GORE® Microwave/RF Assemblies

For Civil Aircraft

ENGINEERED TO MAINTAIN INTEGRITY

Together, improving life

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Proven high-quality performance and reliability with durable, lightweight cable assemblies

Maintaining signal integrity in challenging environments is essential to ensuring the reliability of critical aircraft systems. However, independent studies and research conducted by Gore showed that globally more than 75 percent of microwave/RF cable assemblies are frequently replaced due to damage during installation or operation. As a result, costs can quickly add up with replacing assemblies, extra labor, and more maintenance and downtime.

GORE® Microwave/RF Assemblies are engineered specifically to maintain electrical and mechanical integrity in the most difficult conditions over the aircraft's lifetime. They withstand complex routing, repeated vibration, shock, abrasion, harsh contaminants, and fluctuating temperatures while delivering reliable signal transmission. These cable assemblies have been proven to maintain low insertion loss and return loss, excellent phase and amplitude stability, and more reliable VSWR after installation.
Gore also offers a variety of robust, low-profile connector options precisely tailored to optimize assembly performance.

Substantial Weight Savings

Gore's cable types 65, 6E, 7L and 7M feature an expanded polytetrafluoroethylene (ePTFE) fiber jacket that offers significant weight savings when compared to extruded fluorinated ethylene propylene (FEP) or perfluoroalkoxy alkane (PFA) jackets. Our lighter-weight materials also result in smaller cable diameters in your system architecture where space is at a premium.

Easier Routing & Installation

Gore's selection of high-performance microwave/RF cable assemblies facilitates easier installation for aircraft maintainers. The small cable diameter increases flexibility with a tight bend radius making routing simple, particularly when retrofitting cable assemblies in overcrowded areas surrounding sensitive electronic systems.

Benefits of GORE® Microwave/RF Assemblies

- Reliable signal integrity with low loss and excellent phase/amplitude stability
- Outstanding shielding effectiveness for less RF interference among electronic systems
- Longer product life, reduced downtime, and less total costs with mechanically rugged designs
- Improved fuel efficiency and increased cargo with lightweight cable assemblies
- Easy installation due to smaller diameters with greater flexibility and tight bend radius
- Increased design flexibility with a variety of robust, low-profile connector options
- Proven performance with approved aerospace materials through qualification testing

Fully Tested & Qualified

Gore controls the entire manufacturing process from purchasing raw materials and creating and applying the proprietary dielectric material, through testing and shipping the final cable assembly. This unsurpassed vertical integration allows Gore the complete control necessary to achieve tight specifications consistently. Where applicable, this process includes testing the assemblies for insertion loss, VSWR, phase and amplitude stability, impedance control, shielding effectiveness, vapor leakage and more. Ensuring that every cable assembly will deliver the highest-quality performance required for today's aircraft.

Whatever type of microwave/RF assemblies your system architecture requires (Table 1), Gore's rugged solutions with approved aerospace materials and robust connector options provide stable and accurate performance over time.

Table 1: Gore's Standard Solutions

	Cable Type							
Frequency	**5H**	**G5**	**8W**	**6E**	**65**	**7E**	**7L**	**7M**
Ka Band	●							
Ku Band		●	●	●	●	●		
L Band							●	●

GORE® Microwave/RF Assemblies, Types 5H, G5, 8W (Ka-Band / Ku-Band Applications)

High-frequency Gore assemblies ensure optimal electrical and mechanical performance consistently for the life of the aircraft. They deliver dependable signal integrity for superior radio frequency up to 32 gigahertz (Table 2). They have a small, lightweight construction without compromising mechanical strength — making Gore's assemblies ideally suited for conduit installation or areas that require little or no maintenance (Figure 1). Additionally, these durable assemblies maintain low loss with outstanding shielding effectiveness in the harshest aerospace conditions (Figure 2).

Unlike standard bifurcated contacts used in test connectors, the robust connectors of Gore's assemblies withstand repeated vibration without sacrificing signal quality and performance.

Typical Applications

- Ka-Band SATCOM antennas
- Ku-Band SATCOM antennas

Standards Compliance

- BSS7239 and ABD0031 (AITM 3.0005): Toxicity
- EIA-364-66A: EMI Shielding Effectiveness Test Method for Electrical Connectors
- FAR Part 25, Appendix F, Part I, BSS7230, and ABD0031 (AITM 2.0005): Flammability
- FAR Part 25, Appendix F, Part V, BSS7238, and ABD0031 (AITM 3.0008B): Smoke Density
- MIL-DTL-17: Cables, Radio Frequency, Flexible and Semi-Rigid
- MIL-STD-202: Test Methods for Electronic and Electrical Component Parts
- MIL-STD-810: Environmental Test Methods

