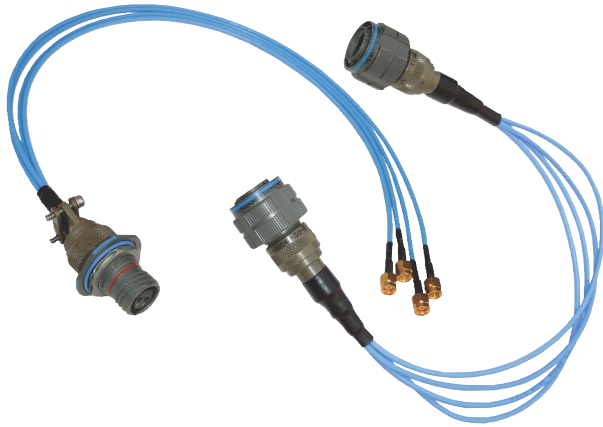


MIL-38999 Based RF Coaxial Cable Sets, DC-18 GHz, ULL04 Series, Ultra Low Loss

Avoid Multiple Coaxial Cables • Quick Assemble/Disassemble • D38999 more rugged than SMA, N

DC-18 GHz use, Ultra Low Loss RF Cable
MIL-38999 Connectors



Our MIL-38999 connectors based RF Cable Sets are ideal for military applications where panel space is at a premium. Instead of using a bunch of RF cables the designer can choose 1 single cable set with D38999 connectors and with multiple wire configurations. Well suited for portable radars where quick field assembly & disassembly is important.

Constructed using QPL'ed D38999 connectors from Deutsch/Aero, imported hi-frequency coaxial contacts and Ultra-Low-Loss Coaxial cable from USA.

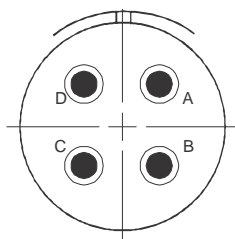
FEATURES, MIL STD MATERIALS

- MIL-38999 Series III connectors are QPL listed from suppliers like Deutsch, Aero Inc
- MIL-39029 compliant Hi-Frequency Coaxial Inserts
- DC- 18 Ghz frequency range, ultra low loss cable
- Many combinations of channels available including 4 wire, 6 wire, 8 wire, 11 wire. Pls contact us for custom versions
- Imported ultra-low loss Hi-Frequency cable with low density PTFE dielectric
- Aluminium Shell with Olive Drab Plating

MIL/DEFENSE APPLICATIONS

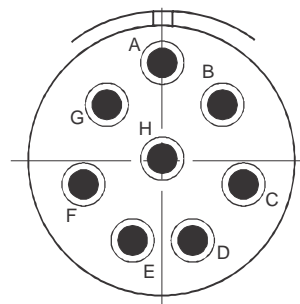
- Where panel space is at a premium. Multiple discrete RF cables can be substituted by single D38999 cable set
- Portable radars where quick field assembly & disassembly is important
- Applications where more rugged solution than SMA/N/TNC is needed

Hi-Freq. Insert Arrangements for DC-18 Ghz, D38999 RF Cable Sets



4 RF contacts,
Shell size 21,
G75 Pattern

Fig 1

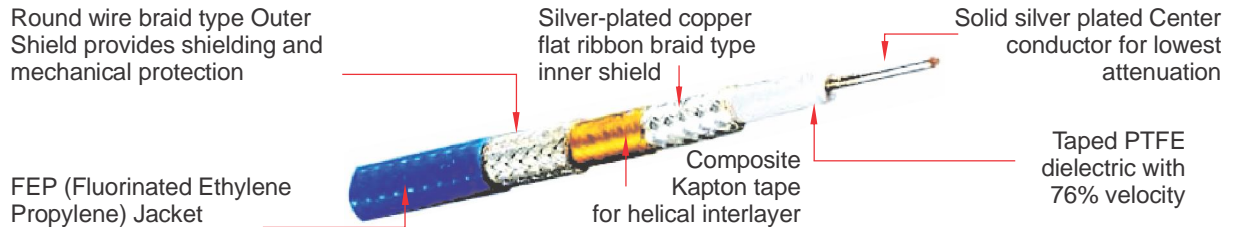


8 RF contacts,
Shell size 25,
J8 Pattern

Fig 2

ULL04 Ultra-low Loss Cable Construction

Imported Triple Shielded e-PTFE taped Phase Stable & Low Loss Cable Construction



Physical and Mechanical Specifications

Dimensions	inches	mm
Jacket	< 0.180	< 4.8
Bending Radius (minimum)	0.9	23
Weight	0.054 kg/m	
Temperature Range	-55°C to +125°C	

