

### Typical Applications:

- \* Interconnection between boards
- \* Cabinet jumper
- \* Airborne Radar
- \* Missile System
- \* Phased array radar
- \* Feed network
- \* Instrumentation

FSD series base on the traditional semi-rigid cable, FSD series RF cable adopts advanced low-density PTFE wrapped dielectric to replace traditional solid PTFE dielectric. Compared to traditional semi-rigid cable, FSD series can effectively reduce the attenuation by 30%, the temperature phase decrease by 100%, weight reduced by approximately 20%. Standardize cable structure can easily select the standardize semi-rigid and conformable cable connector.

### Features & Benefits:

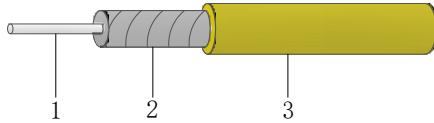
- \* Good temperature phase stability
- \* Extremely low loss
- \* Extremely high power
- \* Light weight
- \* Plenty connector options



Replacment reference chart

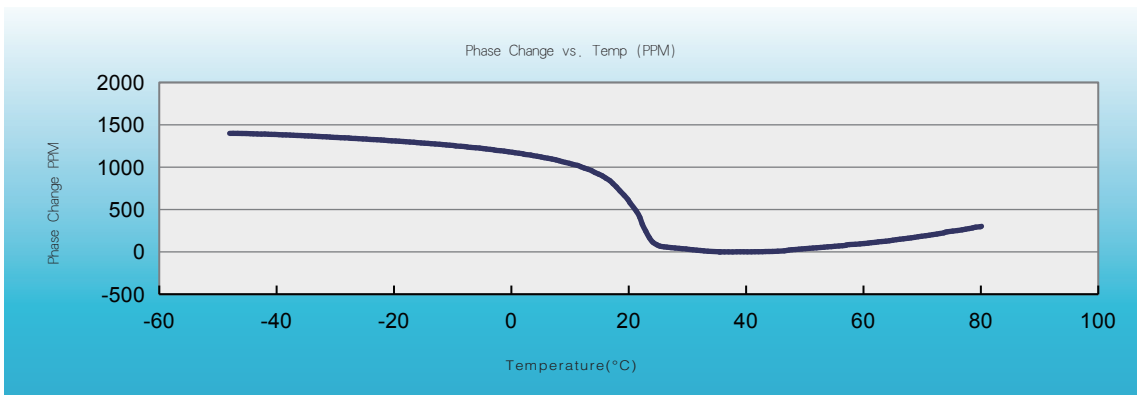
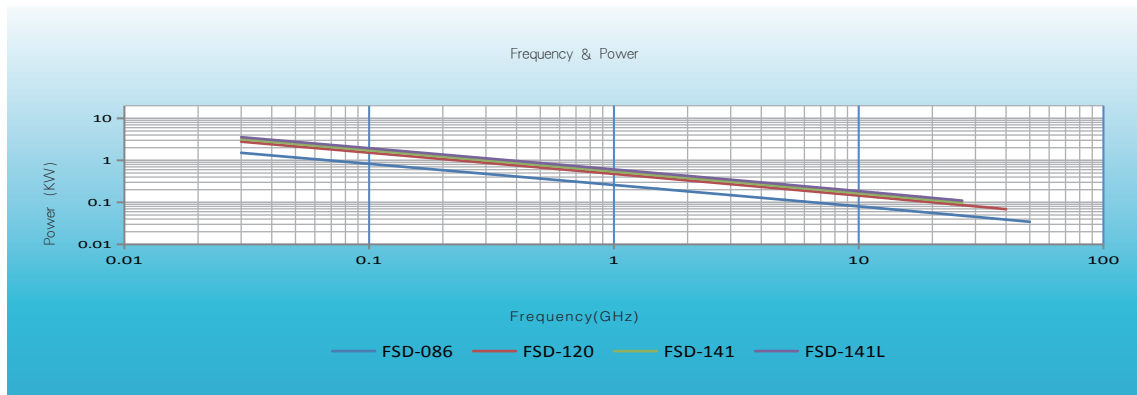
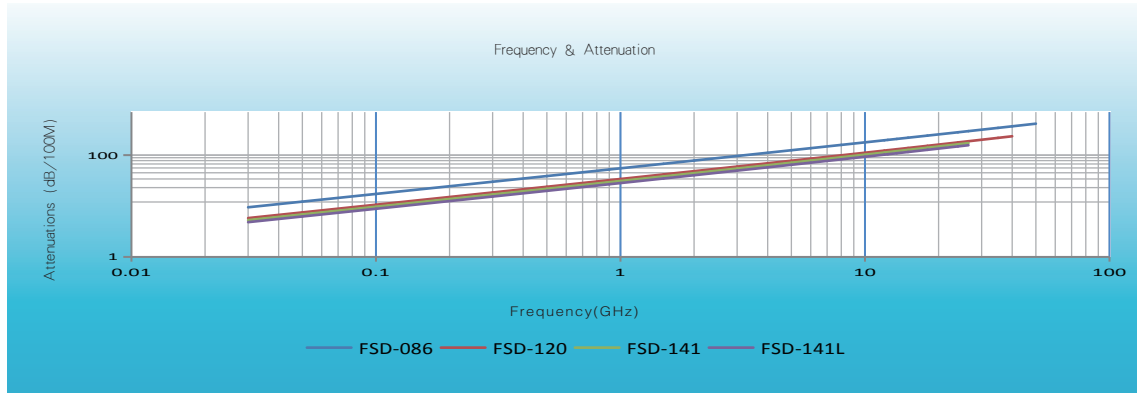
F+S	TIMES	MCC
FSD086	CLL50086	UT-085-LL
FSD120		UT-120-LL
FSD141	CLL50141	UT-141-LL