Figure 1: Durable Construction

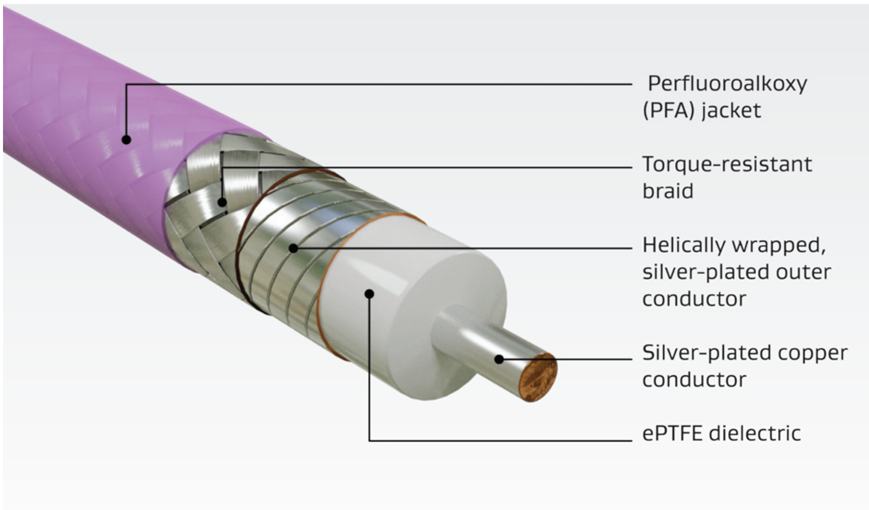

Figure 2: Typical Insertion Loss

The electrical specifications for all cable types are based on a 0.9 m (36 in) assembly length and the maximum frequency with straight connectors.

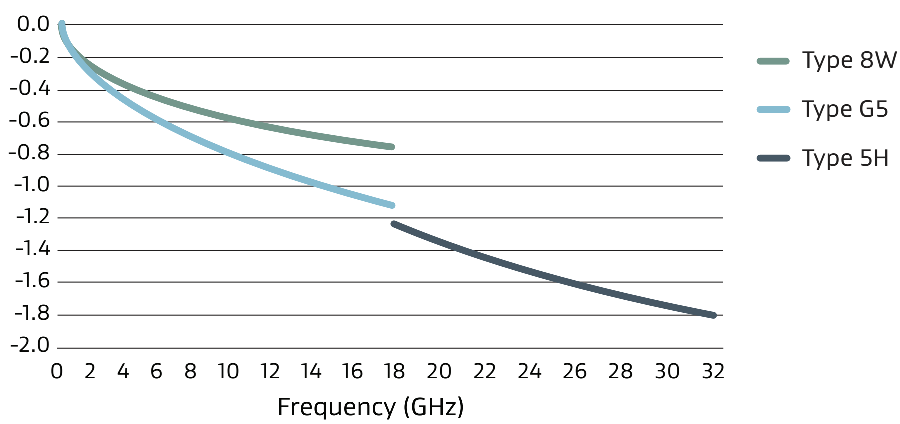

Table 2: Cable Assembly Properties

The electrical specifications for all cable types are based on a 0.9 m (36 in) assembly length and the maximum frequency with straight connectors.

Electrical

	Value		
Property	**Type 5H**	**Type G5**	**Type 8W**
Maximum Frequency (GHz)	32	18	18
Optimized Frequency (GHz)	17.5 – 22.0 27.0 – 32.0	DC-18	DC-18
Typical VSWR through Max Frequency Straight-to-Straight Connector	1.30:1	1.25:1	1.25:1
Typical Attenuation through Max Frequency dB/m (dB/ft)	1.81 (0.55)	1.06 (0.32)	0.63 (0.19)
Standard Impedance (Ohms)	50 ± 1	50 ± 1	50 ± 1
Nominal Velocity of Propagation (%)	85	85	85
Nominal Time Delay ns/m (ns/ft)	3.94 (0.10)	3.94 (0.10)	3.94 (0.10)
Capacitance pFm/m (pF/ft)	72.7 (22.1)	80.3 (24.4)	78.6 (24.0)
Shielding Effectiveness through 18 GHz (-dB)	> 90	> 100	> 100
Nominal Dielectric Constant	1.4	1.4	1.4
Dielectric Withstanding Voltage (Vrms)	500	1000	1500

Mechanical / Environmental

	Value		
Property	**Type 5H**	**Type G5**	**Type 8W**
Jacket Material		PFA	
Jacket Color		Purple	
Center Conductor		Solid, Silver-Plated Copper	
Dielectric Material		ePTFE	
Nominal Outer Diameter mm (in)	4.3 (0.17)	4.8 (0.19)	8.1 (0.32)
Nominal Weight g/m (lb/1000 ft)	42.0 (28.2)	52.5 (35.3)	144.4 (97.0)
Minimum Bend Radius mm (in)	25.4 (1.0)	25.4 (1.0)	50.8 (2.0)
Temperature Range (°C)	-55 to +125	-55 to +125	-55 to +125

Connector Options

Gore offers robust, low-profile connector options designed specifically for GORE® Microwave/RF Assemblies, Types 5H, G5, and 8W (Table 3). These connectors are engineered to complement the performance of each cable type, minimizing loss and reflection for optimized signal transmission. Gore also offers an intermediate interface that allows the use of replacement connectors.

Ordering Information

To review your application needs and request a quote for GORE® Microwave/RF Assemblies, Types 5H, G5, and 8W for Ka-Band and Ku-Band applications, please contact a Gore representative. Alternatively, see page 18 regarding Gore's online tools to build your assembly and calculate insertion loss, VSWR, and other parameters.

Gore's durable cables maintain dependable signal integrity with low loss and outstanding shielding effectiveness under the harshest aerospace conditions.

