MultiFlex Micro-D

TELEDYNE
Storm Microwave

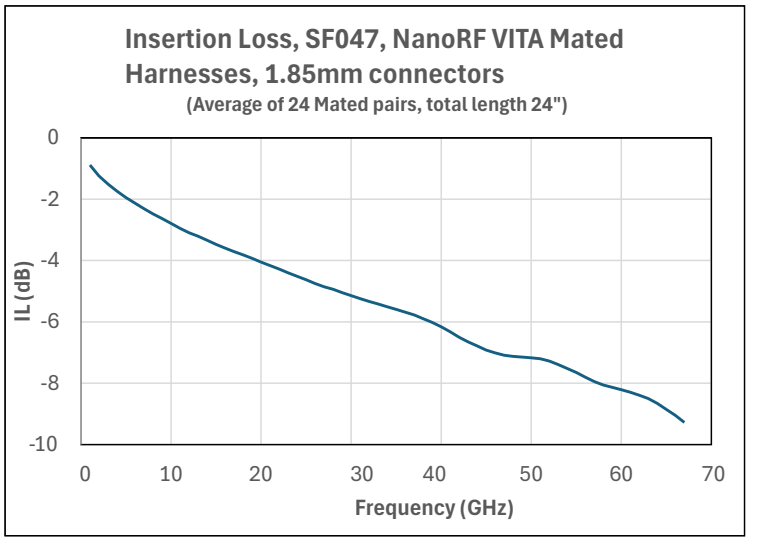


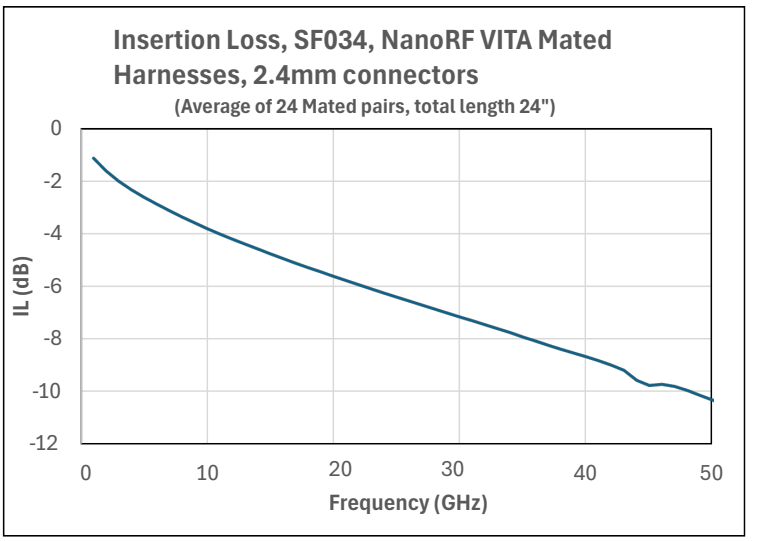
MultiFlex Micro-D VITA 67.3 NanoRF

Teledyne Storm Microwave's MultiFlex Micro-D platform integrates VITA 67.3 NanoRF-compliant RF contacts within a compact, high-density Micro-D connector architecture, enabling the seamless integration of RF, signal, and power contacts in a single interconnect solution.

Compatible with StormFlex® 047 and 034 low-loss microwave cable assemblies, the MultiFlex Micro-D platform delivers a combination of outstanding electrical performance and mechanical durability. Engineered for demanding operating environments, these cable solutions provide superior flexibility, environmental robustness, and reliable performance under dynamic conditions. Designed for SWaP constrained aerospace, defense, and space applications, the MultiFlex Micro-D platform enables reliable transmission of high-frequency signals in next-generation radar, electronic warfare, SATCOM, test and measurement systems.

The platform supports flexible contact configurations while maintaining controlled impedance and exceptional high-frequency signal integrity. These cables support excellent RF performance with a Voltage Standing Wave Ratio (VSWR) up to 67 GHz, depending on connector selection, making them well suited for high-speed, high-frequency interconnect applications where size, weight, and performance are critical.





TELEDYNE

Use and Disclosure of Data: This product is classified as EAR99 and is subject to U.S. Department of Commerce regulations. Export, reexport or diversion contrary to U.S. law is prohibited

VITA 67.3 NanoRF Compliant Contacts

The Hybrid Micro-D connector configurations offer new VITA 67.3 NanoRF compliant contacts providing a wide range of high-performance connectivity options to support diverse customer applications and design requirements.