Electrical Specifications

Impedance	50 ohms
Velocity	76 %
Shielding Effectiveness	> -90dB
Capacitance	26.7 pF/ft

Attenuation and Power Handling Data

Frequency GHz	Insertion Loss		Power Watts
	dB/100ft	dB/100m	
0.4	6.4	20.9	900
3	17.8	58.4	320
10	33.3	109.4	165
12	36.7	120.4	150
18	45.5	149.4	120

Ordering Codes Description

ULL04 - (Length) (Connector 1) (Connector 2)
 □ □ - □ (□ / □ / □) - □ (□ / □ / □) - □ - □
L L 1 2 3 4 1 2 3 4 U W

L L	Length	0.5 = 0.5 ; 1 = 1.0 ; 2 = 2.0
1	Connector Series	MIL38999 = D38999
2	Number of Channels(wires)	4 channel = 4xST ; 6 channel = 6xST
3	Male/Female Designator	P = Male; W = Female Wallmount; J = Female Jamnut
4	Insert Pattern Code	G75 = G75 ; J8 = J8
U	Unit of Length	M = Meter ; F = Feet ; I = Inch
W	Frequency Code	18 GHz = 18G ; 3 GHz = 3G ; 0.5 GHz = 0.5G

1m cable set with D38999 (Male) on both sides, 4 wire, 18GHz = ULL04-1.0-D38999(4xST/P/G75)-D38999(4xST/P/G75)-M-18G

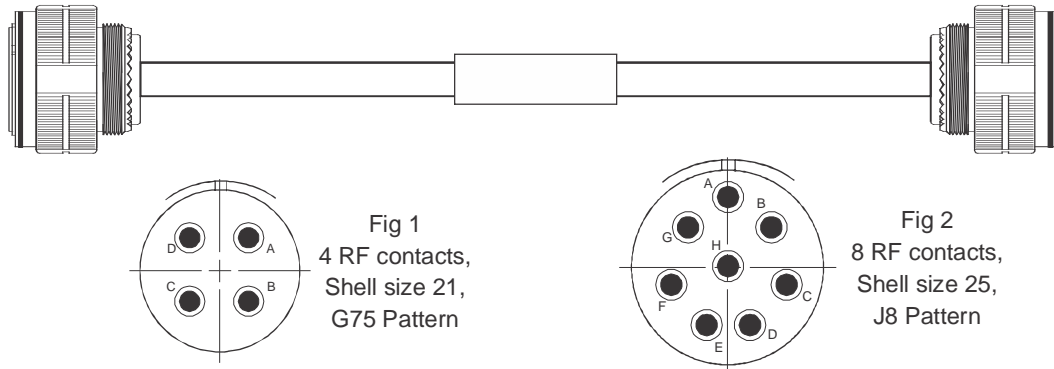
Shown trademarks are property of their respective owners.

While the information contained herein in this catalog, has been carefully compiled to the best of our knowledge, nothing is intended as representation and warranty on our part; and no statement shall be construed as recommendation to infringe any of existing patents. We accept no liability of whatsoever for any faults and errors in the information contained herein. Contents of this catalogue and specifications of the products, are subject to change without notice due to continuous improvements.