Table 3: Connector Options

Connector Type	Direct Mount Connector Code	Replaceable End Connector Code	Cable Type Applicability
SMA Straight Male	R01[1]	701[1]	G5 / 8W
SMA 90° Male	R71[1]	7V1[1]	G5 / 8W
SMA 45° Male	–	7P1[1]	G5 / 8W
SMA Straight Female	R02	–	G5 / 8W
SMA Bulkhead Female	R42	–	G5 / 8W
SMA Flangemount Female	R52	–	G5 / 8W
TNCA Straight Male	C01[1]	801[1]	G5 / 8W
TNCA 90° Male	C71[1]	8V1[1]	G5 / 8W
TNCA 45° Male	–	8P1[1]	G5 / 8W
TNCA Straight Female	C02	802	G5 / 8W
TNCA Bulkhead Female	C42	842	G5 / 8W
TNCA Flangemount Female	C52	852	G5 / 8W
Type N Straight Male	N01	901	G5 / 8W
Type N 90° Male	N71	9V1	G5 / 8W
Type N 45° Male		9P1	G5 / 8W
Type N Straight Female	N02	902	G5 / 8W
Type N Bulkhead Female	N62	962	G5 / 8W
Type N Flangemount Female	N52	–	G5 / 8W
HN Straight Male	H01	ZJS	G5 / 8W
HN Bulkhead Female	–	ZNL	G5 / 8W
Size 8 Pin Contact BMA[2]	Z8T	–	G5
Size 8 Socket Contact BMA[2]	ZJA	–	G5
Size 8 Pin Contact BMA[3]	Z8T-001	–	G5
Size 8 Socket Contact BMA[3]	ZY2	–	G5
Size 8 Pin Contact BMB[2]	ZR3	–	G5
Size 8 Socket Contact BMB[2]	ZR2	–	G5
Size 8 Pin Contact BMB[3]	ZR3-001	–	G5
Size 8 Socket Contact BMB[3]	ZNS	–	G5
2.92 mm Straight Male	ZMQ	–	5H
2.92 mm 90° Male	ZQA	–	5H
3.5 mm Straight Male	D01	–	5H / G5
3.5 mm Straight Female	D02		5H / G5
M8 Multiport Straight Male	ZXE	ZTC	G5 / 8W
M8 Multiport Straight Female	ZUD	ZTD	G5 / 8W
M8 Multiport 90° Male	–	Y1C / Y1D[4]	G5 / 8W
M8 Multiport 90° Female	–	Z1C / Z1D[4]	G5 / 8W
M8 Multiport 45° Male	–	Z1A / Z1B[4]	G5 / 8W
M8 Multiport 45° Female	–	Y1A / Y1B[4]	G5 / 8W
TK Straight Male	–	ZVM	G5 / 8W
TK Straight 90° Male	–	Y13	G5 / 8W
TK Straight 45° Male	–	ZVN	G5 / 8W

1. Also available in Lock Wire Hole and Self-Locking versions. For Lock Wire version, replace "1" with "L" eg. R01 would be R0L.
   For Self-Locking version, replace "1" with "S" eg. R01 would be R0S.
2. For use in MIL-DTL-38999 connector systems.
3. For use in ARINC 600 connector systems.
4. Y1B and Y1D are extended versions of Y1A and Y1C connectors respectively. Z1B and Z1D are extended versions of Z1A and Z1C connectors respectively.

GORE-FLIGHT® Microwave Assemblies (Ku-Band Applications)

Qualified to the most stringent aerospace specifications for airframes, Gore's award-winning microwave assemblies provide stable and accurate performance over the aircraft's lifespan. They are proven to maintain the lowest insertion loss and more reliable VSWR performance up to 18 gigahertz before and after installation compared to alternative assemblies (Table 4).

These rugged assemblies can easily tolerate rigorous installation, maintenance activities and flight conditions (Figure 3). The engineered fluoropolymers used in this construction help reduce abrasion caused by routing, and resist the effects of vibration during flight. They are also lighter than leading competitor assemblies, improving fuel efficiency. GORE-FLIGHT® Microwave Assemblies reduce costly production delays, field service frequency, and replacement assemblies — ultimately decreasing total costs.

Typical Applications

- Ku-Band SATCOM antennas
- Navigation/communication systems
- Radar interconnects

Standards Compliance

- BSS7239 and ABD0031 (AITM 3.0005): Toxicity
- EIA-364-66: EMI Shielding Effectiveness Test Method for Electrical Connectors
- FAR Part 25, Appendix F, Part I, BSS7230, and ABD0031 (AITM 2.0005): Flammability
- FAR Part 25, Appendix F, Part V, BSS7238, and ABD0031(AITM 2.0008B): Smoke Density
- MIL-DTL-17: Cables, Radio Frequency, Flexible and Semi-Rigid
- MIL-STD-202: Test Methods for Electronic and Electrical Component Parts
- MIL-STD-810: Environmental Test Methods
- MIL-T-81490: Transmission Lines, Transverse Electrical Mode