Data & Specifications

Signal Contact Specifications	
Dielectric Withstand Voltage	600 VAC RMS Sea Level
Contact Resistance	26 milliohms max (65 mV drop) @ 2.5 AMPS
Current Rating	3 AMPS per contact
Insulation Resistance	15000 Meg ohms @ 500 VDC
Shock	50 g's with no discontinuities > 1 microsecond
Vibration	20 g's with no discontinuities > 1 microsecond
Conductor	26 AWG stranded PTFE Jacket, color coded
Durability	2000 mates (Minimum)
Pull force (Crimp contact per SAE AS7928)	7 lbs

NanoRF Coax Contact Specifications	
Characteristic Impedance	50 ohms
Operating Frequency	DC to 67 GHz
VSWR	1:25:1 TYP. DC to 40 GHz (connectors only, gated) 1:40:1 TYP. 40GHz to 67 GHz (connectors only, gated)
Channel to Channel Isolation (cross talk)	3 GHz thru 27 GHz 100 dB min. | 27 GHz thru 67 GHz 90 dB min.
DWV (@ sea level)	325 Vrms when tested per MIL-STD-202, Method 301
Axial Travel	.060" min.
Radial Float	± .015" min.
Shock	50 g's with no discontinuities > 1 microsecond (tested per MIL-83513 / EIA-364-27 COND. E)
Vibration	20 g's with no discontinuities > 1 microsecond (tested per MIL-83513 / EIA-364-28 COND II)
Engage Force	2.5 lbs (MAX per contact at full deflection)
Durability	500 mates (Minimum)
Pull Force	SF047: 10 lbs (Tensile Load) | SF034: 8 lbs (Tensile Load)

Replacement O-Rings		
TSM Part Number	**Description**	**Housing Size**
012-0051-001	Panel Mount - 4 Position	A
012-0051-002	Panel Mount - 6 Position	B
012-0051-003	Panel Mount - 8 Position	C
012-0051-004	Panel Mount Hybrid - 2 Position	A
012-0051-005	Panel Mount Hybrid - 5 Position	B
012-0051-006	Panel Mount Hybrid - 8 Position	C

Qualification: Hybrid connector series tested to and complies with performance requirements of MIL-DTL-83513.

Material Specs	
Housing	Electroless nickel, Aluminum 6061, 500 micro-inches minimum, per SAE AMS 2404.
Hardware	300 Series stainless steel, passivated unless otherwise noted.
Hybrid connector contacts	Beryllium copper (C17200) with hard gold plating per ASTM B488 over nickel underplate.
O-Ring	Buna-N O-ring, 70 Shore A.
Qualification	Hybrid connectors complies with Table VII performance requirements of MIL-DTL-83513.
Export Classification	EAR99 where specified.
Conductor	26 AWG stranded PTFE Jacket, color coded

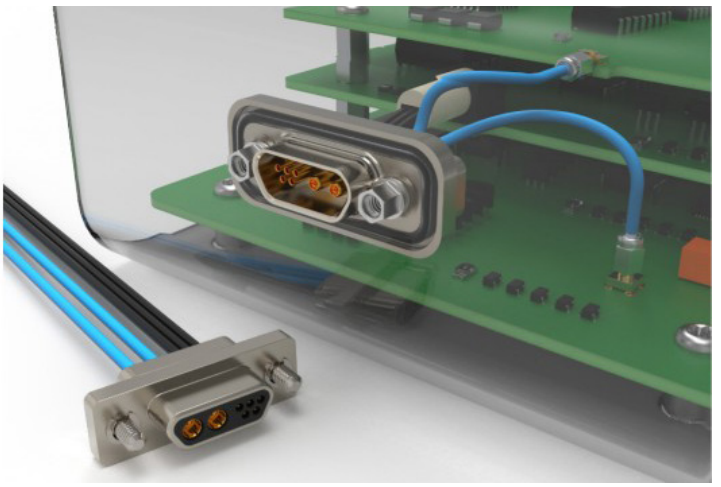
Signal Wire/Coax Cable Specifications			
Specifications	**Signal Wire**	**Coax .047 Nominal**	**Coax .034 Nominal**
Description	26 AWG Wire per NEMA HP-3 Type E (formerly Mil-W-16878/4)	Storm Flex .047	Storm Flex .034
Outside Diameter (in/mm)	0.039/.991	0.055/1.40	0.0375/0.952
Jacket	PTFE	FEP	FEP
Nominal Jacket Wall (in/mm)	0.010/.254	0.010/.254	.003/0.084
Sheild	Not sheilded	Two shield layers, silver plated wire	Two shield layers, silver plated wire
Voltage (Volts, R.M.S.)	600 (Working Voltage)	325 (Dielectric Withstanding Center conductor to braid)	300 (Dielectric Withstanding Center conductor to braid)
Operating temperature range (C)	-65 to 200	-63 to 125	-55 to 125

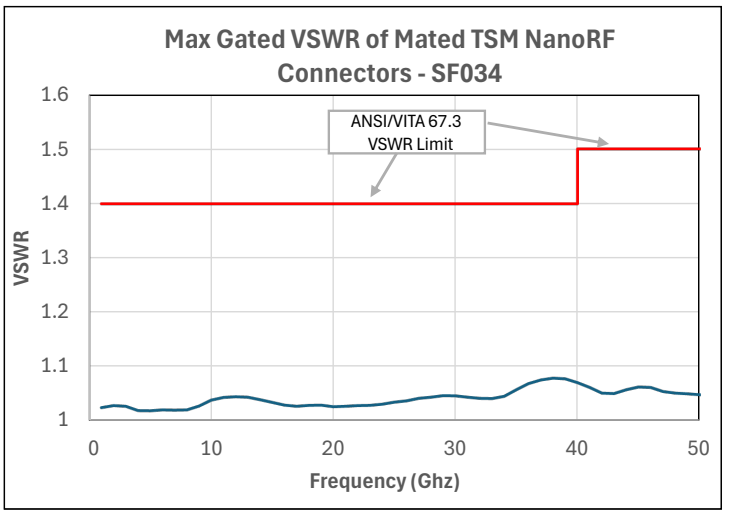
VITA 67.3 NanoRF + Storm Flex® 047 & 034 Cable

