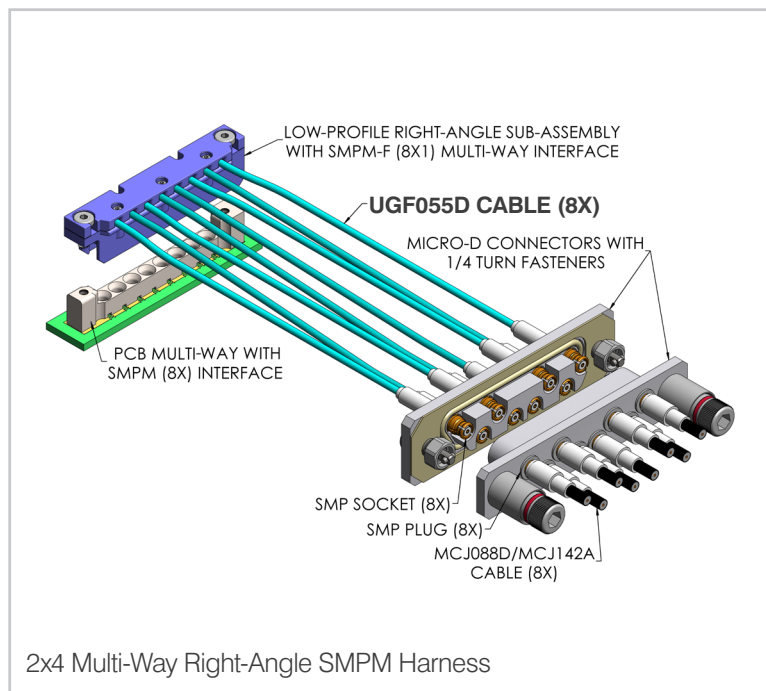


UGF055D Miniature Multi-Channel RF Cable Assemblies

INTRODUCTION

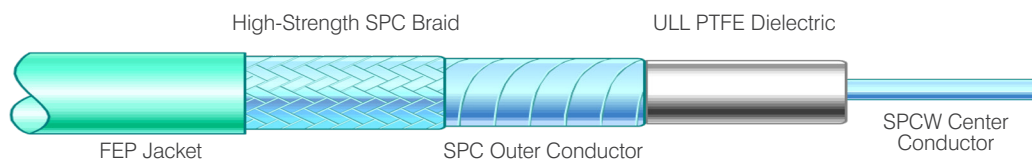


Specifically designed for high-density microwave applications up to 70 GHz, the UGF055D is a miniature multi-channel RF assembly that stands up to the most demanding space-flight, defense, and 5G environments. The ultra-low-loss UGF055D features:

- » UTiFLEX® cable
- » Lowest possible VSWR and insertion loss
- » High-performance thread-on and push-on connectors
- » Multi-way harness configurations for launching directly onto PCBs

Employing all the cable and connector performance and proven reliability of our UTiFLEX line – only in a smaller and higher-performing package – UGF055D has a double-shielded cable construction with a rugged FEP outer jacket. Popular connector options include 1.85 mm, 2.92 mm, SMP, and SMPM.

CABLE CONSTRUCTION

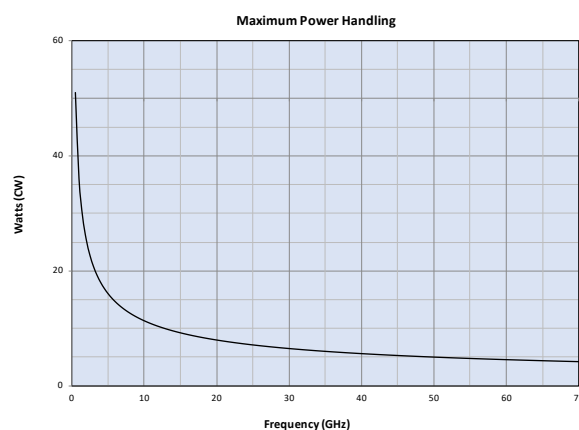
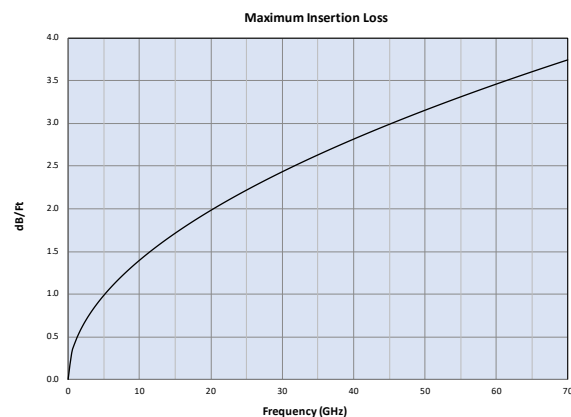


FEATURES	BENEFITS
Line sizes to match high-frequency connectors	• Lowest possible return loss (VSWR) and insertion loss
Helical metal-wrapped outer conductor	• Maximizes RF shielding and flexibility, especially critical for high-density multi-way applications
MIL and/or space-rated materials	• Available M39012 Group A and B compliant, and as required, restricted use of prohibited materials such as pure tin, cadmium, and zinc
100% test and inspection of electrical and mechanical requirements	• Allows peace of mind and for receipt and integration of assemblies/harnesses without additional quality checks
Vertical integration of connectors, cables, and assemblies	• CarlisleIT-produced connectors and cables are designed for optimized assembly and matching, enhancing performance and reliability of finished assemblies/harnesses
Compatible with high-density PCB launch mechanism	• Enables direct launch to PCBs with proven SMPM technology, reducing footprint, and lowering installation costs

UGF055D Miniature Multi-Channel RF Cable Assemblies

SPECIFICATIONS & PERFORMANCE

Mechanical		
Center Conductor Diameter		0.010" (0.25 mm)
Outer Shield Diameter		0.046" (1.17 mm)
Overall Diameter		0.055" +/- 0.004" (1.40 +/- 0.10 mm)
Mass		≤ 1.5 g/ft (4.9 g/m)
Minimum Static Bend Radius		0.300" (7.62 mm)
Electrical		
Impedance		50 Ω
Velocity of Propagation		79%
RF Shielding		≥ 100 dB
Maximum Frequency		70 GHz
Insertion Loss	@ 1 GHz	≤ .42 dB/ft (1.37 dB/m)
	@ 10 GHz	≤ 1.39 dB/ft (5.57 dB/m)
	@ 26.5 GHz	≤ 2.38 dB/ft (7.8 dB/m)
	@ 40 GHz	≤ 3.00 dB/ft (9.85 dB/m)
	@ 70 GHz	≤ 3.7 dB/ft (12.1 dB/m)
	Stability	≤ 5% change
Environmental		
Thermal Shock		20 Cycles, -65 °C to +125 °C
Vibration		MIL-STD-202, Method 204, Condition B
Stress Crack Resistance		MIL-DTL-17, Paragraph 4.8.17
Cold Bend		MIL-STD-17, Paragraph 4.8.19



AVAILABLE CONNECTORS

Frequency Range	Connector Options
DC-18 GHz	SMA: Plug, Bulkhead Jack
DC-40 GHz	2.92 mm: Plug, Bulkhead Jack
	SMP: Plug, Jack, Right-Angle Jack, Bulkhead Jack, Multi-Way
DC-70 GHz	1.85 mm: Plug, Bulkhead Jack
	SMMP: Plug, Jack, Right-Angle Jack, Bulkhead Jack, Multi-Way PCB Launch



See our complete line of Cable Assemblies & Harnesses at:
CarlisleIT.com/products/cable-assemblies-harnesses/

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