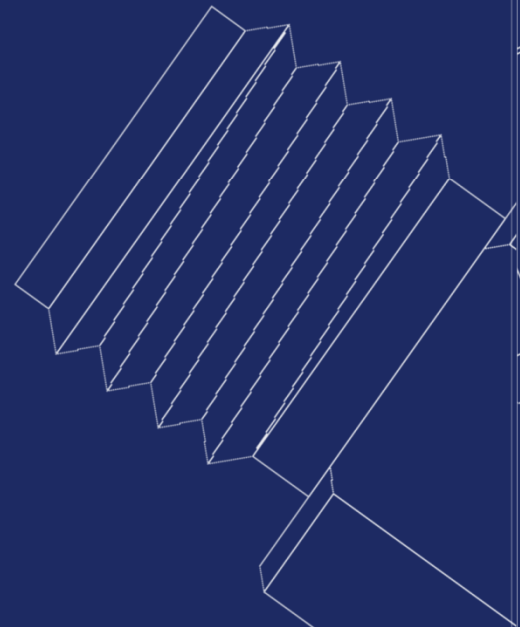


Our Product— **Cable Assembly**



Cable/Cable Assembly

Features

- ✓ up to 26GHz
- ✓ 50 ohm impedance (75ohm available)
- ✓ Various cable type
- ✓ Accept customer-made

MVE standard coaxial cable can offer not only inexpensive cost but also a lot of variety models to meet your needs. The overall diameter of flexible series are including 0.071 inch(RG178) , 2.59mm(RG316) , 2.93mm(RG316 Double Shielding), 0.085inch(SS405) , 0.141inch(SS402); Semi-flex series are including 0.047inch(semi-flex .047); 0.085 inch (semi-flex RG405); 0.141inch(Semi-flex RG402); Semi-rigid series are including 0.047inch(semi-rigid .047); 0.085 inch (semi-rigid RG405); 0.141inch (Semi-rigid RG402). Besides, MVE can offer customized services (including connector type, cable length) and support the optimization of cable assembly.

Table of Cable Assembly Code

Connector	"A"	Connector	"A"	Cable	"B"	Cable	"B"
2.4 Male	12	SMA Male	28	1.13mm	113	Flexiform405	085
2.4 Female	13	SMA Female	29	1.37mm	137	Flexiform405FJ	085J
2.9 Male	14	N Male	26	RG58	58	Flexiform402	141
2.9 Female	15	N Female	27	RG59	59	Flexiform402FJ	141J
3.5 Male	16	TNC Male	32	RG174	174	Flexiform047	047
3.5 Female	17	TNC Female	33	RG178	178	Semi-Rigid 085	SR085
BNC Male	20	U.FL Male	34	RG316	316	Semi-Rigid 141	SR141
BNC Female	21	U.FL Female	35	RG316DS	316D	Semi-Rigid 047	SR047
MCX Male	22	MMCX Male	24	RG400	400	Spiral Strip 085	085SS
MCX Female	23	MMCX Female	25	LL200	200L	Spiral Strip 141	141SS
				LL400	400L		

Part number : A1A2.B.XX(Length:cm)

Estimate of Cable Assembly loss

Cable assembly loss = Connector loss + Assembly loss + Cable loss

Connector Loss: $0.08 \times \sqrt{\text{Frequency}} \times 2$ (2 connectors)

Assembly Loss : 0.12×2 (sides)

Cable Loss: per cable attenuation (Max.) * Cable length



Flexible Cable Assemblies



Single Braid



Double Braid

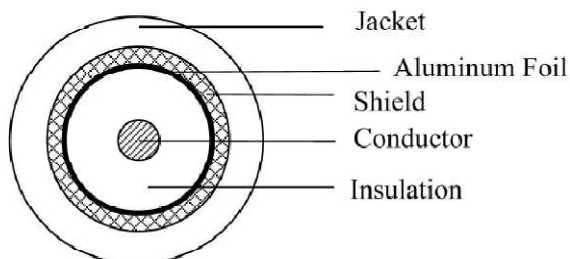
Cable Type	Overall Diameter	Dielectric Diameter	Bend Radius	Frequency (GHz)	Attenuation (100ft)	Impedance
RG178	0.71"	0.033"	1.0"	DC-3	44/42@1GHz 61.9/83.3@2.4GHz	50 ohms
RG316	0.98"	0.060"	0.5"	DC-3	26.2/38@1GHz 41.2/55.4@2.4GHz	50 ohms
RG316DS	0.118"	0.060"		DC-12	1.6@3GHz 2.6@6GHz	50 ohms
RG400	0.195"	0.116"	1.0"	DC-12	14.1/18.1@1GHz 35.6/52.1@5GHz 61.6/78@2.4GHz	50 ohms