Figure 3: Rugged Construction

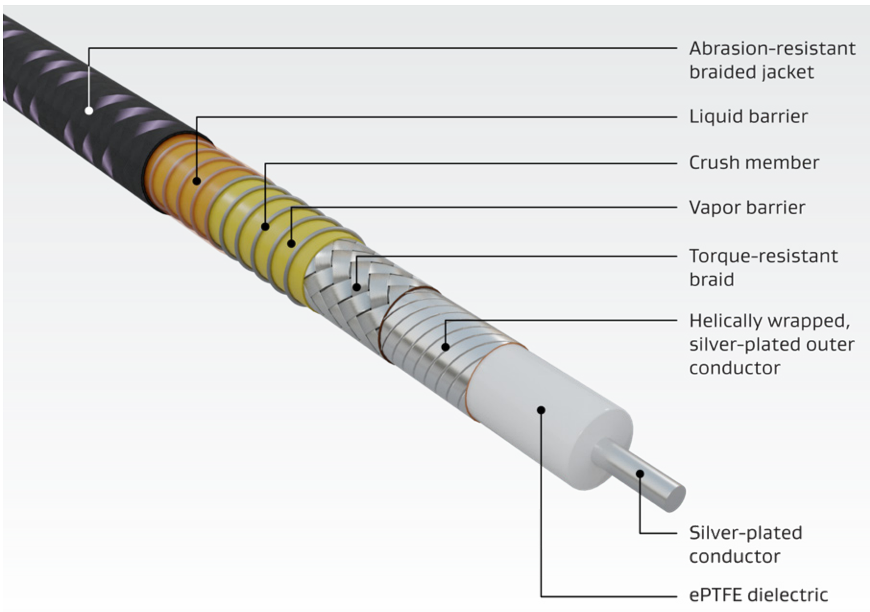

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Table 4: Cable Assembly Properties

Electrical

Property	Value: Type 65	Value: Type 6E
Maximum Frequency (GHz)	18	18
Typical VSWR through Max Frequency Straight Connector	1.25:1	1.25:1
Typical Attenuation through Max Frequency dB/m (dB/ft)	1.12 (0.34)	0.65 (0.20)
Standard Impedance (Ohms)	50 ± 1	50 ± 1
Nominal Velocity of Propagation (%)	86	86
Nominal Time Delay ns/m (ns/in)	4.0 (0.10)	4.0 (0.10)
Capacitance pF/m (pF/ft)	75.8 (23.1)	78.7 (24.0)
Shielding Effectiveness through Max Frequency (dB)	90	90
Nominal Dielectric Constant	1.35	1.35
Dielectric Withstanding Voltage (Vrms)	1000	1500

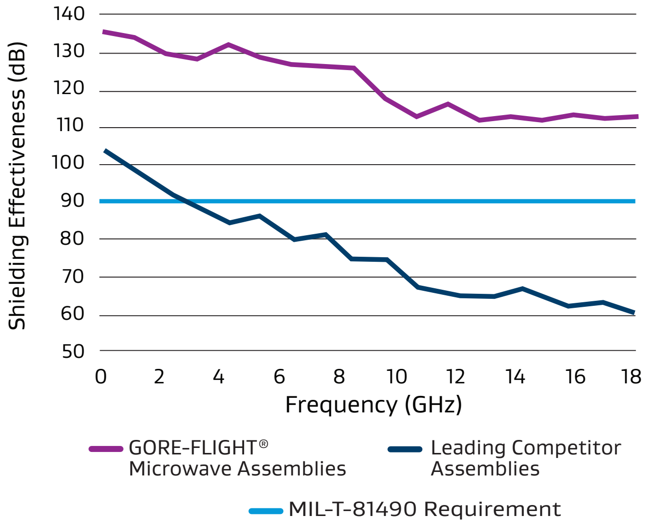
Mechanical / Environmental

Property	Value: Type 65	Value: Type 6E
Jacket Material	Engineered Fluoropolymer	
Jacket Color	Black with Purple Stripes	
Center Conductor	Solid, Silver-Plated Copper	
Dielectric Material	ePTFE	
Nominal Outer Diameter mm (in)	6.1 (0.24)	8.9 (0.35)
Nominal Weight g/m (lb/1000 ft)	60.0 (40.3)	125.0 (84.0)
Minimum Bend Radius mm (in)	25.4 (1.0)	48.3 (1.9)
Concentrated Load per MIL-T-81490, 4.7.18 (lb)	> 150	> 150
Temperature Range (°C)	-55 to +125	-55 to +125

Outstanding EMI Shielding

Radiating cable assemblies can interfere with critical aircraft systems due to power and frequency requirements that continue to increase in today's sophisticated electronics. These systems can also be susceptible to interference due to inadequate shielding effectiveness. With proven EMI shielding performance, GORE-FLIGHT® Microwave Assemblies improve signal integrity by reducing RF interference among multiple electronic systems (Figure 4).

Figure 4: Shielding Effectiveness Comparison[a]



a. Data in this graph reflects Type 6E test results. Results for Type 65 are similar.

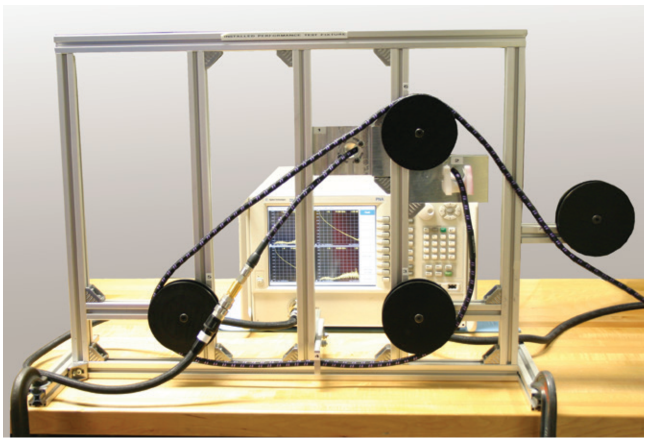
Proven Installed Performance

Gore has designed a simulator to evaluate the stress of installation on microwave airframe assemblies (Figure 5). The simulator has several mandrels that replicate minimum bend radius conditions, routing guides that induce torque, and an abrasive edge to simulate routing across sharp edges or through access holes in the airframe structure.