MIL-38999 Based RF Coaxial Cable Sets, DC-18 GHz, ULL04 Series, Ultra Low Loss

Avoid Multiple Coaxial Cables • Quick Assemble/Disassemble • D38999 more rugged than SMA, N

D38999-D38999 RF Cable Sets Ordering Codes - DC-18 GHz



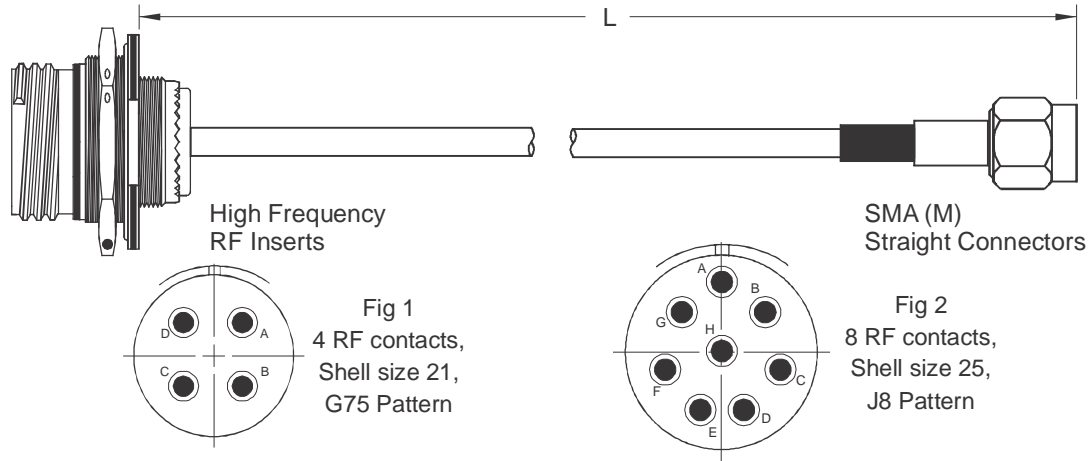
Ordering Code	Connector 1	Connector 2	Length	Insert Pattern	Insertion Loss (dB)			
					0.5 GHz	2 GHz	12 GHz	18 GHz
DC-18 GHz, 2 wire								
ULL04-1.0-D38999(2xST/P/G75)-D38999(2xST/P/G75)-M-18G	D38999 Plug, 2 x RF	D38999 Plug, 2 x RF	1 m	Fig 1*	0.39	0.63	1.53	1.75
ULL04-2.0-D38999(2xST/P/G75)-D38999(2xST/P/G75)-M-18G	D38999 Plug, 2 x RF	D38999 Plug, 2 x RF	2 m	Fig 1*	0.71	1.24	2.95	3.61
ULL04-5.0-D38999(2xST/P/G75)-D38999(2xST/P/G75)-M-18G	D38999 Plug, 2 x RF	D38999 Plug, 2 x RF	5 m	Fig 1*	1.64	3.31	7.41	8.80
ULL04-1.0-D38999(2xST/P/G75)-D38999(2xST/P/G75)-F-18G	D38999 Plug, 2 x RF	D38999 Plug, 2 x RF	1 feet	Fig 1*	0.14	0.21	0.42	0.51
ULL04-2.0-D38999(2xST/P/G75)-D38999(2xST/P/G75)-F-18G	D38999 Plug, 2 x RF	D38999 Plug, 2 x RF	2 feet	Fig 1*	0.24	0.31	0.79	0.95
DC-18 GHz, 4 wire								
ULL04-1.0-D38999(4xST/P/G75)-D38999(4xST/P/G75)-M-18G	D38999 Plug, 4 x RF	D38999 Plug, 4 x RF	1 m	Fig 1*	0.39	0.63	1.53	1.75
ULL04-2.0-D38999(4xST/P/G75)-D38999(4xST/P/G75)-M-18G	D38999 Plug, 4 x RF	D38999 Plug, 4 x RF	2 m	Fig 1*	0.71	1.24	2.95	3.61
ULL04-5.0-D38999(4xST/P/G75)-D38999(4xST/P/G75)-M-18G	D38999 Plug, 4 x RF	D38999 Plug, 4 x RF	5 m	Fig 1*	1.64	3.31	7.41	8.80
ULL04-1.0-D38999(4xST/P/G75)-D38999(4xST/P/G75)-F-18G	D38999 Plug, 4 x RF	D38999 Plug, 4 x RF	1 feet	Fig 1*	0.14	0.21	0.42	0.51
ULL04-2.0-D38999(4xST/P/G75)-D38999(4xST/P/G75)-F-18G	D38999 Plug, 4 x RF	D38999 Plug, 4 x RF	2 feet	Fig 1*	0.24	0.31	0.79	0.95
DC-18 GHz, 8 wire								
ULL04-1.0-D38999(8xST/P/J8)-D38999(8xST/P/J8)-M-18G	D38999 Plug, 8 x RF	D38999 Plug, 8 x RF	1 m	Fig 2*	0.39	0.63	1.53	1.75
ULL04-2.0-D38999(8xST/P/J8)-D38999(8xST/P/J8)-M-18G	D38999 Plug, 8 x RF	D38999 Plug, 8 x RF	2 m	Fig 2*	0.71	1.24	2.95	3.61
ULL04-5.0-D38999(8xST/P/J8)-D38999(8xST/P/J8)-M-18G	D38999 Plug, 8 x RF	D38999 Plug, 8 x RF	5 m	Fig 2*	1.64	3.31	7.41	8.80
ULL04-1.0-D38999(8xST/P/J8)-D38999(8xST/P/J8)-F-18G	D38999 Plug, 8 x RF	D38999 Plug, 8 x RF	1 feet	Fig 2*	0.14	0.21	0.42	0.51
ULL04-2.0-D38999(8xST/P/J8)-D38999(8xST/P/J8)-F-18G	D38999 Plug, 8 x RF	D38999 Plug, 8 x RF	2 feet	Fig 2*	0.24	0.31	0.79	0.95

