

STORM-TEST™

VNA TEST CABLES & ADAPTERS (50, 40 & 26.5 GHz)

APPLICATIONS

- Vector Network Analyzers
- Bench-Top Testing
- Laboratory Testing
- High-Speed Digital Testing (HDST)
- Accurate Critical Measurements

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elspec group
GmbH

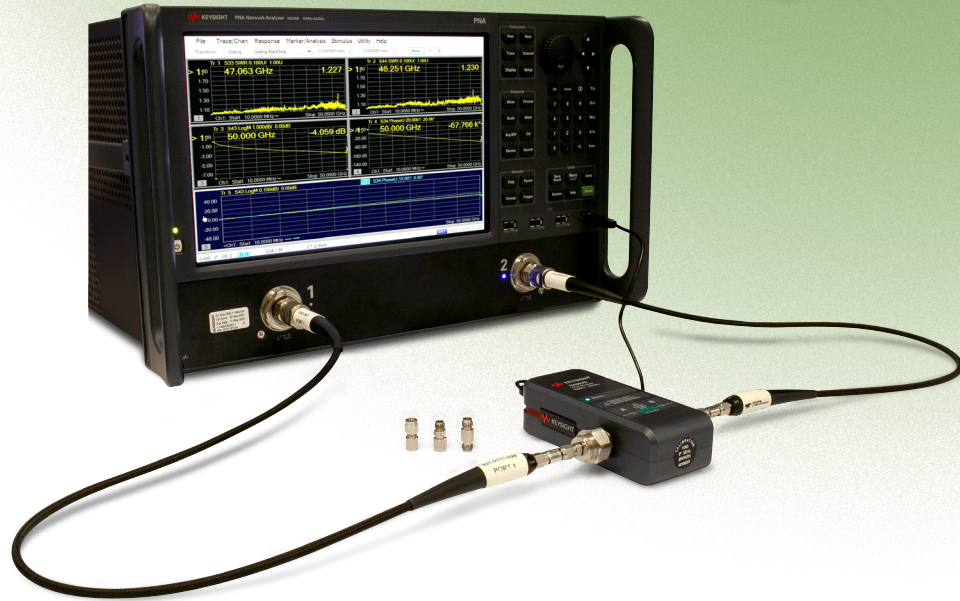
Lauterbachstraße 23c | 82538 Geretsried-Gelting
Tel: +49 8171 4357-0 | sales@elspecgroup.de



PRECISION, RUGGEDIZED TEST CABLE



- Engineered to provide precise measurements with stable electrical performance
- Excellent loss, VSWR, & phase/amplitude stability with flexure.
- Internally ruggedized cable construction delivers longer life, repetitive mating and prevents crushing, bending & twisting
- Accurate & repeatable measurements
- Performance tested prior to shipment



FEATURES

- ~ Custom cable bend protection behind the connector
- ~ Crush & torque resistant due to internal armoring
- ~ Braided FEP jacket
- ~ Phase and amplitude stable with flex
- ~ Flexible
- ~ Phase matching options

BENEFITS

- ~ Optimizes cable assembly product life
- ~ Mechanical robustness
- ~ Natural abrasion resistance prevents fraying of outer jacket
- ~ Calibration accuracy is maintained, reducing downtime
- ~ Ease of use
- ~ Customer specific requirements

MARKETS SERVED



T&M



RADAR



MILITARY



AERO



TELEDYNE
STORM MICROWAVE
Everywhereyoulook™

High value microwave and
electronic interconnect solutions

www.teledynestorm.com

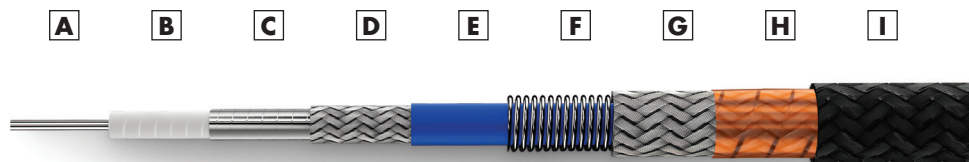
STORM-TEST™ RUGGEDIZED BENCH TEST CABLE ASSEMBLIES