Low Loss, Low Cost Cable Assemblies

Cable Type	Overall Diameter	Dielectric Diameter	Color	Frequency (GHz)	Attenuation (dB/M)	Impedance
LL200	4.95mm	2.95mm	BLACK	DC-2.5	0.31 @900MHz 0.54@2500MHz	50 ohms
LL400	10.3mm	7.24mm	BLACK	DC-2.5	0.13@900MHz 0.24@2500MHz	50 ohms

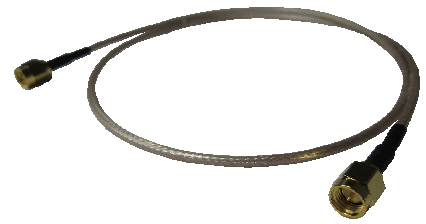
*LL200 is similar to RG58/CFD200/HDF200

*LL400 is similar to RG59/CFD400/HDF400



CABLE ASSEMBLY

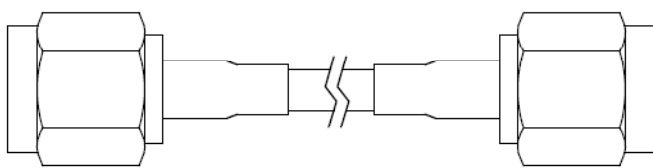
RG316



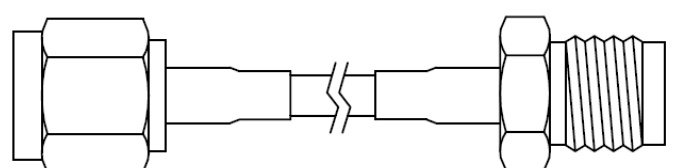
PART NUMBER	280280.316.XX
DESCRIPTION	SMA Male To SMA Male, RG316/L:XXcm

CONSTRUCTION		
ITEM	MATERIAL	DIAMETER
CENTER CONDUCTOR	Silver-Coated CopperClad Steel	0.53 mm
INSULATION	FEP	1.53 ± 0.03 mm
BRAID SHIELD(Coverage:95%)	Silver-Coated Copper	1.98 ±0.05 mm
JACKET	FEP	2.53 ±0.10mm

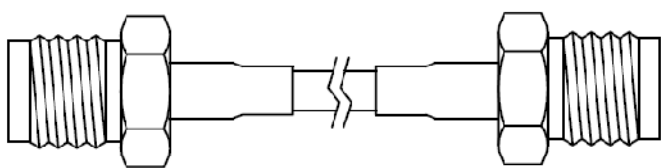
MAXIMUM ATTENUATION	
FREQUENCY	ATTENUATION (dB/1M)
1GHz	1.25
1.8GHZ	1.51
2.4GHz	1.71
3GHz	1.92



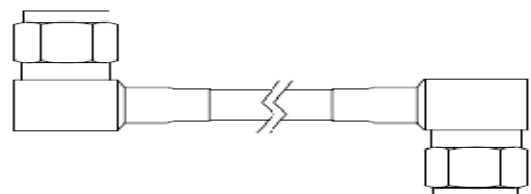
280280.316.XX



280290.316.XX



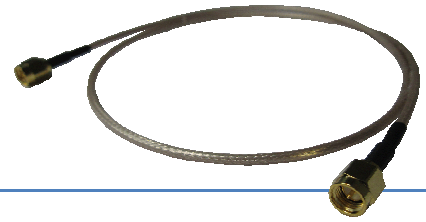
290290.316.XX



287287.316.XX

CABLE ASSEMBLY

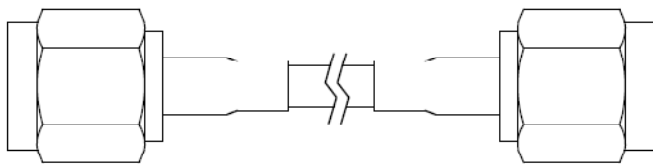
RG316 Doublet Shielding



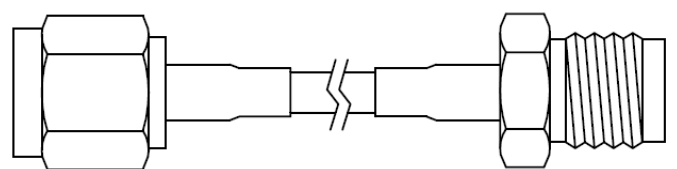
PART NUMBER	280280.316DXX
DESCRIPTION	SMA Male To SMA Male, RG316DS:XXcm