* For detailed mechanical dimensions, panel cutouts refer to standard MIL-38999 Series III connectors

Shown trademarks are property of their respective owners.

While the information contained herein in this catalog, has been carefully compiled to the best of our knowledge, nothing is intended as representation and warranty on our part; and no statement shall be construed as recommendation to infringe any of existing patents. We accept no liability of whatsoever for any faults and errors in the information contained herein. Contents of this catalogue and specifications of the products, are subject to change without notice due to continuous improvements.

D38999-SMA Breakout RF Cable Set Ordering Codes - DC-18 GHz



Ordering Code	Connector 1	Connector 2	Length	Insert Pattern	Insertion Loss (dB)			
					0.5 GHz	2 GHz	11 GHz	18 GHz
DC-18 GHz, 2 x SMA, Wall Mount MIL38999								
ULL04-1.0-D38999(2xSTW/G75)-SMA(2xST/M)-M-18G	D38999 Wall Mount, 2 x RF	2 x SMA	1 m	Fig 1*	0.39	0.63	1.53	1.75
ULL04-2.0-D38999(2xSTW/G75)-SMA(2xST/M)-M-18G	D38999 Wall Mount, 2 x RF	2 x SMA	2 m	Fig 1*	0.71	1.24	2.95	3.61
ULL04-5.0-D38999(2xSTW/G75)-SMA(2xST/M)-M-18G	D38999 Wall Mount, 2 x RF	2 x SMA	5 m	Fig 1*	1.64	3.31	7.41	8.80
ULL04-1.0-D38999(2xSTW/G75)-SMA(2xST/M)-F-18G	D38999 Wall Mount, 2 x RF	2 x SMA	1 feet	Fig 1*	0.14	0.21	0.42	0.51
ULL04-2.0-D38999(2xSTW/G75)-SMA(2xST/M)-F-18G	D38999 Wall Mount, 2 x RF	2 x SMA	2 feet	Fig 1*	0.24	0.31	0.79	0.95
DC-18 GHz, 4 x SMA, Wall Mount MIL38999								
ULL04-1.0-D38999(4xSTW/G75)-SMA(4xST/M)-M-18G	D38999 Wall Mount, 4 x RF	4 x SMA	1 m	Fig 1*	0.39	0.63	1.53	1.75
ULL04-2.0-D38999(4xSTW/G75)-SMA(4xST/M)-M-18G	D38999 Wall Mount, 4 x RF	4 x SMA	2 m	Fig 1*	0.71	1.24	2.95	3.61
ULL04-5.0-D38999(4xSTW/G75)-SMA(4xST/M)-M-18G	D38999 Wall Mount, 4 x RF	4 x SMA	5 m	Fig 1*	1.64	3.31	7.41	8.80
ULL04-1.0-D38999(4xSTW/G75)-SMA(4xST/M)-F-18G	D38999 Wall Mount, 4 x RF	4 x SMA	1 feet	Fig 1*	0.14	0.21	0.42	0.51
ULL04-2.0-D38999(4xSTW/G75)-SMA(4xST/M)-F-18G	D38999 Wall Mount, 4 x RF	4 x SMA	2 feet	Fig 1*	0.24	0.31	0.79	0.95
DC-18 GHz, 8 x SMA, Wall Mount MIL38999								
ULL04-1.0-D38999(8xSTW/J8)-SMA(8xST/M)-M-18G	D38999 Wall Mount, 8 x RF	8 x SMA	1 m	Fig 2*	0.39	0.63	1.53	1.75
ULL04-2.0-D38999(8xSTW/J8)-SMA(8xST/M)-M-18G	D38999 Wall Mount, 8 x RF	8 x SMA	2 m	Fig 2*	0.71	1.24	2.95	3.61
ULL04-5.0-D38999(8xSTW/J8)-SMA(8xST/M)-M-18G	D38999 Wall Mount, 8 x RF	8 x SMA	5 m	Fig 2*	1.64	3.31	7.41	8.80
ULL04-1.0-D38999(8xSTW/J8)-SMA(8xST/M)-F-18G	D38999 Wall Mount, 8 x RF	8 x SMA	1 feet	Fig 2*	0.14	0.21	0.42	0.51
ULL04-2.0-D38999(8xSTW/J8)-SMA(8xST/M)-F-18G	D38999 Wall Mount, 8 x RF	8 x SMA	2 feet	Fig 2*	0.24	0.31	0.79	0.95

