DURATEST™

WHEN FAILURE IS NOT AN OPTION AND COST IS A CONSIDERATION.

DuraTest™: Extra Durable Everyday Test Assemblies

When you need a general purpose test assembly that can be counted on for the long haul and won't bust the budget, you need a DuraTest™ assembly.

DuraTest™ combines:

- The proven toughness of Teledyne Storm cable
- Captivated stainless steel connectors
- Proprietary Hard-To-Hurt™ strain relief technology

Resulting in an **extra durable, precision test assembly** that:

- Has an average flex life of 25,000 flexures
- Is guaranteed for one year

FEATURES	ADVANTAGES	BENEFITS
~ *Extended frequency SMA plugs*	~ *Allows testing to 26.5 GHz*	~ *One cable for broadband testing*
~ *Combination hex/knurl type N coupling nuts*	~ *Easier to tighten, while still able to torque down*	~ *Reduces fatigue; maintains repeatability*
~ *Hard-To-Hurt™ strain relief*	~ *Reduces strain at connector/cable interface*	~ *Extends assembly life; reduces costs*
~ *Stainless steel connector bodies*	~ *Reduces interface wear*	~ *Extends assembly life; reduces costs*

TELEDYNE
STORM MICROWAVE
Everywhereyoulook™

High value microwave and electronic interconnect solutions

www.teledynestorm.com

DURATEST™

SPECIFICATIONS	DURATEST™
Cable Designator	**921**
Diameter (in/mm)	0.176/4.47
Operating Frequency (Max, GHz)	26.5
Attenuation–Max @ 2 GHz (dB/ft)	0.17
Attenuation–Max @ 10 GHz (dB/ft)	0.43
Attenuation–Max @ 18 GHz (dB/ft)	0.61
Attenuation–Max @ 26.5 GHz (dB/ft)	0.78
Min Bend Radius (in/mm)	0.875/22.2
Connector Retention (lbs/kg min), straight pull	50/22.7
Operating Temperature Range (°C)	–55 to +110
Flexure (+/- 30° unrestrained pull)	25,000
Concentrated Load (lbs/ linear inch)	100
Typical VSWR (2 SMA straight plugs)	1.15:1 @ 18 GHz 1.25:1 @ 26.5 GHz
Relative Phase Match (optional)	±9° @ 18 GHz

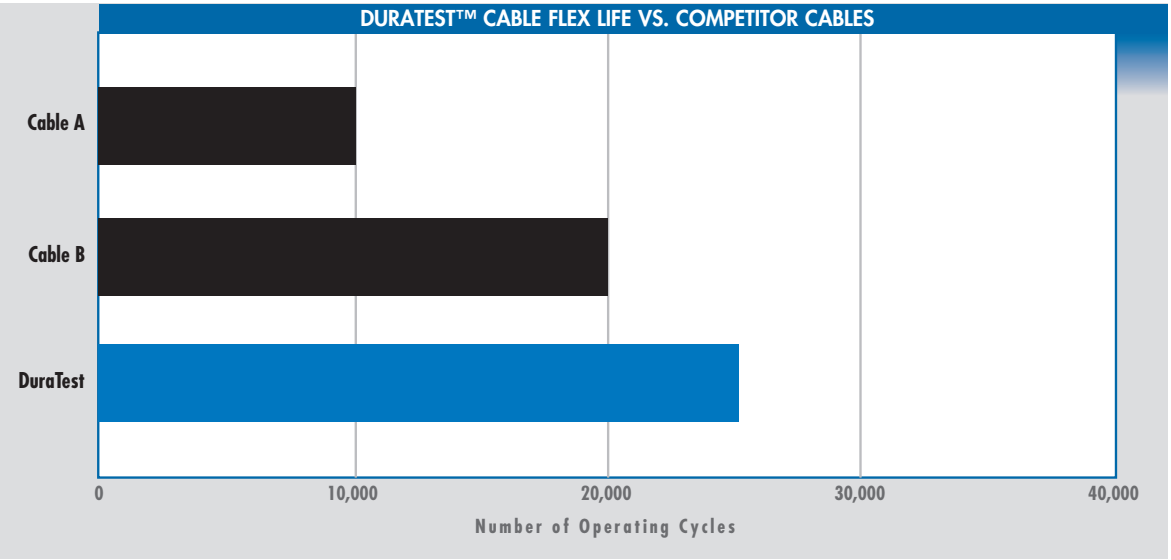
DuraTest™ is RoHS compliant

Specifications subject to change without notice.

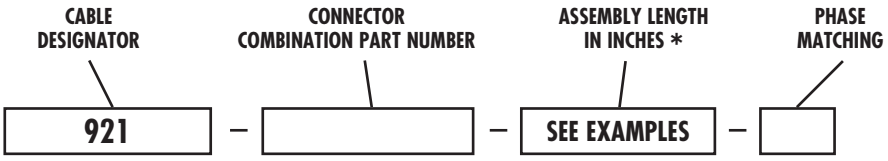
FLEX LIFE

The DuraTest™ cable design incorporates Storm's proprietary Hard-To-Hurt™ strain relief technology in order to extend product life under conditions of repeated flexure, especially right behind the connector.

For a look at how the Hard-To-Hurt™ strain relief was developed, see the last page of this brochure.



