

Semirigid (0.141 inch), Pre-Connectorized Cable Sets, DC~18 GHz, RG402 Series

for hi-rel military & defense use



RG402-Series semi-rigid RF cable sets are used in hi-rel military and defense applications for use upto 18 GHz. Constructed using MIL-C-17 conformant RG402 cable and connectors. A wide choice of connectors like N, SMA, TNC is provided by us.

CONFORMANT MIL STANDARDS

- Cable conforms to MIL-C-17
- Connectors conform to MIL-PRF-39012

APPLICATIONS

- Military and defense systems interconnect or any other application requiring MIL pedigree
- Any application where a cable with highly stable electrical and phase characteristics is needed

PHASE MATCHING

We specialize in phase matching these semirigid cable sets for various applications like phased arrays. Customer needs to provide us degree of phase matching and frequency

Physical & Mechanical Specifications

Dimensions	inches	mm
Center Conductor	0.036"	0.92
Shield (Copper)	0.141"	3.58
Bend Radius	0.25"	6.4
Weight	0.051 Kg/m	
Temperature Range	-40°C ~ +125°C	

Electrical Specifications

Impedance	50 ohms
Velocity of Propagation	70 %
Capacitance	29.4 pF/ft
Operating Frequency	DC - 18 GHz

Attenuation & Power Handling Data

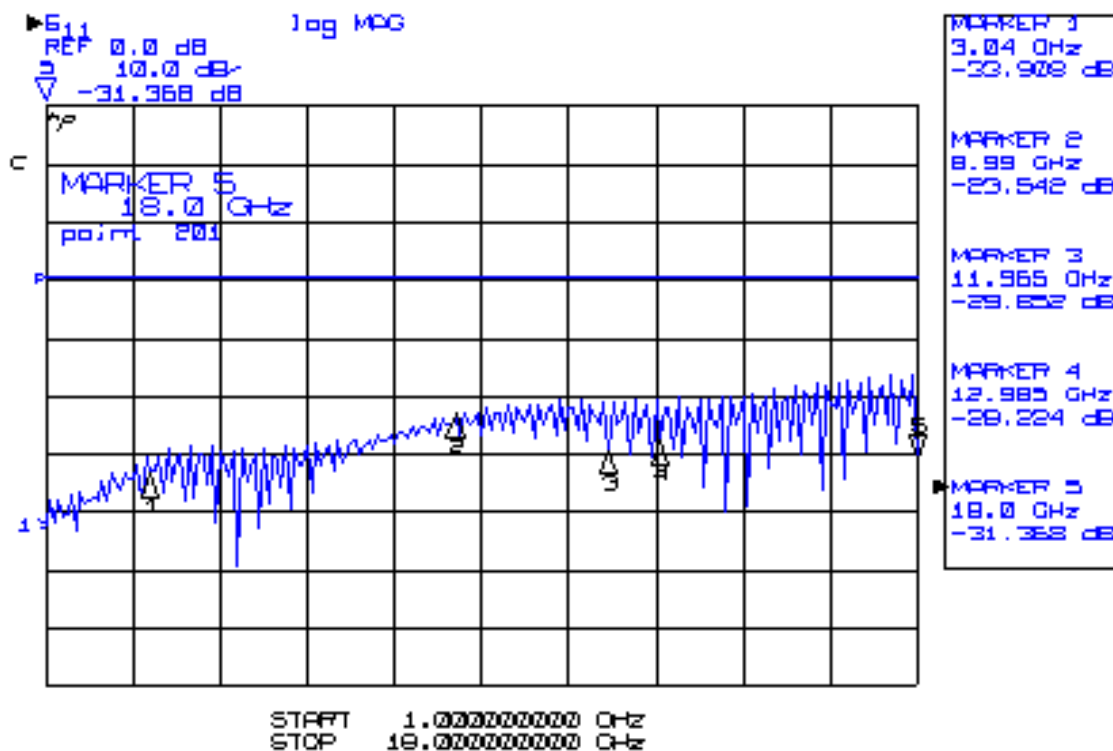
Frequency	Insertion Loss		Power Watts
	dB/ft	dB/m	
500 MHz	0.077	0.25	590
1 GHz	0.11	0.36	400
2 GHz	0.16	0.52	250
3 GHz	0.21	0.68	200
8 GHz	0.38	1.24	115
10 GHz	0.44	1.44	95
12 GHz	0.49	1.60	85
18 GHz	0.64	2.09	60