Testing characteristics such as insertion loss and VSWR before and after routing through the simulator verifies whether an assembly can withstand the complex challenges of installation that can degrade signal integrity. Gore ran a 10-foot assembly through the simulator for 3 cycles to measure the insertion loss and VSWR of its assembly compared to a leading competitor assembly. The results demonstrate the importance of testing these characteristics after installation.

Results showed that the GORE-FLIGHT® Microwave Assemblies maintained the lowest insertion loss before and after installation (Figure 6) compared to the leading competitor assembly (Figure 7). Likewise, the VSWR of Gore's assembly is well controlled (Figure 8) compared to the leading competitor assembly that was less reliable due to impedance changes from cable damage

Figure 5: Installation Simulator



(Figure 9). With this level of performance, Gore's assemblies maintain consistent impedance control of 50 ± 1 ohms, eliminating VSWR stack-up issues when routing through airframe bulkheads.

With GORE-FLIGHT® Microwave Assemblies, a fit-and-forget philosophy is now a reality — providing the most cost-effective solution that ensures critical system performance in aircraft.

For more information about the installation simulator, visit **gore.com/simulator.**

Figure 6: GORE-FLIGHT® Microwave Assemblies Insertion Loss[a]

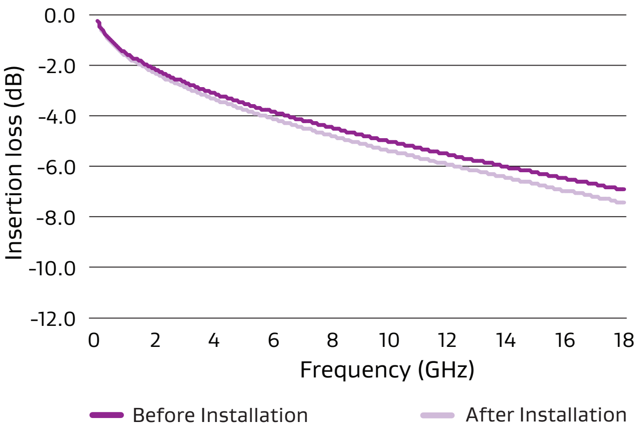


Figure 7: Leading Competitor Assembly Insertion Loss

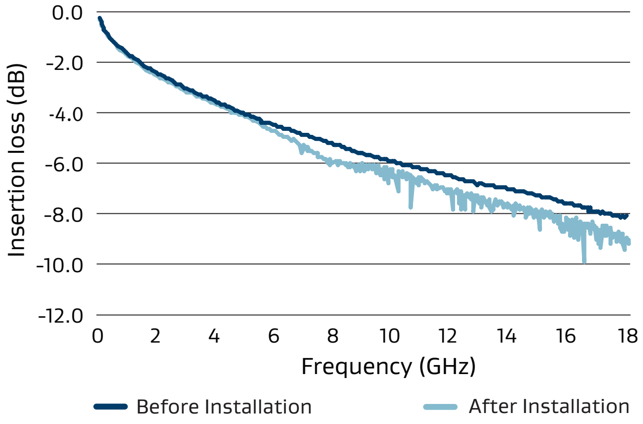


Figure 8: GORE-FLIGHT® Microwave Assemblies VSWR[a]

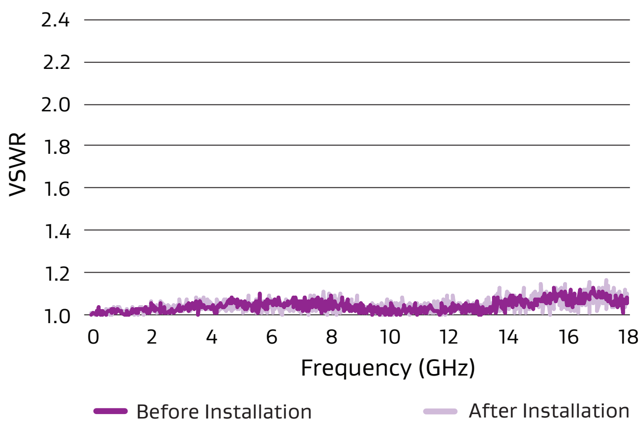
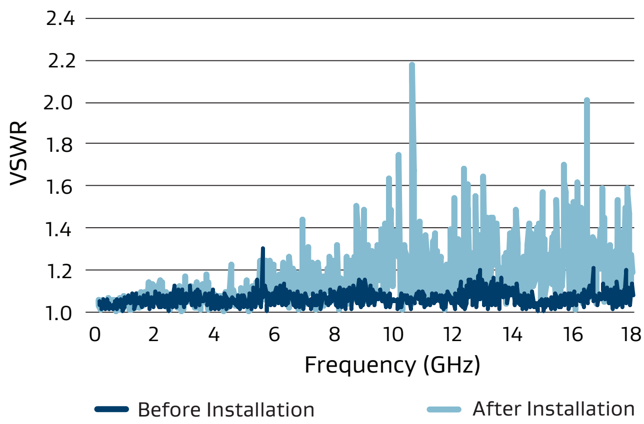


Figure 9: Leading Competitor Assembly VSWR



a. Data in this graph reflects Type 6E test results. Results for Type 65 are similar.