ORDERING INFORMATION: *Part Number Designation*



Phase Matching

Leave Blank for no matching **PM -** Phase Matched

EXAMPLES:

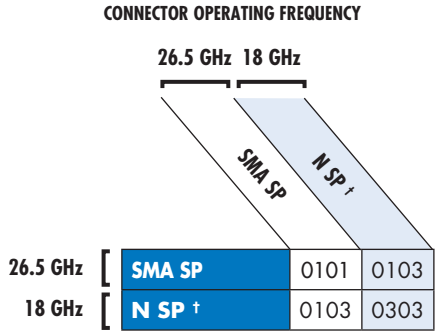
921-0101-**048** = DuraTest™, SMA SP to SMA SP (assembly operates to 26.5 GHz), **48 inches**

921-0103-**120** = DuraTest™, SMA SP to N SP (assembly operates to 18 GHz), **120 inches**

921-0303-**018**-PM = Phase Matched DuraTest™, N SP to N SP (assembly operates to 18 GHz), **18 inches**

** Minimum build length is 18 inches*

CONNECTOR COMBINATION PART NUMBERS



CONNECTOR CODES	
SP	Straight Plug

† N plug not provided with interface gasket unless requested.

ORDERING INFORMATION: *DuraTest™ Express*

Express assemblies—in the lengths listed below and terminated with either 26.5 GHz SMA-SMA or 18 GHz N-N connector combinations—are available for next-day shipment. Express assemblies cannot be phase matched.

Part Number w/ SMA SP	Length (in/mm)	10 GHz	18 GHz	26.5 GHz
		VSWR, Typical		
		1.10:1	1.15:1	1.25:1
		Insertion Loss		
921-0101-024	24.00/609.60	1.00	1.40	1.80
921-0101-036	36.00/914.40	1.40	2.00	2.60
921-0101-048	48.00/1219.20	1.80	2.60	3.40
921-0101-060	60.00/1524.00	2.30	3.20	4.20
921-0101-072	72.00/1828.80	2.70	3.90	4.90
921-0101-084	84.00/2133.60	3.10	4.50	5.70
921-0101-120	120.00/3048.00	4.40	6.30	8.00

Part Number w/ N SP	Length (in/mm)	10 GHz	18 GHz
		VSWR, Typical	
		1.15:1	1.25:1
		Insertion Loss	
921-0303-024	24.00/609.60	1.00	1.40
921-0303-036	36.00/914.40	1.40	2.00
921-0303-048	48.00/1219.20	1.80	2.60
921-0303-060	60.00/1524.00	2.30	3.20
921-0303-072	72.00/1828.80	2.70	3.90
921-0303-084	84.00/2133.60	3.10	4.50
921-0303-120	120.00/3048.00	4.40	6.30

HARD-TO-HURT™ STRAIN RELIEF

Designing the Hard-To-Hurt™ Strain Relief

Since no industry standard test exists, Teledyne Storm Products developed an accelerated life test to evaluate strain relief designs.

The 1st part of the test incorporated a cable flexing device. This flexer is capable of testing up to 6 cables simultaneously.

In use, the connectors are held static and the flexer deflects the cable behind the connectors 30° to the right and 30° to the left.

An integrated counter monitors the number of cycles (± 30° per cycle) that the cables have been flexed.

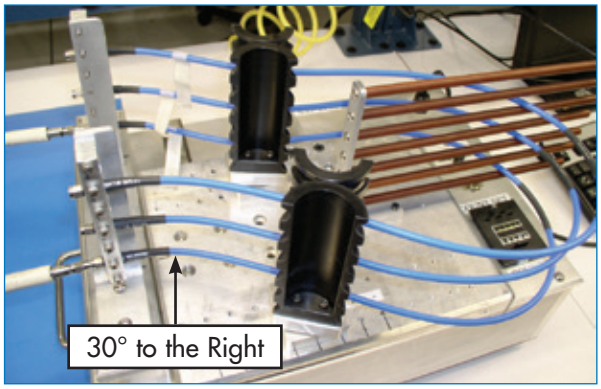
During flexing, the cables are connected to a Network Analyzer and monitored for Insertion Loss and VSWR so the technician knows when the cable is starting to develop instability.

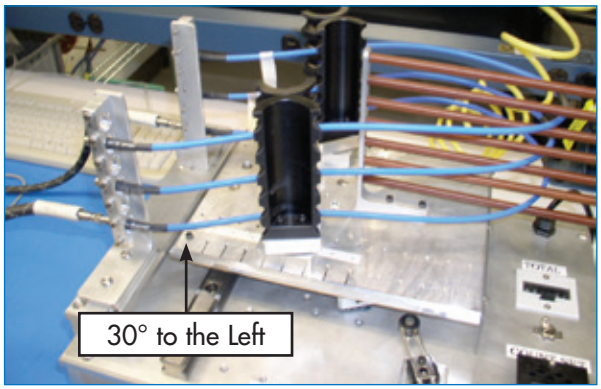
Periodically, the movement is stopped and each cable's performance is measured and recorded.

The flexing is continued until the cable being tested fails to meet the Insertion Loss or VSWR requirements.

To establish an initial design baseline, Teledyne Storm Products evaluated cable assemblies with standard strain reliefs.

With that information in hand, alternate strain relief designs and materials were evaluated until the winning Hard-To-Hurt™ design was selected.





Teledyne Storm Products Accelerated Life Testing

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