The MultiFlex Micro-D platform integrates VITA 67.3 NanoRF compliant RF contacts into a compact connector solution, supporting RF configurations while maintaining excellent signal integrity and mechanical reliability. Designed for aerospace, defense, and space applications, the MultiFlex Micro-D platform is ideal for advanced radar, communications, and test & measurement systems where space constraints demand high-density connectivity without compromising RF performance.

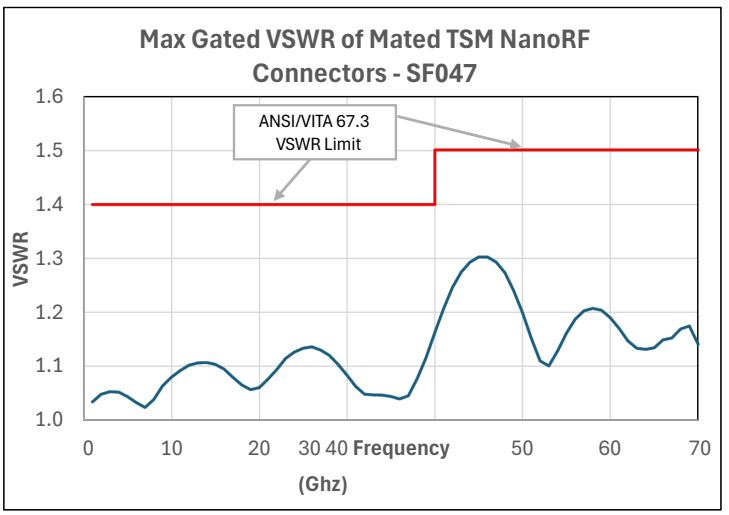
Compatible with StormFlex® 047 and 034 low-loss microwave cable assemblies, the Micro-D platform delivers RF performance through 67 GHz (in a compact, rugged Micro-D form factor. These connectors ensure a high-performance solution for demanding applications that require seamless signal integrity and versatile design configurations.

- Multiflex Micro-D to Multiflex Micro-D (plug or panel mount). There are 4, 6, or 8 NanoRF to VITA 67.3 NanoRF interface.
- Multiflex Micro-D (plug or panel mount) VITA 67.3 NanoRF to individual MIL-STD-348 RF interfaces. The individual interface choices are dependent on the cable size.
- Multiflex Micro-D hybrid connector with RF connections (VITA 67.3 NanoRF to individual MIL-STD-348 RF interface) PLUS control wire connections.





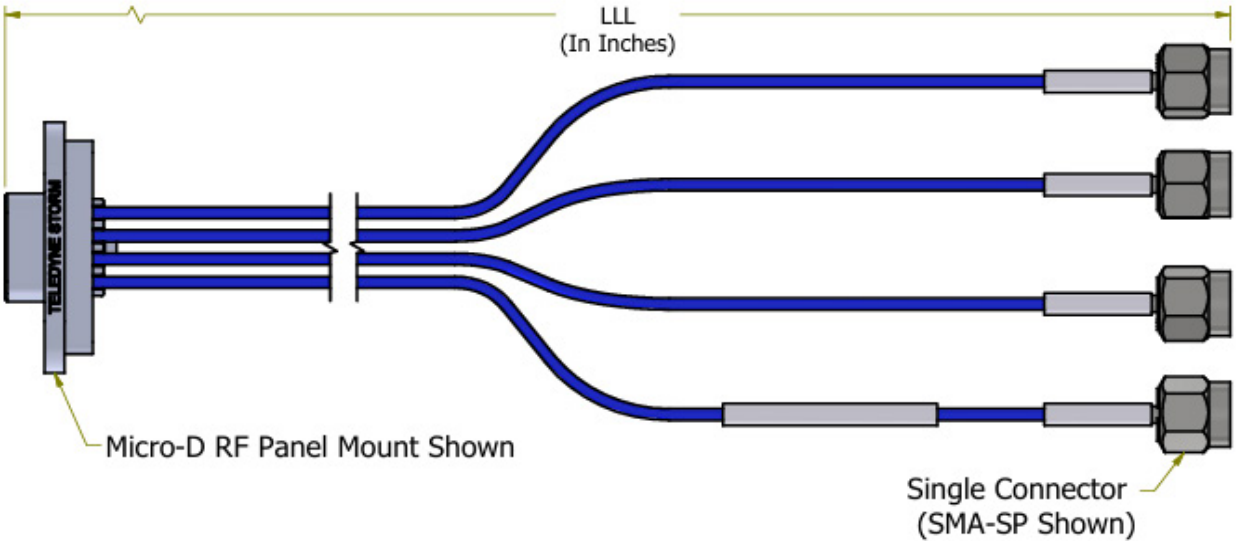
Performance dependent on connector configuration and system implementation.