* For detailed mechanical dimensions, panel cutouts refer to standard MIL-38999 Series III connectors

* Other connectors like TNC, N, BMA etc available - substitute instead of SMA in P/N

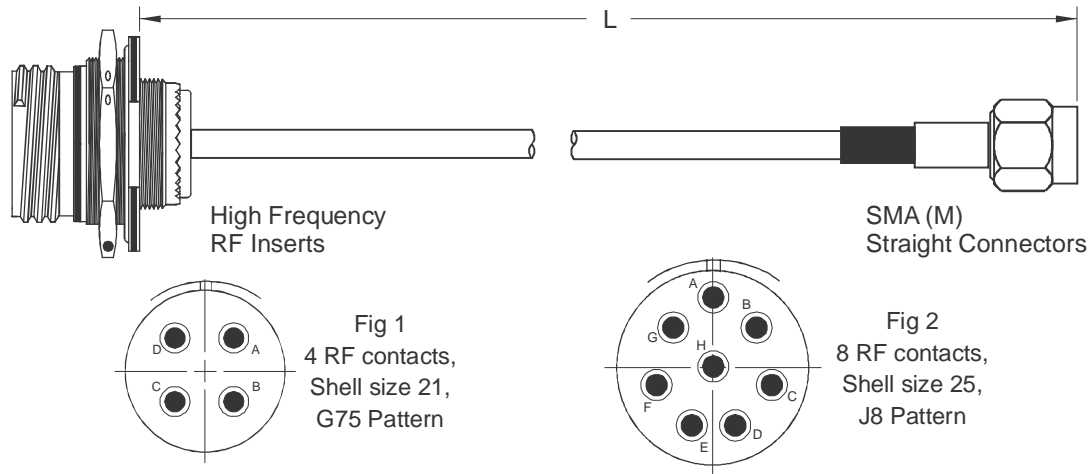
Shown trademarks are property of their respective owners.

While the information contained herein in this catalog, has been carefully compiled to the best of our knowledge, nothing is intended as representation and warranty on our part; and no statement shall be construed as recommendation to infringe any of existing patents. We accept no liability of whatsoever for any faults and errors in the information contained herein. Contents of this catalogue and specifications of the products, are subject to change without notice due to continuous improvements.