Connector Options

Gore offers robust, low-profile connector options designed specifically for GORE-FLIGHT® Microwave Assemblies. These connectors are engineered to complement the performance of each cable type, minimizing loss and reflection for optimized signal transmission. Gore also offers an intermediate interface that allows the use of replacement connectors (Table 5).

Table 5: Connector Options

The maximum operating frequency of an assembly is determined as the lowest frequency of either the connectors or the assembly.

Connector Type	Direct Mount Connector Code	Replaceable End Connector Code	Cable Type Applicability
SMA Straight Male	R01[1]	701[1]	65 / 6E
SMA 90° Male	R71[1]	7V1[1]	65 / 6E
SMA 45° Male		7P1[1]	65 / 6E
SMA Straight Female	R02		65 / 6E
SMA Bulkhead Female	R42		65 / 6E
SMA Flangemount Female	R52		65 / 6E
TNCA Straight Male	C01[1]	801[1]	65 / 6E
TNCA 90° Male	C71[1]	8V1[1]	65 / 6E
TNCA 45° Male		8P1[1]	65 / 6E
TNCA Straight Female		802	65 / 6E
TNCA Bulkhead Female	C42	842	65 / 6E
TNCA Flangemount Female	C52	852	65 / 6E
Type N Straight Male		901	65 / 6E
Type N 90° Male		9V1	65 / 6E
Type N 45° Male		9P1	65 / 6E
Type N Straight Female		902	65 / 6E
Type N Bulkhead Female		962	65 / 6E
HN Straight Male		ZJS	65 / 6E
HN Bulkhead Female		ZNL	65 / 6E
BMB Pin		ZPB	65

Table 5: Connector Options (continued)

Connector Type	Direct Mount Connector Code	Replaceable End Connector Code	Cable Type Applicability
Size 8 Pin Contact BMA[2]	Z8T		65
Size 8 Socket Contact BMA[2]	ZJA		65
Size 8 Pin Contact BMA[3]	Z8T-001		65
Size 8 Socket Contact BMA[3]	ZY2		65
Size 8 Pin Contact BMB[2]	ZR3		65
Size 8 Socket Contact BMB[2]	ZR2		65
Size 8 Pin Contact BMB[3]	ZR3-001		65
Size 8 Socket Contact BMB[3]	ZNS		65
M8 Multiport Straight Male	ZXE	ZTC	65 / 6E
M8 Multiport Straight Female	ZUD	ZTD	65 / 6E
M8 Multiport 90° Male	–	Y1C / Y1D[4]	65 / 6E
M8 Multiport 90° Female		Z1C / Z1D[4]	65 / 6E
M8 Multiport 45° Male		Z1A / Z1B[4]	65 / 6E
M8 Multiport 45° Female		Y1A / Y1B[4]	65 / 6E
TK Straight Male		ZVM	65 / 6E
TK Straight 90° Male		Y13	65 / 6E
TK Straight 45° Male		ZVN	65 / 6E

1. Also available in Lock Wire Hole and Self-Locking versions. For Lock Wire version, replace "1" with "L" eg. R01 would be R0L. For Self-Locking version, replace "1" with "S" eg. R01 would be R0S.
2. For use in MIL-DTL-38999 connector systems.
3. For use in ARINC 600 connector systems.
4. Y1B and Y1D are extended versions of Y1A and Y1C connectors respectively. Z1B and Z1D are extended versions of Z1A and Z1C connectors respectively.

Ordering Information

To review your application needs and request a quote for GORE-FLIGHT® Microwave Assemblies for Ku-Band applications, please contact a Gore representative. Alternatively, see page 18 regarding Gore's online tools to build your assembly and calculate insertion loss, VSWR, and other parameters.

Torque Values

The recommended mating and installation torque values for Gore connector options are provided in Table 6.

Table 6: Mating/Installation Torque Values

Connector Type	Installation Torque in-lbs (Nm)
TNCA[i] TNCA Bulkhead Mount Panel Nut	23 ± 3 (2.59 ± 0.33) 35 ± 5 (3.95 ± 0.56)
SMA	12 – 15 (1.35 – 1.69)
Type N[i] Type N Bulkhead Mount Panel Nut	23 ± 3 (2.59 ± 0.33) 35 ± 5 (3.95 ± 0.56)
TK	19 – 21 (2.15 – 2.37)
HN HN Bulkhead Mount Panel Nut	15 ± 3 (1.69 ± 0.33) 35 ± 5 (3.95 ± 0.56)
Replaceable Adapter	45 ± 5 (5.08 ± 0.56)

i. Based on MIL-T-81490

Rugged cables from Gore maintain the lowest insertion loss and more reliable VSWR after installation compared to leading competitor assemblies.

GORE® Microwave/RF Assemblies, 7 Series (Ku-Band / L-Band Applications)

Gore's award-winning 7 Series is designed precisely to prevent the ingress of water vapor, fuel, and other hazardous contaminants commonly found in aerospace environments. They routinely maintain low loss and excellent phase stability for high-quality performance up to 18 gigahertz over the aircraft's lifetime (Table 7). These tough assemblies also provide excellent shielding effectiveness against electromagnetic interference that can compromise signal integrity and reduce the quality of signal transmission.

Additionally, the 7 Series has a smaller diameter with greater flexibility and a tighter bend radius for ease of installation compared to other standard airframe assemblies that are more rigid (Figure 10).

