74 @ 39.76
5 (S11,S21)	1.16 @ 12.62	-22.41 @ 12.62	-1.12 @ 20.00	1.31 @ 24.41	-17.40 @ 24.41	-1.75 @ 36.39
(S22,S12)	1.17 @ 11.54	-22.22 @ 11.54	-1.12 @ 20.00	1.32 @ 32.27	-17.29 @ 32.27	-1.76 @ 39.76

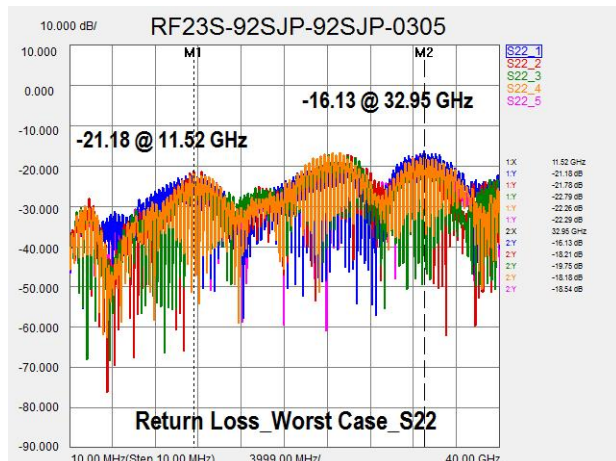
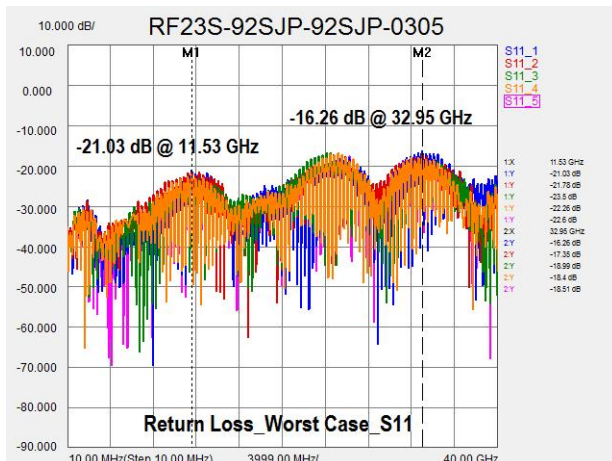
Cable Series: RF23S

Description: Microwave Cable Assembly, 2.92mm Connector End, 23 AWG, 50 Ohm, Solid Dielectric

Standing Wave Ratio



Return Loss



Cable Series: RF23S

Description: Microwave Cable Assembly, 2.92mm Connector End, 23 AWG, 50 Ohm, Solid Dielectric

RF23S-92SPP-92SPP-0305 Test Definition

Part Number	Length	End 1	End 2
RF23S-92SPP-92SPP-0305	305mm	SMA, 2.92 Straight Plug	SMA, 2.92 Straight Plug

Assembly under Test:

Rating Opportunity:

Not Available

Conclusion:

RF23S-92SJP-92SJP-0305 cable assemblies perform to expected insertion loss, return loss and SWR levels between 10 MHz and 40 GHz. All assemblies respond consistently and are free of resonance.

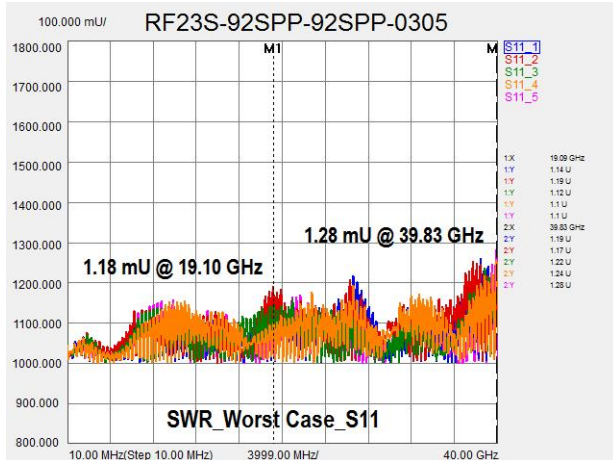
Results: RF23S-92SPP-92SPP-0305, Group R11

Description: SMA 2.92 Plug to RF23S Microwave Cable to SMA 2.92 Plug						
DUT	10 MHz to 20.0 GHz			20.0 GHz to 40.0 GHz		
	SWR (max)	RL (max)	IL (min)	SWR (max)	RL (max)	IL (min)
1 (S11,S21)	1.16 @ 19.82	-22.56 @ 19.82	-1.15 @ 19.86	1.26 @ 38.37	-18.75 @ 38.37	-1.75 @ 39.94
(S22,S12)	1.16 @ 9.46	-22.79 @ 9.46	-1.14 @ 19.87	1.26 @ 39.19	-18.65 @ 39.19	-1.73 @ 39.88
2 (S11,S21)	1.18 @ 19.10	-21.16 @ 19.10	-1.18 @ 19.86	1.25 @ 37.69	-18.96 @ 37.69	-1.86 @ 39.90
(S22,S12)	1.17 @ 9.06	-21.19 @ 8.23	-1.17 @ 19.89	1.34 @ 39.52	-16.79 @ 39.52	-1.85 @ 39.88
3 (S11,S21)	1.15 @ 19.16	-23.40 @ 19.16	-1.14 @ 19.86	1.24 @ 38.78	-19.48 @ 38.78	-1.71 @ 39.90
(S22,S12)	1.14 @ 18.38	-23.44 @ 18.38	-1.14 @ 19.93	1.24 @ 39.87	-19.26 @ 39.87	-1.71 @ 39.92
4 (S11,S21)	1.15 @ 10.90	-22.79 @ 10.90	-1.15 @ 19.86	1.26 @ 39.84	-18.93 @ 39.84	-1.75 @ 39.78
(S22,S12)	1.18 @ 19.83	-21.82 @ 19.83	-1.15 @ 19.92	1.31 @ 39.50	-17.37 @ 39.50	-1.75 @ 39.88
5 (S11,S21)	1.16 @ 9.82	-22.71 @ 9.82	-1.17 @ 19.86	1.28 @ 39.83	-18.17 @ 39.83	-1.76 @ 39.85
12)	1.20 @ 19.47	-20.73 @ 19.47	-1.14 @ 19.86	1.35 @ 39.81	-16.60 @ 39.81	-1.73 @ 39.88

Cable Series: RF23S

Description: Microwave Cable Assembly, 2.92mm Connector End, 23 AWG, 50 Ohm, Solid Dielectric

Standing Wave Ratio



Cable Series: RF23S

Description: Microwave Cable Assembly, 2.92mm Connector End, 23 AWG, 50 Ohm, Solid Dielectric

Insertion Loss /TDR