MIL-38999 Based RF Coaxial Cable Sets, DC-18 GHz, ULL04 Series, Ultra Low Loss

Avoid Multiple Coaxial Cables • Quick Assemble/Disassemble • D38999 more rugged than SMA, N

D38999-N Breakout RF Cable Set Ordering Codes - DC-11 GHz



Ordering Code	Connector 1	Connector 2	Length	Insert Pattern	Insertion Loss (dB)			
					0.5 GHz	2 GHz	11 GHz	18 GHz
DC-11 GHz, 2 x N, Wall Mount MIL38999								
ULL04-1.0-D38999(2xSTW/G75)-N(2xSTM)-M-11G	D38999 Wall Mount, 2 x RF	2 x N	1 m	Fig 1*	0.39	0.63	1.53	-
ULL04-2.0-D38999(2xSTW/G75)-N(2xSTM)-M-11G	D38999 Wall Mount, 2 x RF	2 x N	2 m	Fig 1*	0.71	1.24	2.95	-
ULL04-5.0-D38999(2xSTW/G75)-N(2xSTM)-M-11G	D38999 Wall Mount, 2 x RF	2 x N	5 m	Fig 1*	1.64	3.31	7.41	-
ULL04-1.0-D38999(2xSTW/G75)-N(2xSTM)-F-11G	D38999 Wall Mount, 2 x RF	2 x N	1 feet	Fig 1*	0.14	0.21	0.42	-
ULL04-2.0-D38999(2xSTW/G75)-N(2xSTM)-F-11G	D38999 Wall Mount, 2 x RF	2 x N	2 feet	Fig 1*	0.24	0.31	0.79	-
DC-11 GHz, 4 x N, Wall Mount MIL38999								
ULL04-1.0-D38999(4xSTW/G75)-N(4xSTM)-M-11G	D38999 Wall Mount, 4 x RF	4 x N	1 m	Fig 1*	0.39	0.63	1.53	-
ULL04-2.0-D38999(4xSTW/G75)-N(4xSTM)-M-11G	D38999 Wall Mount, 4 x RF	4 x N	2 m	Fig 1*	0.71	1.24	2.95	-
ULL04-5.0-D38999(4xSTW/G75)-N(4xSTM)-M-11G	D38999 Wall Mount, 4 x RF	4 x N	5 m	Fig 1*	1.64	3.31	7.41	-
ULL04-1.0-D38999(4xSTW/G75)-N(4xSTM)-F-11G	D38999 Wall Mount, 4 x RF	4 x N	1 feet	Fig 1*	0.14	0.21	0.42	-
ULL04-2.0-D38999(4xSTW/G75)-N(4xSTM)-F-11G	D38999 Wall Mount, 4 x RF	4 x N	2 feet	Fig 1*	0.24	0.31	0.79	-
DC-11 GHz, 8 x N, Wall Mount MIL38999								
ULL04-1.0-D38999(8xSTW/J8)-N(8xSTM)-M-11G	D38999 Wall Mount, 8 x RF	8 x N	1 m	Fig 2*	0.39	0.63	1.53	-
ULL04-2.0-D38999(8xSTW/J8)-N(8xSTM)-M-11G	D38999 Wall Mount, 8 x RF	8 x N	2 m	Fig 2*	0.71	1.24	2.95	-
ULL04-5.0-D38999(8xSTW/J8)-N(8xSTM)-M-11G	D38999 Wall Mount, 8 x RF	8 x N	5 m	Fig 2*	1.64	3.31	7.41	-
ULL04-1.0-D38999(8xSTW/J8)-N(8xSTM)-F-11G	D38999 Wall Mount, 8 x RF	8 x N	1 feet	Fig 2*	0.14	0.21	0.42	-
ULL04-2.0-D38999(8xSTW/J8)-N(8xSTM)-F-11G	D38999 Wall Mount, 8 x RF	8 x N	2 feet	Fig 2*	0.24	0.31	0.79	-

* For detailed mechanical dimensions, panel cutouts refer to standard MIL-38999 Series III connectors

* Other connectors like TNC, SMA, BMA etc available - substitute instead of N in P/N

Shown trademarks are property of their respective owners.

While the information contained herein in this catalog, has been carefully compiled to the best of our knowledge, nothing is intended as representation and warranty on our part; and no statement shall be construed as recommendation to infringe any of existing patents. We accept no liability of whatsoever for any faults and errors in the information contained herein. Contents of this catalogue and specifications of the products, are subject to change without notice due to continuous improvements.