SPECIFICATIONS		STORM-TEST™		
Cable Designator		931	931	931
Operating Frequency (Max, GHz)		50	40	26.5
Attenuation–Nominal @ (dB @ max freq, nom.)		1.308	1.155	0.92
Typical VSWR (2 straight connectors)		1.35:1 @ 50 GHz	1.30:1 @ 40 GHz	1.22:1 @ 26.5 GHz
Cable Delay (ns. per ft/m)		1.27/4.17	1.27/4.17	1.27/4.17
Phase Stability vs. Flexure* (deg @ max freq, typical)		±6.1	±4.9	±3.2
Amplitude Stability vs. Flexure* (deg @ max freq, typical)		0.21	0.15	0.13
Shielding Effectiveness–Minimum (dB @ 1 GHz)		–95	–95	–95
Crush Resistance		100 lbs./in. Minimum	100 lbs./in. Minimum	100 lbs./in. Minimum
Min Bend Radius, (in/mm)	DYNAMIC	2.00 / 50.80	2.00 / 50.80	2.00 / 50.80
	STATIC	1.00 / 25.40	1.00 / 25.40	1.00 / 25.40
Connectors		2.4 mm	2.4 mm, 2.92 mm	3.5 mm
Phase Matching		Yes, upon request.	Yes, upon request.	Yes, upon request.
Operating Temperature Range (°C)		–54 to +125	–54 to +125	–54 to +125

* ± 360° bends around a 4"/101.6mm mandrel

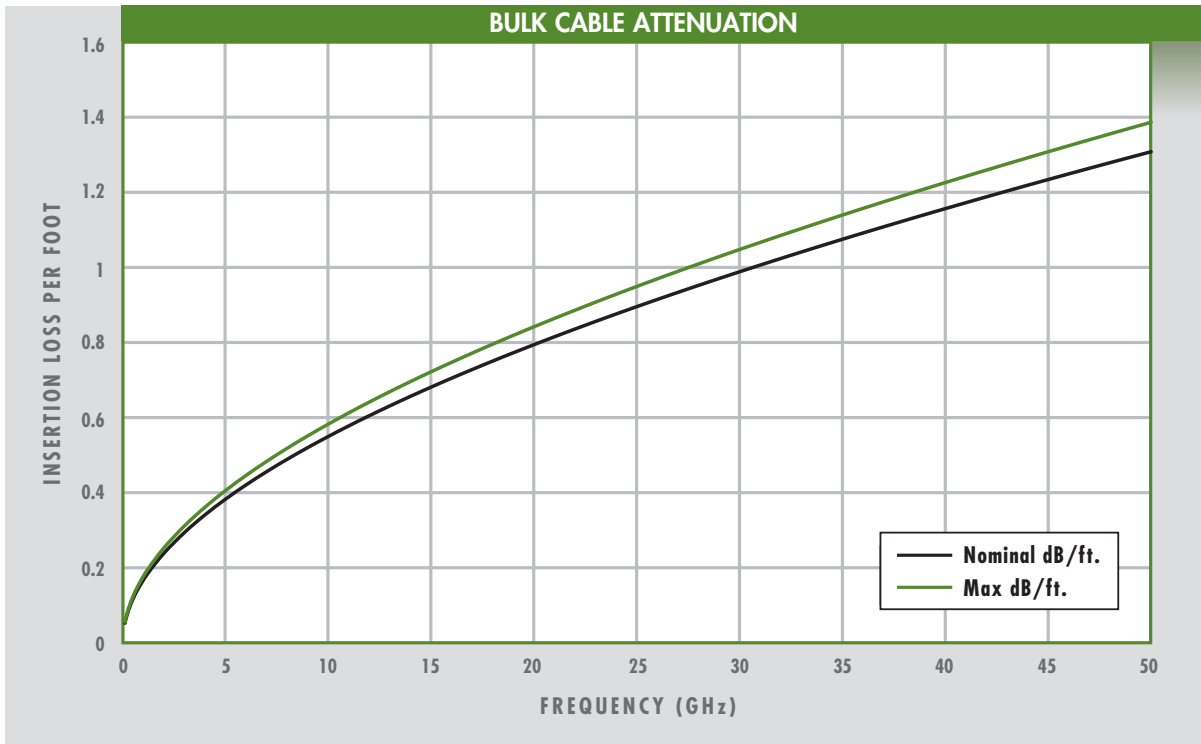
Specifications subject to change without notice.