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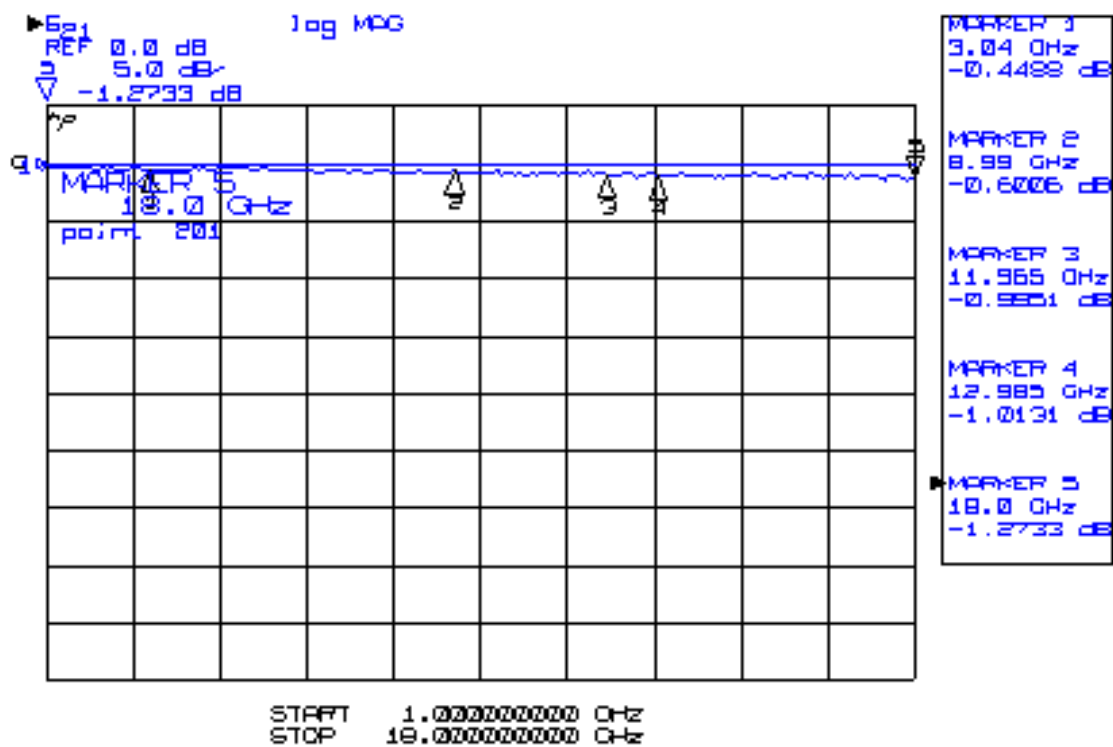
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Return Loss of 0.5 Meter, RG402 Cable Set with SMA(M) on both sides