Typical Applications

- L-Band Air-to-Ground (ATG) networks
- Active electronically-steered phased arrays
- GPS connectivity
- Iridium
- Ku-Band SATCOM antennas
- SwiftBroadband

Standards Compliance

- MIL-DTL-17: Cables, Radio Frequency, Flexible and Semi-Rigid
- MIL-STD-202: Test Methods for Electronic and Electrical Component Parts
- MIL-STD-810: Environmental Test Methods
- MIL-T-81490: Transmission Lines, Transverse Electrical Mode

Figure 10: Vapor-Sealed Construction

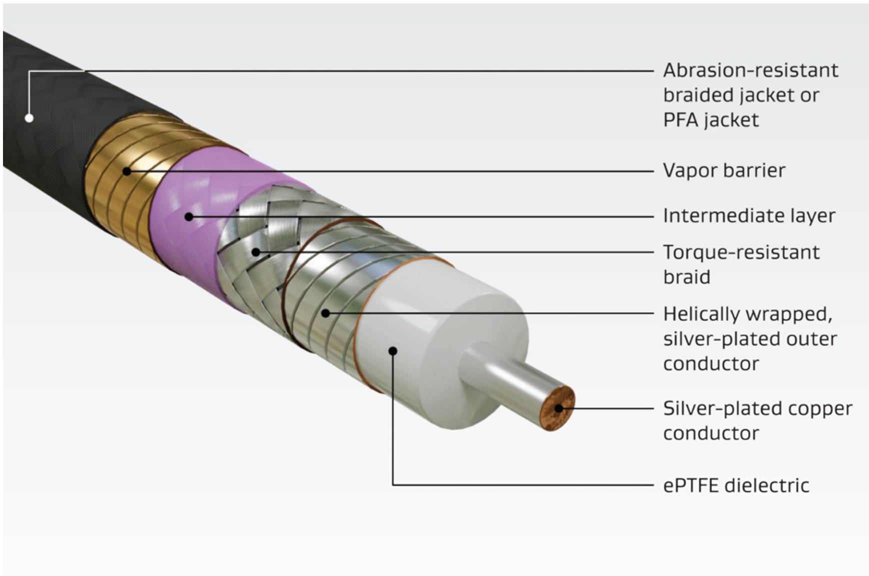


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Table 7: Cable Assembly Properties

Electrical

Property	Value: Type 75	Type 7E	Type 7L	Type 7M
Maximum Frequency (GHz)	18	18	7	2
Typical VSWR through Max Frequency Straight-to-Straight Connector	1.25:1	1.25:1	1.20:1	1.10:1
Maximum Attenuation through Max Frequency dB/m (dB/ft)	1.05 (0.32)	0.62 (0.19)	0.33 (0.10)	0.13 (0.04)
Standard Impedance (Ohms)	50 ± 1	50 ± 1	50 ± 1	50 ± 1
Nominal Velocity of Propagation (%)	85	85	85	85
Nominal Time Delay ns/m (ns/in)	3.94 (1.20)	3.94 (1.20)	3.94 (1.20)	3.94 (1.20)
Capacitance pF/m (pF/ft)	85.3 (26.0)	85.3 (26.0)	85.3 (26.0)	85.3 (26.0)
Shielding Effectiveness through Max Frequency (dB)	> 90	> 90	> 90	> 90
Nominal Dielectric Constant	1.4	1.4	1.4	1.4
Dielectric Withstanding Voltage (Vrms)	1000	1500	1500	1500

Mechanical / Environmental

Property	Value: Type 75	Type 7E	Type 7L	Type 7M
Jacket Material	PFA		Engineered Fluoropolymer	
Jacket Color	Purple	Purple	Black	Black
Center Conductor	Solid SPC	Solid, SPC	Stranded, SPC	Solid, SPC
Dielectric Material	ePTFE			
Nominal Outer Diameter mm (in)	5.3 (0.21)	8.5 (0.34)	12.3 (0.49)	14.4 (0.57)
Nominal Weight g/m (lb/1000 ft)	63.0 (42.3)	150.9 (101.4)	262.0 (176.1)	328.0 (220.4)
Minimum Bend Radius mm (in)	25.0 (1.0)	50.0 (2.0)	62.5 (2.5)	80.0 (3.15)
Crush Resistance per MIL-T-81490, 4.7.18 (lb) kgf/cm (lb/in)	8.95 (50.0)	8.95 (50.0)	8.95 (50.0)	8.95 (50.0)
Temperature Range (°C)	-58 to +200	-58 to +200	-58 to +200	-58 to +200

Connector Options

Gore offers robust, low-profile connector options designed specifically for GORE® Microwave/RF Assemblies, 7 Series (Table 8). These connectors are engineered to complement the performance of each cable type, minimizing loss and reflection for optimized signal transmission. Gore also offers an intermediate interface that allows the use of replacement connectors.