Specifications for D38999-D38999 RF Coaxial Cable Sets

Length Connector 1 Connector 2

- Should be flexible, easily routable
- Cable conforms to MIL standards MIL-C-17 and connectors to MIL-38999 Series III

Electrical Specifications

- Impedance : 50 ohms
- Frequency : DC~18 GHz
- Velocity of Propagation : 76 %
- Shielding Effectiveness : better than -90 dB
- Power Handling : > 300 Watts Average @ 3 GHz
50 Watts Average @ 10 GHz
10 Watts Average @ 18 GHz
- Insertion Loss : < 0.20 dB/feet @ 3 GHz
< 0.38 dB/feet @ 10 GHz
< 0.50 dB/feet @ 18 GHz
- VSWR : < 1.45 (DC~18 GHz)

Physical & Mechanical Specifications

- Construction : Triple shielded e-taped type ultra low loss and electrical performance stability with time
- Center Conductor : Solid Silver Plated Copper
- Dielectric : Low Density PTFE
- Inner Shield : Silver Plated Copper Flat Ribbon Tape
- Interlayer : Metalized Foil Tape
- Outer Shield : Silver-Plated Copper Braid
- Jacket : Fluorinated Ethylene Propylene (FEP)
- Overall diameter : < 4.8 mm
- Bending Radius : < 23 mm (0.9 in)
- Temperature Range : -55°C to +125°C

Specifications of D38999 Series III series connectors

- Connectors : MIL-38999 Series III, QPL listed
- Connector make : Reputed make like Deustch, Aero Inc etc
- Shell Material : Aluminium Alloy
- Shell Plating : Olive drab cadmium
- Insulator : Thermoplastic or thermoset
- Endurance : 500 mating / unmating operations
- Shock : 300G for 3 ms
- Vibration : 60G sine, 44G random
- Temperature Range : -65 to +200°C
- Insulation Resistance : >5000 MΩ (at 500Vdc)

Specifications for D38999-SMA Breakout RF Coaxial Cable Sets

Length Connector 1 Connector 2

- Should be flexible, easily routable
- Cable conforms to MIL standards MIL-C-17 and connectors to MIL-38999 Series III

Electrical Specifications

- Impedance : 50 ohms
- Frequency : DC~18 GHz
- Velocity of Propagation : 76 %
- Shielding Effectiveness : better than -90 dB
- Power Handling : > 300 Watts Average @ 3 GHz
50 Watts Average @ 10 GHz
10 Watts Average @ 18 GHz
- Insertion Loss : < 0.20 dB/feet @ 3 GHz
< 0.38 dB/feet @ 10 GHz
< 0.50 dB/feet @ 18 GHz
- VSWR : < 1.45 (DC~18 GHz, for SMA straight connectors)
- VSWR : < 1.40 (DC~11 GHz, for N/TNC straight connectors)

Physical & Mechanical Specifications

- Construction : Triple shielded e-taped type ultra low loss and electrical performance stability with time
- Center Conductor : Solid Silver Plated Copper
- Dielectric : Low Density PTFE
- Inner Shield : Silver Plated Copper Flat Ribbon Tape
- Interlayer : Metalized Foil Tape
- Outer Shield : Silver-Plated Copper Braid
- Jacket : Fluorinated Ethylene Propylene (FEP)
- Overall diameter : < 4.8 mm
- Bending Radius : < 23 mm (0.9 in)
- Temperature Range : -55°C to +125°C

Connector Specifications (SMA, N, TNC)

- Outer Conductor: Brass/Stainless Steel, Gold plated
- Center Conductor: Brass, Gold Plated
- Insulation: PTFE
- Frequency range: DC~18 GHz for SMA straight, DC~11 GHz for SMA right angle
- Frequency range: DC~11 GHz for N and TNC straight
- Meet test conditions of MIL-STD-202 for vibration, mechanical shock, corrosion, humidity, temperature cycling

Specifications of D38999 Series III series connectors

- Connectors : MIL-38999 Series III, QPL listed
- Connector make : Reputed make like Deutsch, Aero Inc etc
- Shell Material : Aluminium Alloy
- Shell Plating : Olive drab cadmium
- Insulator : Thermoplastic or thermoset
- Endurance : 500 mating / unmating operations
- Shock : 300G for 3 ms
- Vibration : 60G sine, 44G random
- Temperature Range : -65 to +200°C
- Insulation Resistance : >5000 MΩ (at 500Vdc)