CABLE CONSTRUCTION

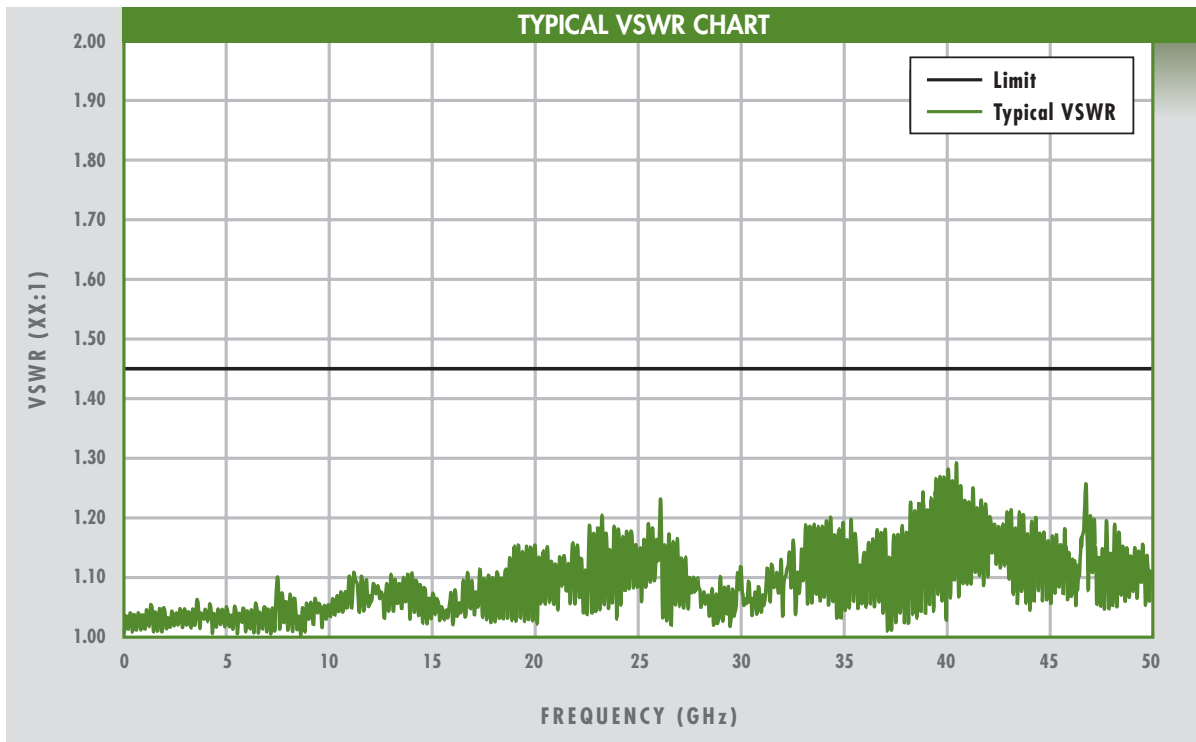


- A** Silver-plated copper center conductor
- B** Low loss, low density PTFE dielectric
- C** Helically wrapped SPC flat wire shield
- D** High coverage silver-plated copper inner braid
- E** Inner jacket
- F** Crush/torque protection
- G** Strength reinforcing silver-plated copper outer braid
- H** Outer tape
- I** Braided jacket

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For cable assembly insertion loss, call us or visit our Web site, www.teledynestorm.com.



■ **STORM-TEST™ 50 CONNECTOR COMBINATION PART NUMBERS***

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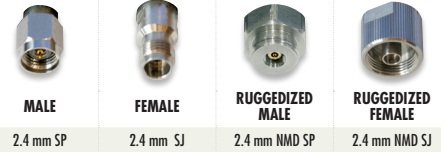
50 GHz

CONNECTOR OPERATING FREQUENCY
50 GHz

	2.4 mm NMD SJ	2.4 mm SJ	2.4 mm SP	2.4 mm NMD SP
2.4 mm NMD SJ	0101	0110	0111	0112
2.4 mm SJ	0110	1010	1011	1012
2.4 mm SP	0111	1011	1111	1112
2.4 mm NMD SP	0112	1012	1112	1212

See back page for available adapters.

CONNECTOR INTERFACE



CONNECTOR CODES

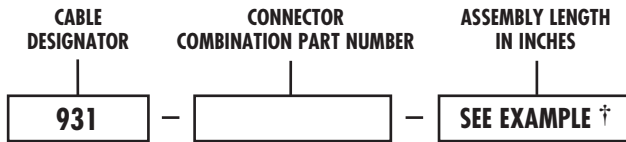
SP	Straight Plug
SJ	Straight Jack
NMD	Ruggedized Test Port Connector

* Other connector styles available; consult Storm.