Key Features

- VITA 67.3 NanoRF-compliant RF contact options
- Integrated RF, signal, and power contacts in a compact Micro-D connector
- Compatible with StormFlex® 047 and 034 low-loss microwave cable assemblies
- RF performance through 67 GHz
- Controlled impedance for optimized signal integrity
- Rugged construction for aerospace, defense, and space environments
- Configurable contact layouts to support application-specific requirements

MultiFlex Micro-D RF Series - Micro-D to Single Connector



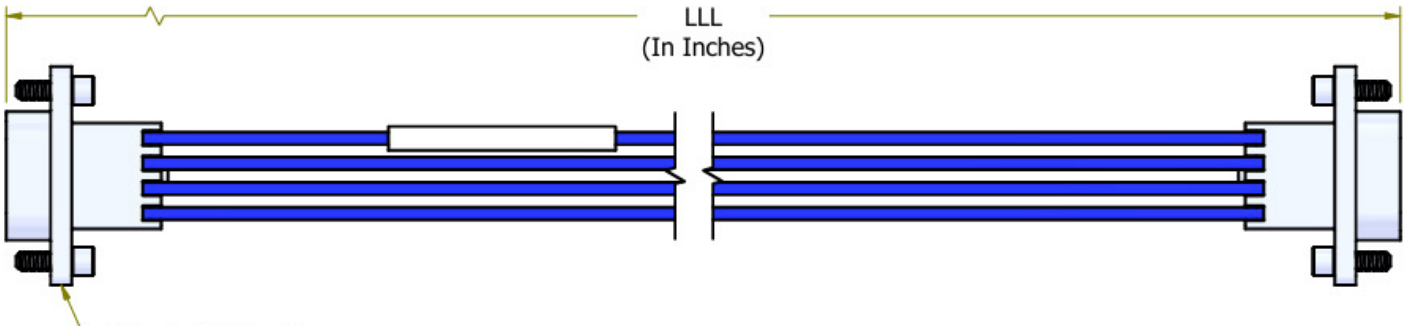
Storm Flex® 047 and 034

Sample Part Number	702-	A	End 1		End 2	Length
			A	A4	03	010
Series	MultiFlex Micro-D RF					
Cable Type	A - SF047 B - SF034					
Housing Style	A - Panel Mount B - Plug					
Housing Size and Insert See tables on page 7	A4 - 4 RF B6 - 6 RF C8 - 8 RF					
Connector Code SF034 & SF047 See connector tables on page 7	Connector Interface	SF034	SF047			
	SMA- SP 26.5 GHz		03			
	SMP-SJ 18 GHz		06			
	SMP-RAJ 18 GHz		07			
	SMPM-SJ 50 GHz	84	18			
	SMPM-RAJ 18 GHz		22			
	SMPM-RAJ 26.5 GHz	85				
	2.9mm-SP 40 GHz	05	37			
	2.4mm-SP 50 GHz	06	40			
	1.85mm-SP 67 GHz		50			
Length - Inches (LLL)						

EXAMPLE 702-AAA403010 = MultiFlex Micro-D assembly with Storm Flex® 047 cables, Panel Mount Micro-D connector end, 1 & SMA-SP end 2, 4-RF ports,10 Inches

Consult factory for custom configurations.