CONSTRUCTION		
CENTER CONDUCTOR	Silver-Coated Copper Clad Steel	0.53 mm
INSULATION	FEP	1.53 ± 0.03 mm
BRAID SHIELD 1(Coverage: 95%)	Silver-Coated Copper	1.98 ±0.05 mm
BRAID SHIELD 2 (Coverage: 86%)	Silver-Coated Copper	2.38 ±0.05 mm
JACKET	FEP	2.90 ±0.10mm

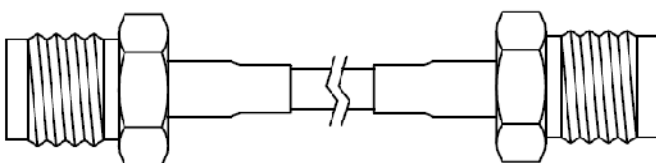
MAXIMUM ATTENUATION	
FREQUENCY	ATTENUATION (dB/1M)
2GHz	1.4
2.4GHZ	1.5
3.0GHz	1.6
4.0GHz	1.95
5.0GHz	2.2
6.0GHz	2.7



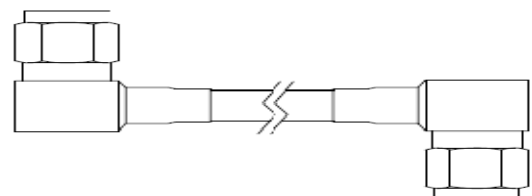
280280.316D.XX



280290.316D.XX



290290.316D.XX



287287.316D.XX

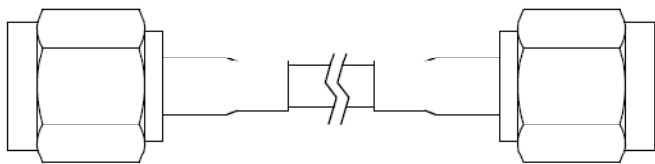
CABLE ASSEMBLY

RG178

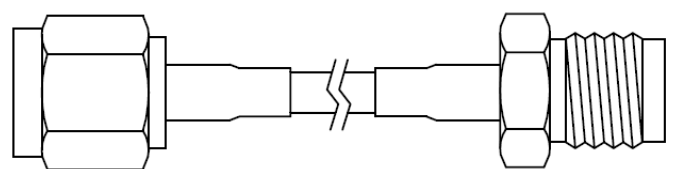
PART NUMBER	280280.178.XX
DESCRIPTION	SMA Male To SMA Male, RG178:XXcm

CONSTRUCTION		
CENTER CONDUCTOR	Silver-Coated Copper Clad Steel	0.53 mm
INSULATION	FEP	1.53 ± 0.03 mm
BRAID SHIELD 1 (Coverage: 95%)	Silver-Coated Copper	1.98 ± 0.05 mm
BRAID SHIELD 2 (Coverage: 86%)	Silver-Coated Copper	2.38 ± 0.05 mm
JACKET	FEP	2.90 ± 0.10 mm

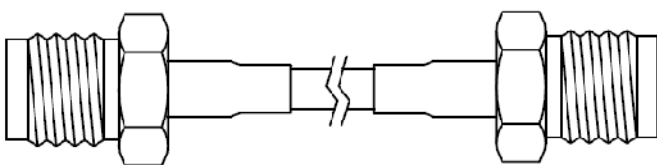
MAXIMUM ATTENUATION	
FREQUENCY	ATTENUATION (dB/1M)
1GHz	1.71
1.8GHz	2.69
2.4GHz	3.12
3GHz	3.58