EXAMPLES:

931-0111-036 = 2.4 mm NMD SJ to 2.4 mm SP, 36 inches

■ **ORDERING INFORMATION: Part Number Designation**



■ **STORM-TEST™ 40 CONNECTOR COMBINATION PART NUMBERS***

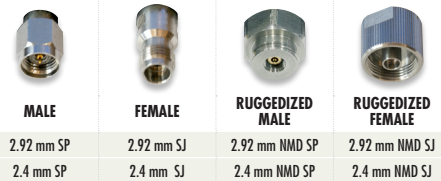
40 GHz

CONNECTOR OPERATING FREQUENCY
40 GHz

	2.4 mm NMD SJ	2.4 mm SJ	2.4 mm SP	2.4 mm NMD SP	2.92 mm NMD SJ	2.92 mm SJ	2.92 mm SP	2.92 mm NMD SP
2.92 mm NMD SJ	0102	0210	0211	0212	0202	0220	0221	0222
2.92 mm SJ	0120	1020	1120	1220	0220	2020	2021	2022
2.92 mm SP	0121	1021	1121	1221	0221	2021	2121	2122
2.92 mm NMD SP	0122	1022	1122	1222	0222	2022	2122	2222

See back page for available adapters.

CONNECTOR INTERFACE



CONNECTOR CODES

SP	Straight Plug
SJ	Straight Jack
NMD	Ruggedized Test Port Connector

* Other connector styles available; consult Storm.

EXAMPLES:

931-0221-036 = 2.92 mm NMD SJ to 2.92 mm SP, 36 inches

† 12" min. length. For max. length, contact Teledyne Storm.

STORM-TEST™ 26.5 GHz CONNECTOR COMBINATION PART NUMBERS*

26.5 GHz

CONNECTOR INTERFACE

MALE	FEMALE	RUGGEDIZED MALE	RUGGEDIZED FEMALE
3.5 mm SP	3.5 mm SJ	3.5 mm NMD SP	3.5 mm NMD SJ
2.92 mm SP	2.92 mm SJ	2.92 mm NMD SP	2.92 mm NMD SJ
2.4 mm SP	2.4 mm SJ	2.4 mm NMD SP	2.4 mm NMD SJ

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CONNECTOR OPERATING FREQUENCY
26.5 GHz

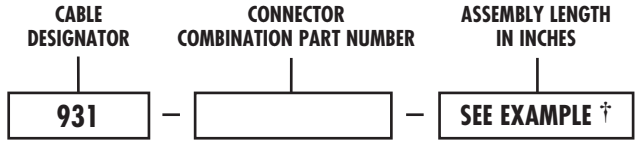
	2.4 mm NMD SJ	2.4 mm SJ	2.4 mm SP	2.4 mm NMD SP	2.92 mm NMD SJ	2.92 mm SJ	2.92 mm SP	2.92 mm NMD SP	3.5 mm NMD SJ	3.5 mm SJ	3.5 mm SP	3.5 mm NMD SP	
26.5 GHz	3.5 mm NMD SJ	0103	0310	0311	0312	0203	0320	0321	0322	0303	0330	0331	0332
	3.5 mm SJ	0130	1030	1130	1230	0230	2030	2130	2230	0330	3030	3031	3032
	3.5 mm SP	0131	1031	1131	1231	0231	2031	2131	2231	0331	3031	3131	3132
	3.5 mm NMD SP	0132	1032	1132	1232	0232	2032	2132	2232	0332	3032	3132	3232

See back page for available adapters.

EXAMPLES:

931-0321-036 = 3.5 mm NMD SJ to 2.92 mm SP, 36 inches

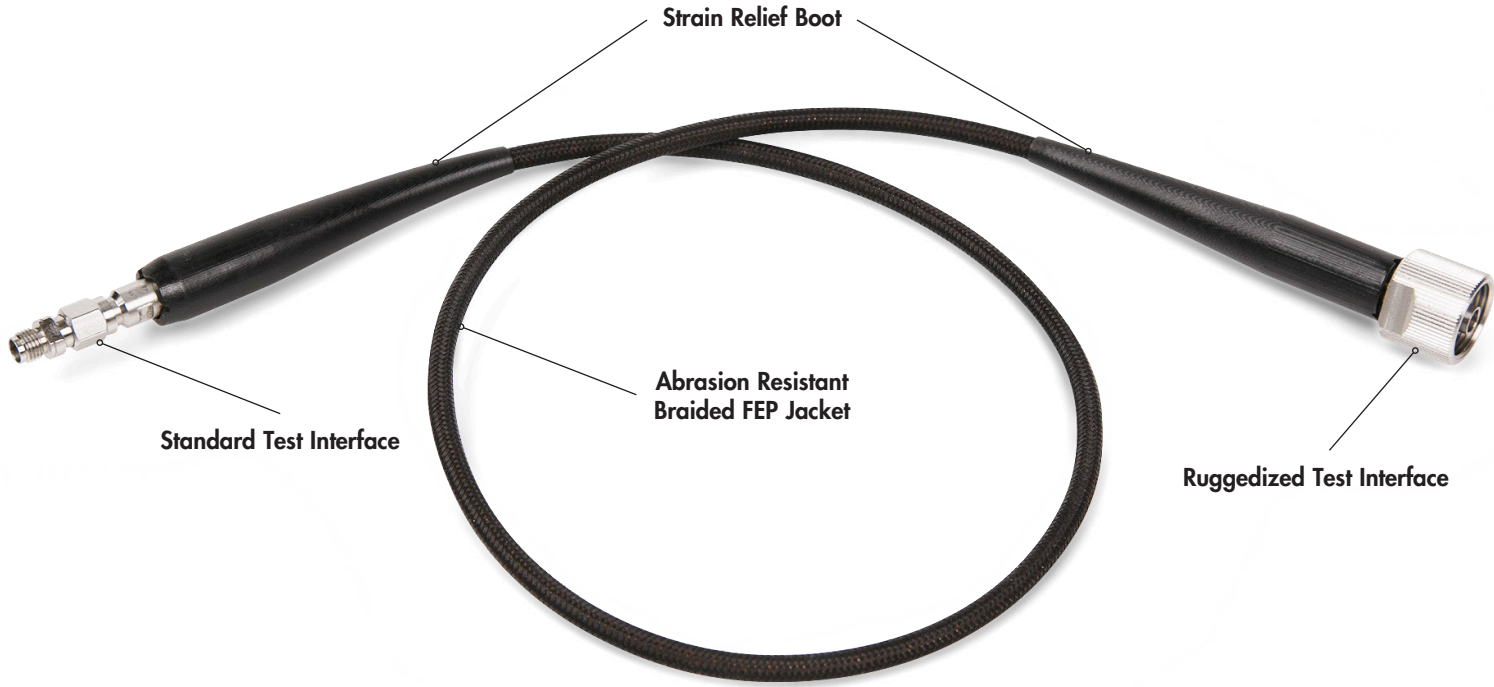
ORDERING INFORMATION: Part Number Designation



CONNECTOR CODES	
SP	Straight Plug
SJ	Straight Jack
NMD	Ruggedized Test Port Connector

* Other connector styles available; consult Storm.

† 12" min. length. For max. length, contact Teledyne Storm.



STORM-TEST™

VNA TEST CABLES & ADAPTERS
(50, 40 & 26.5 GHz)

PRECISION, RUGGEDIZED
TEST CABLE



ADAPTERS FOR STORM-TEST 50, 40 & 26.5

	ADAPTER TYPE	PART NUMBER	ADAPTER DESCRIPTION
	In Series	750-0045-001	2.4 mm to 2.4 mm Female
	In Series	750-0046-001	2.4mm Female to 2.4 mm Male
	In Series	750-0047-001	2.4 mm Male to 2.4 mm Male
	Between Series	750-0048-001	2.92 mm Female to 2.4 mm Male
	Between Series	750-0049-001	2.92 mm Male to 2.4 mm Male
	Between Series	750-0050-001	3.5 mm Female to 2.4 mm Male
	Between Series	750-0051-001	3.5 mm Male to 2.4 mm Male

PART NUMBER	MAX FREQ (GHz)	VSWR (Max Freq)	LOSS (Max IL @ Max Freq)	LENGTH (in/mm)	PHASE (deg @ Max Freq)
750-0045-001	50	1.25:1	0.49 dB	0.84 / 21.34	981.6
750-0046-001					
750-0047-001					
750-0048-001	40	1.20:1	0.50 dB	0.797 / 20.24	770.3
750-0049-001					
750-0050-001	26.5	1.20:1	0.44 dB	0.758 / 19.25	518.8
750-0051-001					



AS9100/ISO 9001 REGISTERED

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