MultiFlex Micro-D RF Series - Micro-D to Micro-D



Max frequency 67GHz

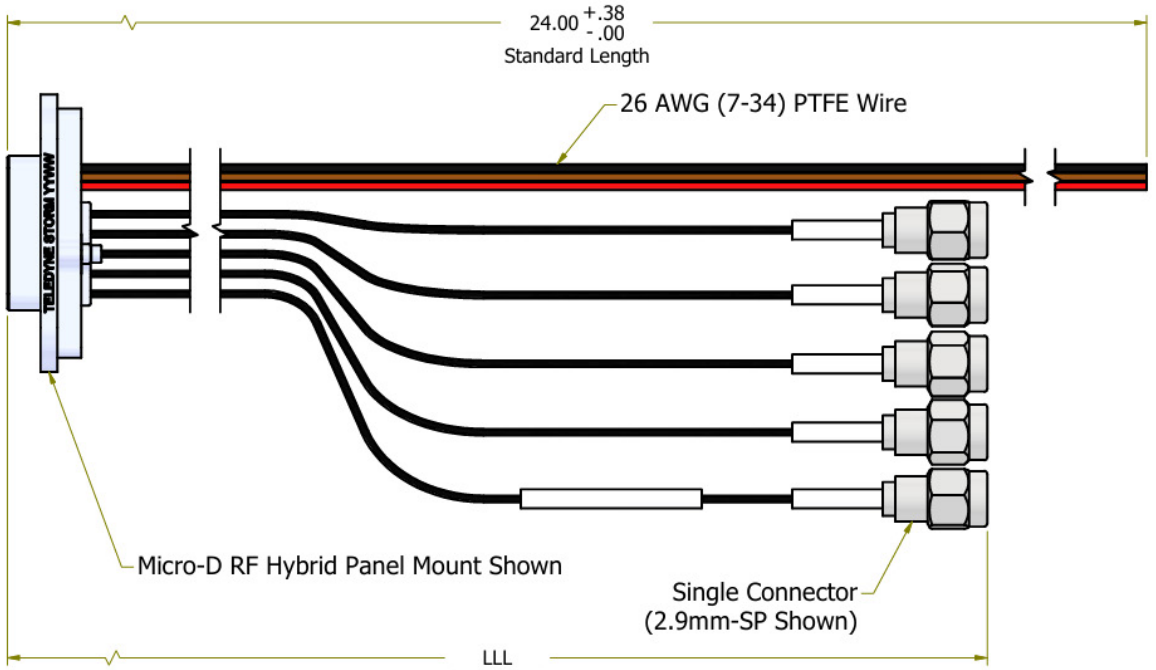
Storm Flex® 047 and 034

Sample Part Number	702-	A	End 1		End 2	Length
			B	A4	B	010
Series	MultiFlex Micro-D RF					
Cable Type	A - SF047 B - SF034					
Housing Style	A - Panel Mount B - Plug					
Housing Size and Insert End 1 See tables on page 7	A4 - 4 RF B6 - 6 RF C8 - 8 RF					
Housing Size and Insert End 2* See tables on page 7	A - Panel Mount B - Plug *Insert will be same as End 1					
Length - Inches (LLL)						

EXAMPLE: 702-ABA4B010 = MultiFlex Micro-D to Micro- D assembly with Storm Flex 047 cables, Plug MultiFlex connector each end, 10 inches

Consult factory for custom configurations.

MultiFlex Micro-D RF Hybrid - Micro-D to Single Connector with Signal Wire



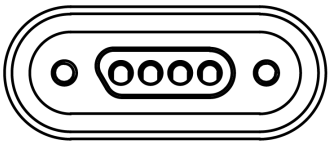
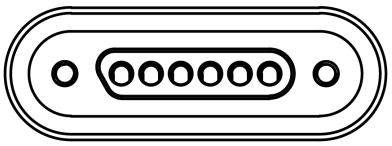
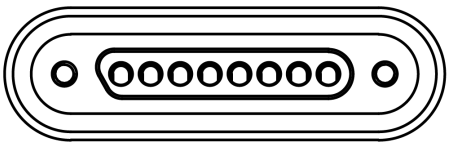
Storm Flex® 047 and 034

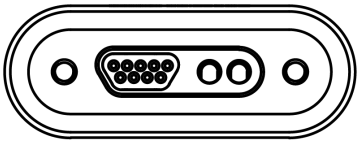
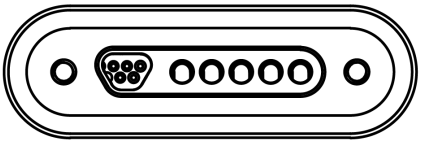
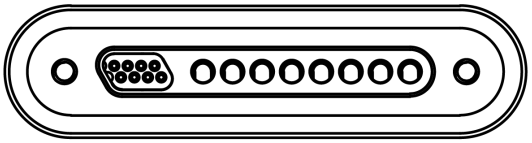
Sample Part Number	703-	B	End 1 A	End 1 B5A	End 2 05	Length 024
Series	MultiFlex Micro-D RF Hybrid					
Cable Type	A - SF047 B - SF034					
Housing Style	A - Panel Mount B - Plug					
Housing Size and Insert See tables on page 7	A2A - 2 RF & 9 Signal Wires B5A - 5 RF & 5 Signal Wires C8A - 8 RF & 8 Signal Wires					
Connector Code SF034 & SF047 See connector tables on page 7	Connector Interface	SF034	SF047			
	SMA- SP 26.5 GHz		03			
	SMP-SJ 18 GHz		06			
	SMP-RAJ 18 GHz		07			
	SMPM-SJ 50 GHz	84	18			
	SMPM-RAJ 18 GHz		22			
	SMPM-RAJ 26.5 GHz	85				
	2.9mm-SP 40 GHz	05	37			
	2.4mm-SP 50 GHz	06	40			
	1.85mm-SP 67 GHz		50			
RF Cable Length - Inches (LLL)	(custom lengths available upon request)					

EXAMPLE 24 inches Example: 703-BAB5A05024 = MultiFlex Micro-D assembly with Storm Flex® 034 cables, Panel Mount Micro-D connector end 1& 2.9mm-SP end 2, 5-RF ports, 5 control wires, 24 Inches

Consult factory for custom configurations.