Table 8: Connector Options

Connector Type	Direct Mount Connector Code	Replaceable End Connector Code	Cable Type Applicability
SMA Straight Male	R01[1]	701[1]	75 / 7E / 7L[4] / 7M[4]
SMA 90° Male	R71[1]	7V1[1]	75 / 7E / 7L[4] / 7M[4]
SMA 45° Male	–	7P1[1]	75 / 7E / 7L / 7M
SMA Straight Female	R02	–	75
SMA Bulkhead Female	R42	–	75
SMA Flangemount Female	R52	–	75
TNCA Straight Male	C01[1]	801[1]	75 / 7E / 7L / 7M
TNCA 90° Male	C71[1]	8V1[1]	75 / 7E[4] / 7L[4] / 7M[4]
TNCA 45° Male	–	8P1[1]	75 / 7E / 7L[4] / 7M[4]
TNCA Straight Female	C02	802	75 / 7E / 7L[4] / 7M[4]
TNCA Bulkhead Female	C42	842	75 / 7E / 7L[4] / 7M[4]
TNCA Flangemount Female	C52	852	75 / 7E / 7L[4] / 7M[4]
Type N Straight Male	N01	901	75 / 7E / 7L[4] / 7M
Type N 90° Male	N71	9V1	75 / 7E / 7L[4] / 7M[4]
Type N 45° Male	–	9P1	75 / 7E / 7L / 7M
Type N Straight Female	–	902	75 / 7E / 7L / 7M
Type N Bulkhead Female	–	962	75 / 7E / 7L / 7M
HN Straight Male	–	ZJS	75 / 7E / 7L[4] / 7M[4]
HN Bulkhead Female	–	ZNL	75 / 7E / 7L / 7M

Table 8: Connector Options (continued)

Connector Type	Direct Mount Connector Code	Replaceable End Connector Code	Cable Type Applicability
Size 8 Pin Contact BMA[2]	Z8T	–	75
Size 8 Socket Contact BMA[2]	ZJA	–	75
Size 8 Pin Contact BMA[3]	Z8T-001	–	75
Size 8 Socket Contact BMA[3]	ZY2	–	75
Size 8 Pin Contact BMB[2]	ZR3	–	75
Size 8 Socket Contact BMB[2]	ZR2	–	75
Size 8 Pin Contact BMB[3]	ZR3-001	–	75
Size 8 Socket Contact BMB[3]	ZNS	ZTC	75
M8 Multiport Straight Male	ZXE	ZTC	75 / 7E / 7L[4] / 7M[4]
M8 Multiport Straight Female	ZUD	ZTD	75 / 7E / 7L[4] / 7M[4]
M8 Multiport 90° Male	–	Y1C / Y1D[5]	75 / 7E / 7L / 7M
M8 Multiport 90° Female	–	Z1C / Z1D[5]	75 / 7E / 7L / 7M
M8 Multiport 45° Male		Z1A / Z1B[5]	75 / 7E / 7L / 7M
M8 Multiport 45° Female	–	Y1A / Y1B[5]	75 / 7E / 7L / 7M
TK Straight Male	–	ZVM	75 / 7E / 7L / 7M
TK Straight 90° Male	–	Y13	75 / 7E / 7L / 7M
TK Straight 45° Male	–	ZVN	75 / 7E / 7L / 7M

1. Also available in Lock Wire Hole and Self-Locking versions. For Lock Wire version, replace "1" with "L" eg. R01 would be R0L. For Self-Locking version, replace "1" with "S" eg. R01 would be R0S.
2. For use in MIL-DTL-38999 connector systems.
3. For use in ARINC 600 connector systems.
4. Only available in replaceable end version.
5. Y1B and Y1D are extended versions of Y1A and Y1C connectors respectively. Z1B and Z1D are extended versions of Z1A and Z1C connectors respectively.

Ordering Information

To review your application needs and request a quote for GORE® Microwave/RF Assemblies, 7 Series for Ku-Band and L-Band applications, please contact a Gore representative. Alternatively, see page 18 regarding Gore's online tools to build your assembly and calculate insertion loss, VSWR, and other parameters.

Ordering Information

GORE® Microwave/RF Assemblies are identified by a 12-character part number that designates the cable type, connector types, and assembly length (Table 9).

1	2	3	4	5	6	7	8	9	10	11	12
Cable Type		Connector A			Connector B			Assembly Length			

Positions 1–2: The two-character identifier of the cable type.

Positions 3–5 and 6–8: Connector codes A and B in alphanumeric order. When reading the label, Connector A is on the left-hand side. Additionally, Gore offers an interface that can be used with replaceable connectors for all assemblies.

Positions 9–11: The length of the assembly expressed in inches, including zeros to fill positions if the length is less than two or three digits. For example, fill in "006" for 6 inches or "024" for 24 inches.

Position 12: Identifier to further define the length of the assembly not in whole increments (e.g., 24.5). Do not use a two-place decimal; instead, round to the desirable tenth of an inch for your application. For whole-inch increments, fill in a zero in this position (e.g., 0060 or 0240).

The **GORE® Microwave/RF Assembly Builder** is a step-by-step tool that allows you to configure and request a quote for an assembly with different connector options, assembly lengths, and frequencies. For more information, visit **gore.com/rfcablebuilder**.

The **GORE® Microwave/RF Assembly Calculator** is an online tool that calculates and compares the insertion loss, VSWR, and other parameters for various cable types. For more information, visit **tools.gore.com/gmcacalc.**

Table 9: Examples of Gore's Part Numbering System

	Ordering Identifier (Part Number Positions)			
Gore Part Number	**Cable Diameter Type (Pos 1–2)**	**Connector A (Pos 3–5)**	**Connector B (Pos 6–8)**	**Length (Pos 9–12)**
G5R01C710400	G5	R01	C71	040.0 (inches) 1.02 (meters)
6EC01C011000	6E	C01	C01	100.0 (inches) 2.54 (meters)
7E7V18013205	7E	7V1	801	320.5 (inches) 8.14 (meters)

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