Insertion Loss of 0.5 Meter, RG402 Cable Set with SMA(M) on both sides



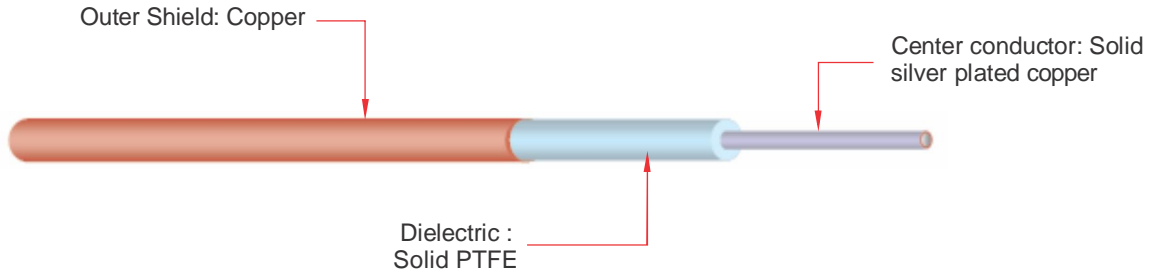
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RG402 Cable Construction



Connectors Specifications

Specifications	SMA Connectors	N Connectors	TNC Connectors
Outer Conductor	Brass/Stainless Steel, Gold plated	Copper alloy	Copper Alloy
Center Conductor	Brass, Gold Plated	Brass, Gold Plated	Brass, Gold Plated
Insulation	PTFE	PTFE	PTFE
Gasket	Silicone Rubber	Silicone Rubber	Silicone Rubber
Frequency range	DC~18 GHz	DC~11 GHz	DC~11 GHz
Nominal Impedance	50 Ω	50 Ω	50 Ω
Mating/Unmating	500 operations	500 operations	500 operations
Vibration	As per MIL-STD-202, method 204, test condition D		
Mechanical Shock	As per MIL-STD-202, method 213, test condition I		
Thermal Shock	As per MIL-STD-202, method 107, test condition B		
Humidity	As per MIL-STD-202, method 106		
Temperature Cycle	As per MIL-STD-202, method 102A, test condition C		

Ordering Codes Description

RG402 (Length) (Connector 1) (Connector 2)
 - □ □ - □ (□ / □) - □ (□ / □) - □
L L 1 2 3 1 2 3 U

L L	Length	0.5 = 0.5 ; 1 = 1.0 ; 2 = 2.0
1	Connector Series	SMA = SMA ; N = N ; BNC = BNC ; TNC = TNC
2	Male/Female Designator	M = Male ; F = Female
3	Orientation of Connector	ST = Straight ; RA = Right Angle
U	Unit of Length	M = Meter ; F = Feet ; I = Inch

1 meter cable set with SMA (Male) on both sides = RG402-1.0-SMA(M/ST)-SMA(M/ST)-M