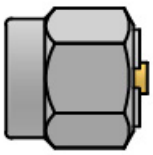
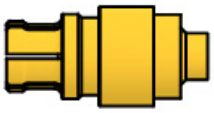
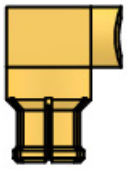
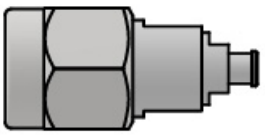
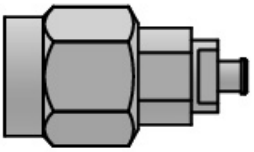
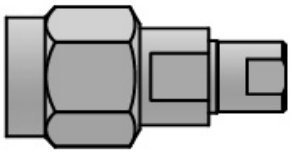
Housing and Insert Options

MultiFlex Micro-D RF Housing and Insert Options - Series 702 (Consult factory for other options)		
 Housing Size & Insert A4	 Housing Size & Insert B6	 Housing Size & Insert C8

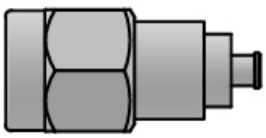
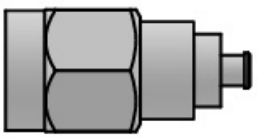
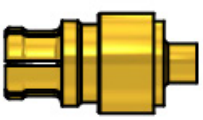
MultiFlex Micro-D RF Hybrid Housing and Insert Options - Series 703 (Consult factory for other options)		
 Housing Size & Insert A2A	 Housing Size & Insert B5A	 Housing Size & Insert C8A

Connector Options

Storm Flex® 047

 03 - SMA-SP 26.5 GHz	 06 - SMP-SJ 18 GHz	 07 - SMP-RAJ 18 GHz	 18 - SMPM-SJ 50 GHz
 22 - SMPM-RAJ 18 GHz	 2.9mm-SP 40 GHz	 40 - 2.4mm-SP 50 GHz	 50 - 1.85mm-SP 67 GHz

Storm Flex® 034

 05 - 2.9mm-SP 40 GHz	 06 - 2.4mm-SP 50 GHz	 84 - SMPM-SJ 50 GHz	 85 - SMPM-RAJ 26.5 GHz

Consult factory for additional connector options.

702 Series

MultiFlex Micro-D RF Plug Connector - Series 702

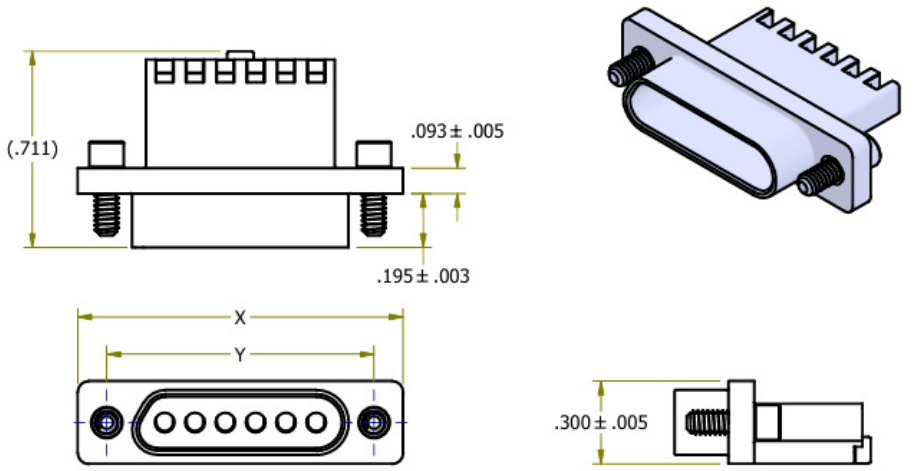


TABLE 1: Plug Dimensions			
Description	Housing Size	X ±.005	Y ±.005
4 Position - Plug	A	.960	.750
6 Position - Plug	B	1.180	.970
8 Position - Plug	C	1.400	1.190

702 Series

MultiFlex Micro-D RF Rear Panel Mount Connector - Series 702

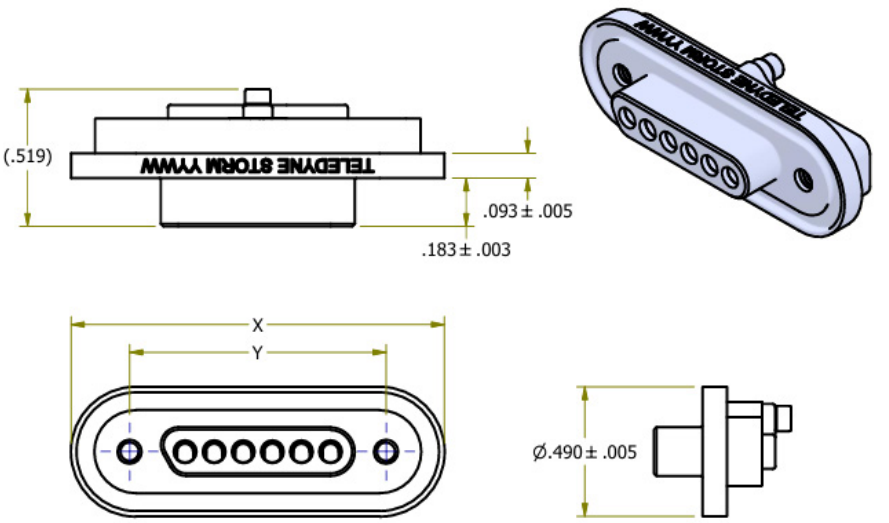


TABLE 1: Panel Mount Dimensions			
Description	Housing Size	X ±.005	Y ±.005
4 Position - Panel Mount	A	1.192	.750
6 Position - Panel Mount	B	1.412	.970
8 Position - Panel Mount	C	1.632	1.190

