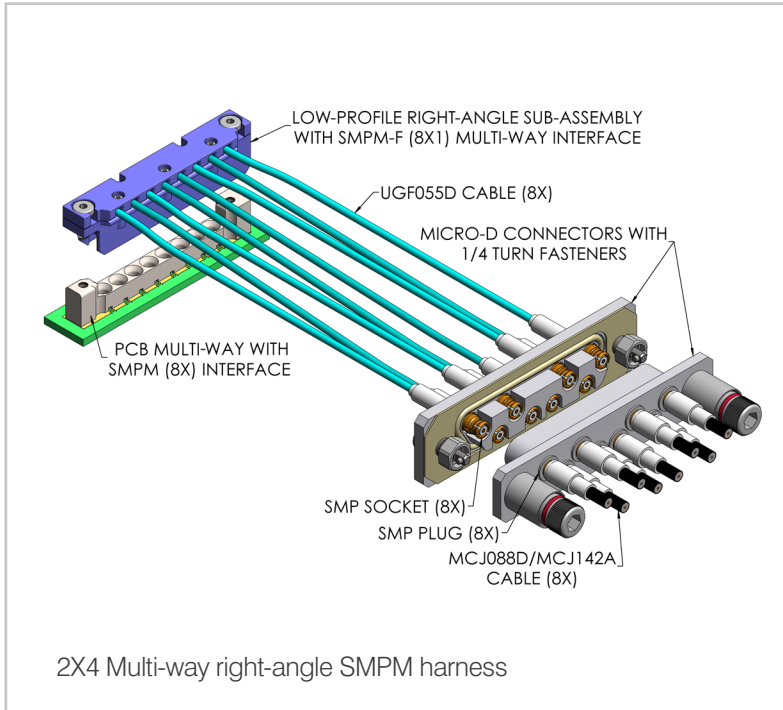


Miniature Microwave Cable Assemblies

For High-Density, Space-Flight, Defense and 5G Applications

WHEN SIGNAL INTEGRITY AND DENSITY MATTER

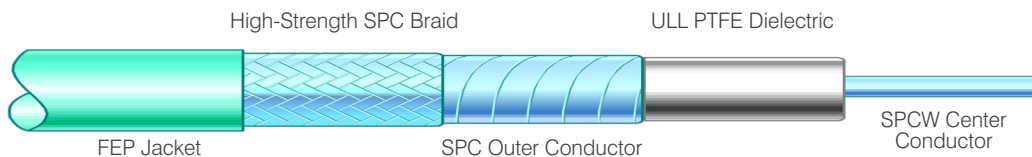


For more than three decades, Carlisle Interconnect Technologies has produced high-end microwave cable assemblies for the most demanding applications from Space-Flight through Test & Measurement. Now we introduce UGF055D, the ideal miniature ultra-low-loss microwave assembly family suitable for high-density, microwave applications up to 70 GHz.

Part of the well-known and reliable UTIFLEX product family, UGF055D cable assemblies are available with high-performance thread-on and push-on connectors and in multi-way harness configurations for launching directly onto PCBs.

The UGF055D family takes advantages of all the cable and connector performance and reliability that have become synonymous with CIT UTIFLEX, only in a smaller higher-performing package. The cable employs a double-shielded construction with a rugged FEP outer jacket. Popular connector options include 1.85mm, 2.92mm, SMP, and SMPM.

UGF055D CABLE CONSTRUCTION



FEATURES & BENEFITS

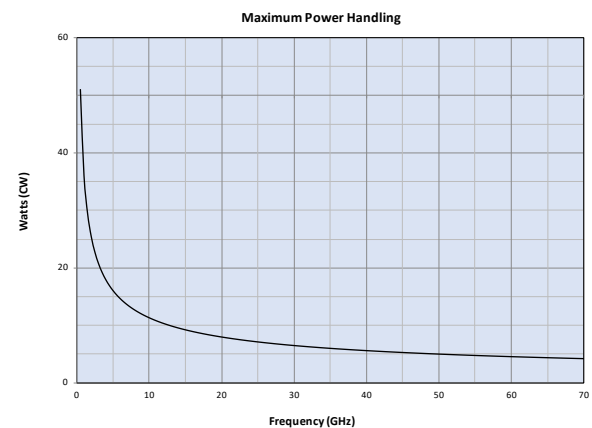
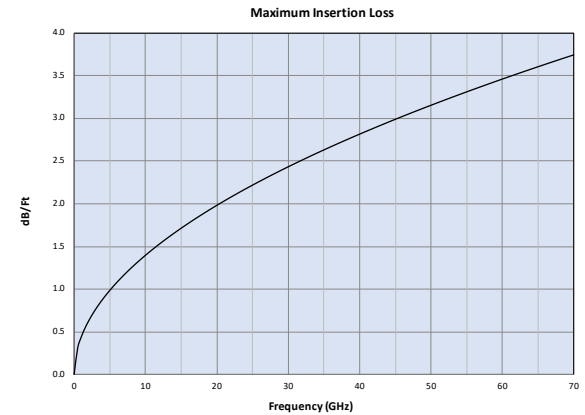
Feature	Benefit
Line sizes to match high-frequency connectors	Lowest possible return loss (VSWR) and insertion loss
Helical metal-wrapped outer conductor	Maximizes RF shielding and flexibility, especially critical for high-density multi-way applications
Mil and/or space-rated materials	Available M39012 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	CIT-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, shrinking footprint and reducing installation costs

Miniature Microwave Cable Assemblies

For High-Density, Space-Flight, Defense and 5G Applications

SPECIFICATIONS & PERFORMANCE

Mechanical	
Center Conductor Diameter [inch (mm)]	0.010 (0.25)
Outer Shield Diameter [inch (mm)]	0.046 (1.17)
Overall Diameter [inch (mm)]	0.055+/-0.004 (1.40+/-0.10)
Mass [grams/ft (grams/meter)]	≤ 1.5 (4.9)
Minimum Static Bend Radius [inch (mm)]	0.300 (7.62)
Electrical	
Impedance (Ohms)	50
Velocity of Propagation (%)	79
RF Shielding 9dB	≥ 100
Maximum Frequency (GHz)	70
Insertion Loss [dB/100ft (dB/meter)] @ 1GHz	≤ 42.0 (1.37)
Insertion Loss [dB/100ft (dB/meter)] @ 10 GHz	≤ 139.0 (5.57)
Insertion Loss [dB/100ft (dB/meter)] @ 26.5 GHz	≤ 238.0 (7.80)
Insertion Loss [dB/100ft (dB/meter)] @ 40 GHz	≤ 300.0 (9.85)
Insertion Loss [dB/100ft (dB/meter)] @ 70 GHz	≤
Insertion Loss Stability (% change)	≤ 5
Environmental	
Thermal Shock	20 Cycles, -65 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	2.92mm (Plug, Bulkhead Jack), SMP (Plug, Jack, Right-Angle Jack, Bulkhead Jack, Multi-Way)
DC-70 GHz	1.85mm (Plug, Bulkhead Jack), SMPM (Plug, Jack, Right-Angle Jack, Bulkhead Jack, Multi-Way PCB Launch)



See CarlisleIT's line of Cable Assemblies & Harness products at:

CarlisleIT.com/products/cable-assemblies-harnesses

+1 (800) 458.9960

Sales@CarlisleIT.com