# FSD Specification



- 1 . Center conductor, Silver-plated copper
- 2 . Dielectric ND-PTFE
- 3 . Seamless copper tube  
No suffix - bare copper  
TM - Tri-alloy plated  
TP - Tin plated

	FSD-086		FSD-120		FSD-141		FSD-141L		
<b>Physical &amp; Mechanical Specifications</b>									
Dimensions	mm	Inch	mm	Inch	mm	Inch	mm	Inch	
Center Conductor	0.56	0.022	0.91	0.036	0.99	0.039	1.05	0.041	
Dielectric	1.68	0.066	2.70	0.106	3.00	0.118	3.00	0.118	
Outer Conductor	2.18	0.086	3.05	0.120	3.58	0.141	3.58	0.141	
Bend Radius, minimum	7	0.276	10	0.394	20	0.787	12.5	0.492	
Weight	19 g/m	.013 lbs/ft	35 g/m	.023 lbs/ft	43 g/m	.029 lbs/ft	45 g/m	.030lbs/ft	
Temperature Range	T: -65° /250° C (-85° /482° F)								
<b>Electrical Specifications</b>									
Impedance	50 Ohms		50 Ohms		50 Ohms		50 Ohms		
Velocity of Propagation	76%		76%		76%		82%		
Dielectric Constant	1.73		1.73		1.73		1.49		
Shielding Effectiveness	> 165 dB		> 165 dB		> 165 dB		> 165dB		
Time Delay	4.38 nS/m	1.33 nS/Ft	4.38 nS/m	1.33 nS/Ft	4.38 nS/m	1.33 nS/Ft	4.06 nS/m	1.24 nS/Ft	
Capacitance	87.7 pF/m	26.7 pF/Ft	87.7 pF/m	26.7 pF/Ft	87.7 pF/m	26.7 pF/Ft	81.4 pF/m	24.8 pF/Ft	
Inductance	0.23 uH/m	0.071 uH/Ft	0.21 uH/m	0.063 uH/Ft	0.22 uH/m	0.066 uH/Ft	0.21 uH/m	0.063 uH/Ft	
Cutoff Frequency	64 GHz		40 GHz		36 GHz		38 GHz		
Voltage Withstand	600 DC		1000 DC		1300 DC		1300 DC		
Peak Power	2.0 kW		2.5 kW		4.2 kW		4.2 kW		
Attenuation&Power Handling	Attenuation (+25° C Ambient) ; Power (+40° Ambient, Sea Level, VSWR 1:1)								
Frequency (MHz)	dB/100 m	dB/100 F	kW	dB/100 m	dB/100 F	kW	dB/100 m	dB/100 F	kW
30	9.45	2.88	1.511	5.80	1.77	3.093	5.28	1.61	3.459
50	12.21	3.72	1.170	7.49	2.28	2.394	6.83	2.08	2.677
100	17.28	5.27	0.827	10.61	3.23	1.690	9.67	2.95	1.889
300	30.00	9.15	0.476	18.45	5.63	0.972	16.82	5.13	1.086
500	38.80	11.83	0.368	23.89	7.28	0.751	21.78	6.64	0.839
900	52.19	15.91	0.274	32.18	9.81	0.557	29.36	8.95	0.622
1000	55.04	16.78	0.259	33.95	10.35	0.528	30.98	9.45	0.590
1500	67.58	20.60	0.211	41.75	12.73	0.429	38.11	11.62	0.479
2000	78.19	23.84	0.183	48.36	14.74	0.371	44.16	13.46	0.414
3000	96.09	29.30	0.149	59.55	18.16	0.301	54.41	16.59	0.336
4000	111.27	33.92	0.128	69.08	21.06	0.259	63.14	19.25	0.289
5000	124.71	38.02	0.114	77.55	23.64	0.231	70.91	21.62	0.258
6000	136.93	41.75	0.104	85.26	25.99	0.210	77.98	23.77	0.234
8000	158.74	48.40	0.090	99.09	30.21	0.181	90.68	27.65	0.201
10000	178.10	54.30	0.080	111.40	33.96	0.161	102.01	31.10	0.179
12000	195.72	59.67	0.073	122.65	37.39	0.146	112.36	34.26	0.163
12400	199.07	60.69	0.072	124.80	38.05	0.144	114.34	34.86	0.160
13500	208.04	63.43	0.069	130.54	39.80	0.137	119.63	36.47	0.153
15000	219.75	67.00	0.065	138.06	42.09	0.130	126.56	38.59	0.144
18000	241.65	73.67	0.059	152.17	46.39	0.118	139.56	42.55	0.131
24000	280.93	85.65	0.051	177.61	54.15	0.101	163.05	49.71	0.112
26500	295.96	90.23	0.048	187.39	57.13	0.096	172.09	52.47	0.106
35000	342.81	104.51	0.042	218.04	66.47	0.082			
40000	368.00	112.20	0.039	234.62	71.53	0.076			
Attenuation at Frequency	$dB/100 m = K1 * \sqrt{FMHz} + K2 * FMHz$								
K1	1.7200000		1.0550000		0.9610400		0.9433391		
K2	0.0005900		0.0005904		0.0005904		0.0005554		