703 Series

MultiFlex Micro-D RF Hybrid Plug Connector - Series 703

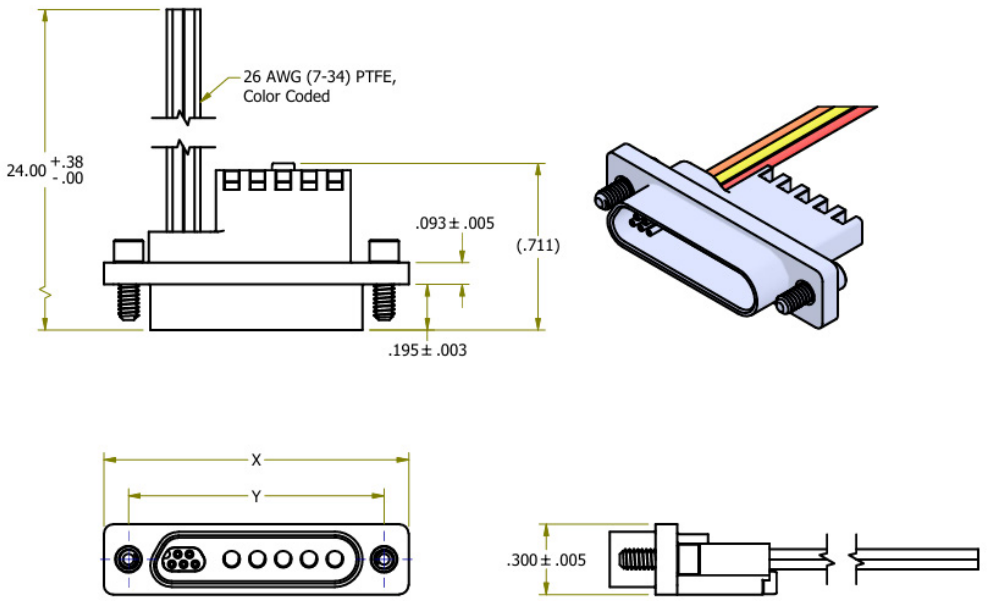


TABLE 1: Plug Dimensions			
Description	Housing Size	X ±.005	Y ±.005
2 Postion - Plug	A	1.070	.860
5 Postion - Plug	B	1.300	1.090
8 Postion - Plug	C	1.705	1.495

703 Series

MultiFlex Micro-D RF Hybrid Rear Panel Mount Connector - Series 703

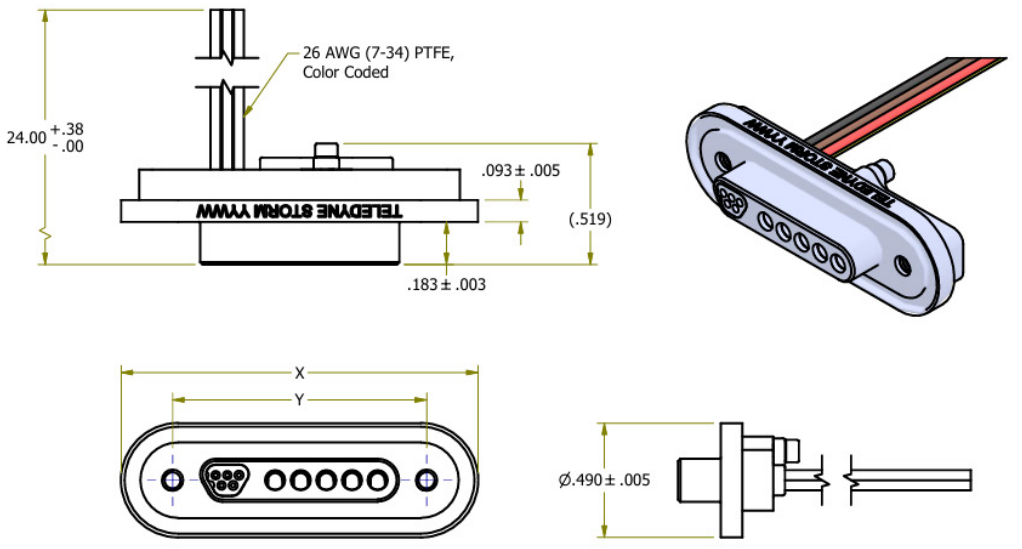


TABLE 1: Panel Mount Dimensions			
Description	Housing Size	X ±.005	Y ±.005
2 Position - Panel Mount	A	1.302	.860
5 Position - Panel Mount	B	1.532	1.090
8 Position - Panel Mount	C	1.937	1.495