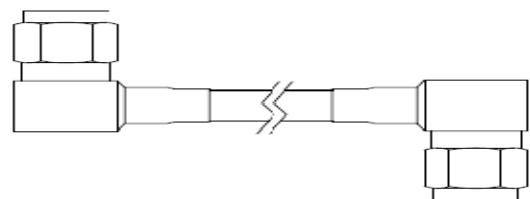
280280.178.XX



280290.178.XX



290290.178.XX



287287.178.XX

CABLE ASSEMBLY

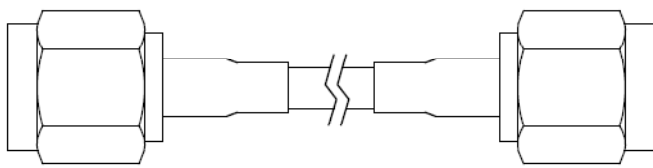
RG174



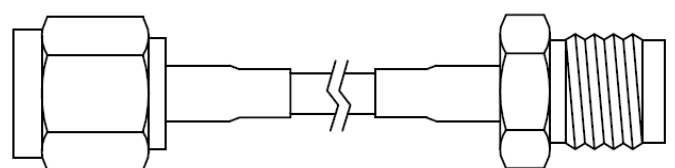
PART NUMBER	280280.174.XX
DESCRIPTION	SMA Male To SMA Male, RG174/L:XXcm

CONSTRUCTION		
ITEM	MATERIAL	DIAMETER
CENTER CONDUCTOR	Bare Copper Wire	7 / 0.16 ± 0.006 mm
INSULATION	XLPE	1.50 ± 0.05 mm
BRAID SHIELD	Tin Copper	16 x 4 / 0.100 mm
JACKET	(L.F) PVC <10PPM	2.75 ± 0.10 mm

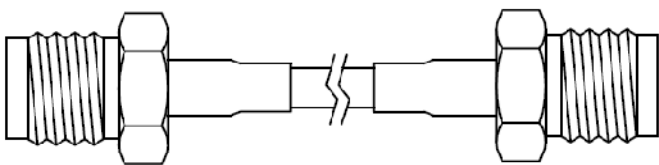
MAXIMUM ATTENUATION	
FREQUENCY	ATTENUATION (dB/1M)
100MHz	0.395
400MHz	0.655
1000MHz	1.175
30000MHz	2.103



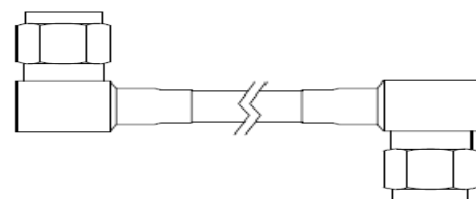
280280.174.XX



280290.174.XX



290290.174.XX



287287.174.XX

CABLE ASSEMBLY --12GHz

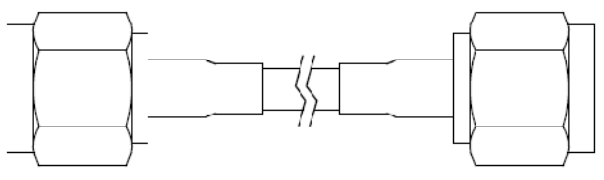
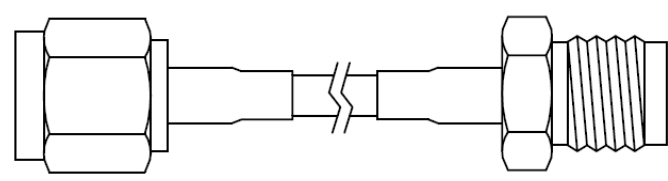
RG400

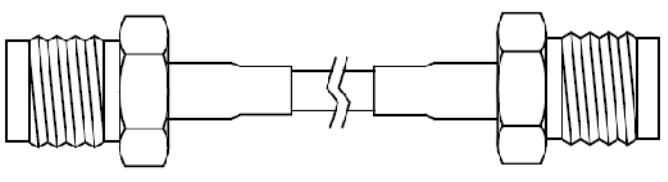
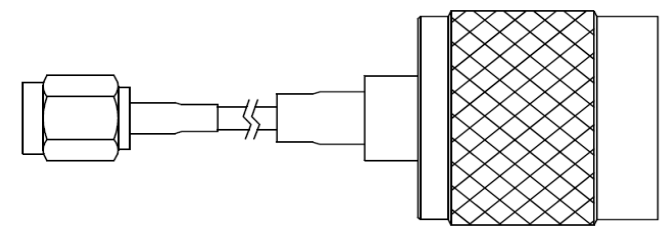