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Cable Set Ordering Codes

Ordering Code	Length	Insertion Loss (dB) Typical					
		1.5 GHz	3 GHz	6 GHz	9 GHz	12 GHz	18 GHz
SMA (Male) Straight - SMA (Male) Straight (DC to 18 GHz)							
RG402-0.5-SMA(M/ST)-SMA(M/ST)-M	0.5m	0.30	0.44	0.66	0.85	1.01	1.30
RG402-1.0-SMA(M/ST)-SMA(M/ST)-M	1m	0.53	0.79	1.18	1.51	1.81	2.35
RG402-2.0-SMA(M/ST)-SMA(M/ST)-M	2m	0.99	1.47	2.26	2.85	3.42	4.45
RG402-4.0-SMA(M/ST)-SMA(M/ST)-IN	4 inch	0.12	0.17	0.25	0.31	0.37	0.46
RG402-0.5-SMA(M/ST)-SMA(M/ST)-F	0.5 feet	0.14	0.20	0.30	0.38	0.45	0.57
RG402-1.0-SMA(M/ST)-SMA(M/ST)-F	1 feet	0.21	0.31	0.46	0.58	0.69	0.89
RG402-2.0-SMA(M/ST)-SMA(M/ST)-F	2 feet	0.35	0.52	0.78	0.99	1.18	1.53
N (Male) Straight - N (Male) Straight (DC to 11 GHz)							
RG402-0.5-N(M/ST)-N(M/ST)-M	0.5m	0.32	0.46	0.68	0.87	1.03	-
RG402-1.0-N(M/ST)-N(M/ST)-M	1m	0.55	0.81	1.20	1.53	1.83	-
RG402-2.0-N(M/ST)-N(M/ST)-M	2m	1.01	1.49	2.28	2.87	3.44	-
RG402-4.0-N(M/ST)-N(M/ST)-IN	4 inch	0.14	0.19	0.27	0.33	0.39	-
RG402-0.5-N(M/ST)-N(M/ST)-F	0.5 feet	0.16	0.22	0.32	0.40	0.47	-
RG402-1.0-N(M/ST)-N(M/ST)-F	1 feet	0.23	0.33	0.48	0.60	0.71	-
RG402-2.0-N(M/ST)-N(M/ST)-F	2 feet	0.37	0.54	0.80	1.01	1.20	-
TNC (Male) Straight - TNC (Male) Straight (DC to 11 GHz)							
RG402-0.5-TNC(M/ST)-TNC(M/ST)-M	0.5m	0.34	0.48	0.70	0.89	1.05	-
RG402-1.0-TNC(M/ST)-TNC(M/ST)-M	1m	0.57	0.83	1.22	1.55	1.85	-
RG402-2.0-TNC(M/ST)-TNC(M/ST)-M	2m	1.03	1.51	2.30	2.89	3.46	-
RG402-4.0-TNC(M/ST)-TNC(M/ST)-IN	4 inch	0.16	0.21	0.29	0.35	0.41	-
RG402-0.5-TNC(M/ST)-TNC(M/ST)-F	0.5 feet	0.18	0.24	0.34	0.42	0.49	-
RG402-1.0-TNC(M/ST)-TNC(M/ST)-F	1 feet	0.25	0.35	0.50	0.62	0.73	-
RG402-2.0-TNC(M/ST)-TNC(M/ST)-F	2 feet	0.39	0.56	0.82	1.03	1.22	-
SMA (Male) Straight - SMA (Male) Right Angle (DC to 11 GHz)							
RG402-0.5-SMA(M/ST)-SMA(M/RA)-M	0.5m	0.33	0.47	0.69	0.88	1.04	-
RG402-1.0-SMA(M/ST)-SMA(M/RA)-M	1m	0.56	0.82	1.21	1.54	1.84	-
RG402-2.0-SMA(M/ST)-SMA(M/RA)-M	2m	1.02	1.50	2.29	2.88	3.45	-
RG402-4.0-SMA(M/ST)-SMA(M/RA)-IN	4 inch	0.15	0.20	0.28	0.34	0.40	-
RG402-0.5-SMA(M/ST)-SMA(M/RA)-F	0.5 feet	0.17	0.23	0.33	0.41	0.48	-
RG402-1.0-SMA(M/ST)-SMA(M/RA)-F	1 feet	0.24	0.34	0.49	0.61	0.72	-
RG402-2.0-SMA(M/ST)-SMA(M/RA)-F	2 feet	0.38	0.55	0.81	1.02	1.21	-
SMA (Male) Straight - N (Male) Straight (DC to 11 GHz)							
RG402-0.5-SMA(M/ST)-N(M/ST)-M	0.5m	0.31	0.45	0.67	0.86	1.02	-
RG402-1.0-SMA(M/ST)-N(M/ST)-M	1m	0.54	0.80	1.19	1.52	1.82	-
RG402-2.0-SMA(M/ST)-N(M/ST)-M	2m	1.01	1.48	2.27	2.86	3.43	-
RG402-4.0-SMA(M/ST)-N(M/ST)-IN	4 inch	0.13	0.18	0.26	0.32	0.38	-
RG402-0.5-SMA(M/ST)-N(M/ST)-F	0.5 feet	0.15	0.21	0.31	0.39	0.46	-
RG402-1.0-SMA(M/ST)-N(M/ST)-F	2 feet	0.36	0.53	0.79	1.01	1.19	-

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