Panel Cutouts

702 Series

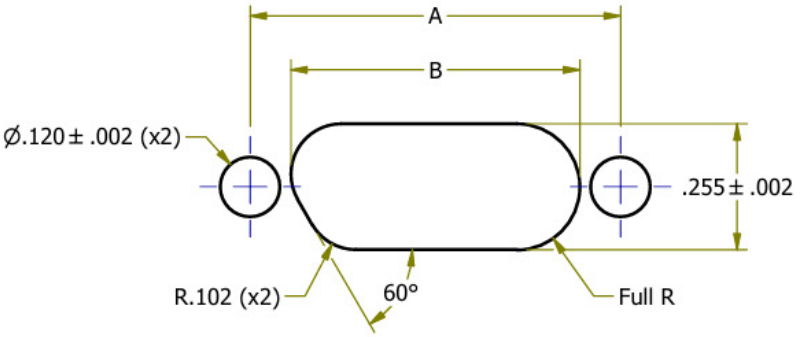


TABLE 1: Recommended Series 702 MultiFlex Micro-D RF Panel Cutouts			
Description	Housing Size	A ±.002	B ±.002
4 Position	A	.750	.585
6 Position	B	.970	.805
8 Position	C	1.190	1.025

703 Series

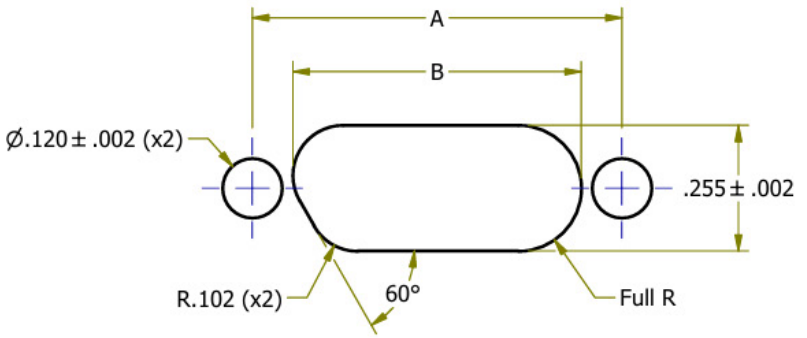


TABLE 2: Recommended Series 703 MultiFlex Micro-D RF Hybrid Panel Cutouts			
Description	Housing Size	A ±.002	B ±.002
2 Position	A	.860	.695
5 Position	B	1.090	.925
8 Position	C	1.495	1.330

Data Specifications for Storm Flex® 047 & 034 Cables

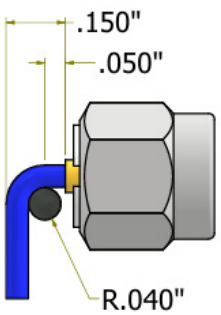
Specifications	Storm Flex® 047	Storm Flex® 034
Diameter (in/mm)	0.055/1.40	0.0375/0.9525
Max Frequency (Max, GHz)	67	50
Attenuation-Nom @ 18 GHz (dB/ft)	NA	NA
Attenuation-Nom @ 26.5 GHz (dB/ft)	2.42	3.05
Attenuation-Nom @ 50GHz (dB/ft)	3.52	4.38
Shielding Effectiveness (dB, 0-18 GHz)	-85 or better	-75 or better

Connector Retention (lbs/kg min), straight pull	10/4.54	8/3.63
Connector Retention (lbs/kg min), right angle pull	5/2.27	3/1.36
Weight (grams/ft & /m)	1.54/5.05	0.66/2.17
Operating Temperature Range (°C)	-55 to +125	-55 to +125

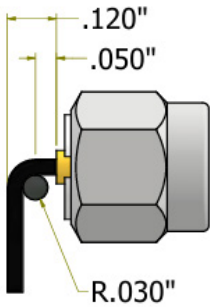
Consult factory for details.

Cable Mechanical	Storm Flex® 047	Storm Flex® 034
Cable Outer Diameter	0.055 inch (Nominal)	0.0375 inch (Nominal)
Minimum Bend Radius	0.600 inch (Dynamic) 0.040 inch (Static)	0.375 inch (Dynamic) 0.030 inch (Static)
Durability	500 mates (Minimum)	500 mates (Minimum)
Pull Force	10 lbs (Tensile Load)	8 lbs (Tensile Load)

Storm Flex 047
Minimum Bend Radius - 0.040"

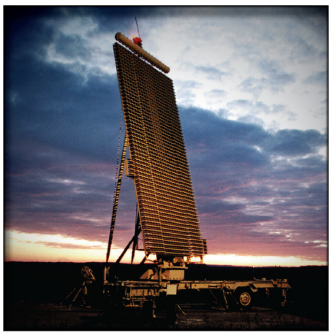


Storm Flex 034
Minimum Bend Radius - 0.030"





Defense Electronics



Radar



Wireless



Test Equipment / Systems

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Storm Microwave

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