PART NUMBER	280280.400.XX
DESCRIPTION	SMA Male To SMA Male, RG400/L:XXcm

CONSTRUCTION		
ITEM	MATERIAL	DIAMETER
CENTER CONDUCTOR	SC	0.384 Inch
INSULATION	PTFE	0.116" Inch
JACKET	FEP	0.195 Inch

MAXIMUM ATTENUATION	
100MHz	
400MHz	
1000MHz	
30000MHz	

	
280280.400.XX	280290.400.XX

	
290290.400.XX	280260.400.XX

SS (Spiral Strip) Coaxial Cable



Construction:

Center Conductor: SPCW
 Stranded silver plated copper or copper weld
 Dielectric: Solid PTFE
 Inner shield: Spiral strip of silver plated copper
 Outer braid: Round silver plated copper
 Jacket: Solid light blue polyurethane
 Operating temperature: -55 +85° C
 Velocity of Propagation: 70%
 Shielding Effectiveness: <-110 dB

	SS402	SS405	SS75086
Center conductor diameter	.037"	.0201"	.0113"
Dielectric diameter	.117"	.064"	.064"
Diameter over inner shield	.128"	.071"	.074"
Diameter over outer braid	.141"	.086"	.086"
Overall diameter	.163"	.104"	.100"
Weight (lbs/mft)	32	14	14
Bend radius	0.8"	0.5"	0.5"
Impedance (Ohms)	50	50	75
Capacitance (pF/ft)	29.4	29.4	19.5
Attenuation (dB/100ft) @	Typ/Max	Typ/Max	Typ/Max
400 MHz	7.1 / 8.0	13.5 / 14.0	13.5 / 14.0

1 GHz	11.2 / 13.0	21.7 / 23.0	22.0 / 24.0
2 GHz	16.5 / 18.5	29.0 / 32.0	31.0 / 34.0
2.4 GHz	18.0 / 20.0	33.0 / 35.0	34.0 / 37.0
3 GHz	21.0 / 23.0	37.0 / 39.0	38.0 / 41.0
5 GHz	27.0 / 30.0	47.0 / 52.0	50.0 / 55.5
10 GHz	41.0 / 45.0	69.0 / 80.0	71.0 / 84.0
18 GHz	58.0 / 64.0	95.0 / 110.0	98.0 / 115.0
Cut-off frequency (GHz)	34.0	63.0	72.0

Flexiform 405,402

Construction:

Center Conductor: silver-plated copper-clad steel wire

Dielectric: Solid PTFE

Outer conductor . . . tin-soaked copper braid, Coverage 100%

Operating temperature: -40 +165° C

Shielding Effectiveness: <-130 dB/m

	RG405	RG402
Center conductor diameter	0.51mm	0.92mm
Dielectric diameter	1.7mm	3.0mm
Overall diameter	0.086"	0.141"
Weight (kg/km)	15	44
Bend radius(Singal/Multiple)	6/25mm	10/40mm
Impedance (Ohms)	50	50
Capacitance (pF/m)	94	94
Attenuation (dB/m) @	Max	Max
2 GHz	1.0	0.6
4 GHz	1.5	0.9



10 GHz	2.5	1.55
18 GHz	3.5	2.2
Cut-off frequency (GHz)	20.0	20.0

Semi-rigid .047,085,141

Construction:

Inner Conductor Material: SPCW

Inner Dielectric Material: PTFE,F1

Outer Conductor Material: Copper /Tin

Operating temperature: -55 +125° C

	.047	.085	.141
Center conductor diameter	.0113"	.0201 +/- .0005	.0362 +/- .0007
Dielectric diameter	.037 +/- .001	.066 +/- .002	.1175 +/- .001
Overall diameter	.047 + .002 - .001	.0865 + .002 - .001	.141 +.002 -.001
Weight (lbs/mft)	4.5	15.8	35.1
Bend radius	0.050"	0.050"	0.10"
Impedance (Ohms)	50	50	50
Attenuation (dB/100ft) @ Max	Max	Max	Max
1 GHz	40	22	12
10 GHz	130	80	45
20 GHz	190	120	70
Cut-off frequency (GHz)	34	40	36

* Max. Attenuation, db/100ft. at 20° C and Avg. Pwr., Watts, unity VSWR, 40° C amb., still air