### Assemblies order information

FSDXXX-XXXXXX-XX.XXX

M: Metric system, meter  
E.g.: -01.20M = 1.2meter  
F: Imperial Standard, Ft  
E.g.: 07.50F = 7.5 Ft

Cable Size

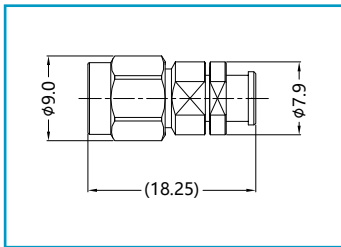
- 086
- 120
- 141
- 141L

Connector Type, two sides independent

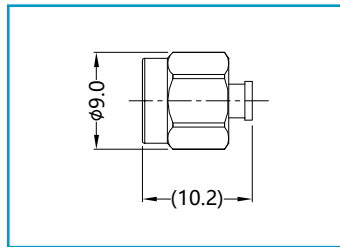
- NM = Type N Male
- SM = SMA Male
- SF = SMA Female
- SMPF = SMP Female

### Connectors Information

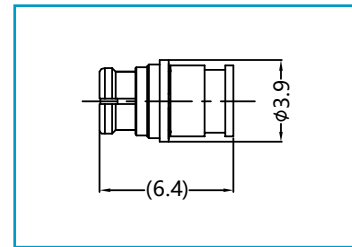
TS-C280-SM-A



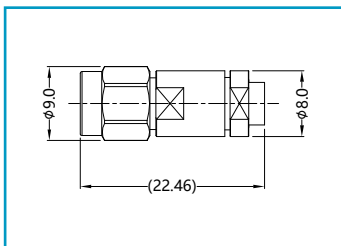
TS-C280-SM-B



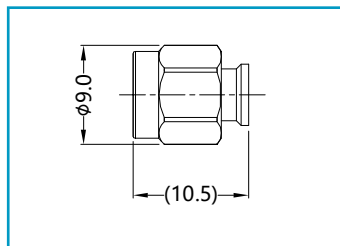
TS-C280-SMPF-A



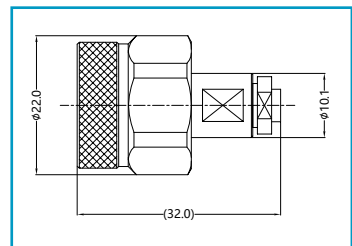
TS-C400-SM-A



TS-C400-SM-B



TS-C400-NM-A



Type	Cable	Description	P/N	Materials	Attach Method
SMA-Male	FSD-086	TS-C280-SM-A	01-MS037	Stainless Steel	Soldering inner/outer conductor
SMA-Male	FSD-086	TS-C280-SM-B	01-MS038	Stainless Steel	Soldering inner/outer conductor
SMA-Male	FSD-141	TS-C400-SM-A	01-MS042	Stainless Steel	Soldering inner/outer conductor
SMA-Male	FSD-141	TS-C400-SM-B	01-MS043	Stainless Steel	Soldering inner/outer conductor
SMP-Female	FSD-086	TS-C280-SMPF-A	07-FS001	Beryllium copper	Soldering inner/outer conductor
N-Male	FSD-141	TS-C400-NM-A	02-MS039	Stainless Steel	Soldering inner/outer conductor

Note: Please contact FocusSimple if you have other connectors request.