StabilityPower High-Power Low-Loss Microwave/RF Cable Assemblies

DATA SHEET / 2Z-017

MODELS:

PW18 // 18 GHz StabilityPower cables

PW6 // 6 GHz StabilityPower cables

StabilityPower Cable Assemblies

Features and Benefits

- High power handling
- Low insertion loss

Typical Applications

- EMC
- RADAR
- Satellite Communications
- Electronic Warfare

Description

In EMC testing, your goal is clear: achieve precise, repeatable results while maximizing test efficiency and minimizing downtime. When pushing systems to generate high field strengths across large test volumes, your cable assemblies become mission critical. Poor cable performance means higher amplifier load, reduced field uniformity, and inconsistent results, all of which risk delays, rework, and increased operating costs.

Our high-power, low-insertion-loss cable assemblies are designed to keep your lab running smoothly and your tests on schedule. By delivering more RF power to your antennas with lower losses, these cables help you reach target field strengths more easily, reduce amplifier strain, and extend system lifespan. The result: fewer interruptions, lower energy consumption, and greater confidence that your setup is performing at its best, day after day.

Power handling is just as essential. EMC tests often demand sustained high-power operation, and our assemblies are built to thrive under these conditions. Robust materials and construction techniques prevent overheating, arcing, and degradation, ensuring reliable performance even in extended test campaigns. With our cables in place, you can focus on your testing not on equipment failures or unexpected maintenance.

While optimized for EMC, these assemblies also bring proven benefits to other high-power RF applications such as radar, electronic warfare, satellite uplinks, industrial heating, and plasma generation. Wherever power integrity and measurement reliability matter, our cables deliver the consistent, worry-free performance you need to keep your operations moving forward.

Take control of your testing environment with cable assemblies engineered for accuracy, endurance, and total system efficiency.

Electrical Specifications

StabilityPower Cable Type	PW18-N	PW18-TNC	PW18-SC	PW6-N	PW6-716
Maximum Frequency (GHz)	18	18	6	4	6
Connector	Type N[1]	TNC[2]	SC[2]	Type N[2]	7/16[3]
VSWR (max)	1.25:1	1.30:1		1.40:1	
Typical Insertion Loss (cable only) at max frequency	0.20 dB/ft			0.07 dB/ft	
Impedance (nominal)	50 ohm				
Phase Stabiity with Temperature (typical)	< 1300 ppm			< 3000 ppm	
Velocity of Propogation	83%			76%	
Shielding Effectiveness	> 90 dB			> 100 dB	
Withstanding Voltage	3600 V			6000 V	

1 - IEC 60169-16
2 - MIL-STD-348
3 - IEC 61169-4 optimized for high power

Mechanical Specifications

StabilityPower Cable Type	PW18-N	PW18-TNC	PW18-SC	PW6-N	PW6-716
Center Conductor Material	Silver Plated Copper				
Maximum Outer Diameter (Cable)	0.3in (7.8mm)			0.6in (14.8mm)	
Nominal Weight	1.38oz/ft (128 g/m)			5.1 oz/ft (475 g/m)	
Min Static Bend radius	1.57in (40mm)			2.91in (74mm)	
Min. Dynamic Bend radius	3.15in (80mm)			5.83in (148mm)	
Flex Life Cycles	500			200	
Crush Resistance	231 lbf/in (40 kgf/cm)			462 lbf/in (80 kgf/cm)	
Operating Temperature Range	-67 to 329F (-55 to +165C)				
RoHS/REACH	Yes				

Max Insertion Loss / Attenuation

(1:1 VSWR, 25C, Sea Level, Cable Only)

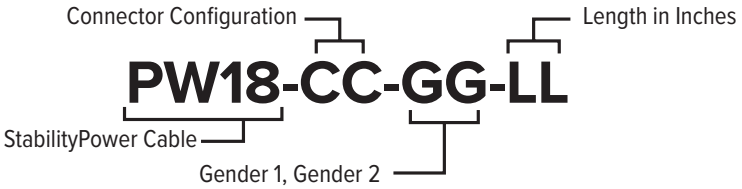
Freq (GHz)	PW18 (dB / 100ft)	PW6 (dB / 100ft)
0.3	2.44	1.34
1	4.51	2.53
2	6.43	3.69
6	11.37	6.84
8	13.23	-
10	14.91	-
12	16.43	-
14	17.87	-
16	19.21	-
18	20.46	-

Average Power Handling

(1:1 VSWR, 25C, Sea Level, Cable Only)

Freq (GHz)	PW18 (kW)	PW6 (kW)
0.3	3.34	10.00
1	1.81	5.30
2	1.27	3.64
6	0.72	2.00
8	0.62	-
10	0.55	-
12	0.50	-
14	0.46	-
16	0.43	-
18	0.40	-

Ordering Instructions for StabilityPower PW18

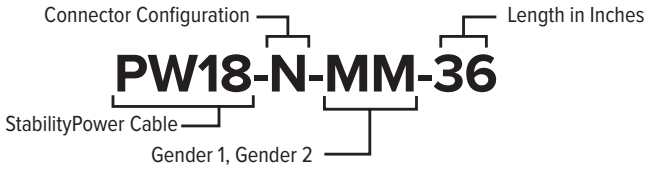


CC	GG	LL
N (Type N) TNC SC	MM (Male to Male)	Custom length

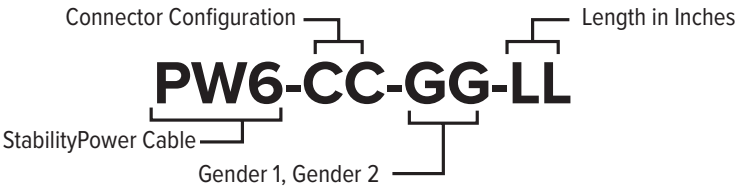
EXAMPLE:

The following is a StabilityPower 18 GHz cable assembly with Type N male connectors on both ends and 36" overall length.

Configuration Sample



Ordering Instructions for StabilityPower 6 GHz

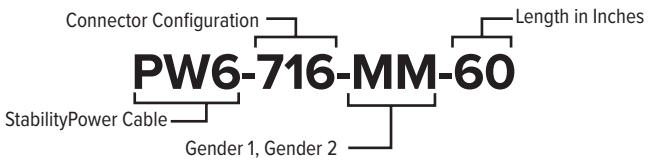


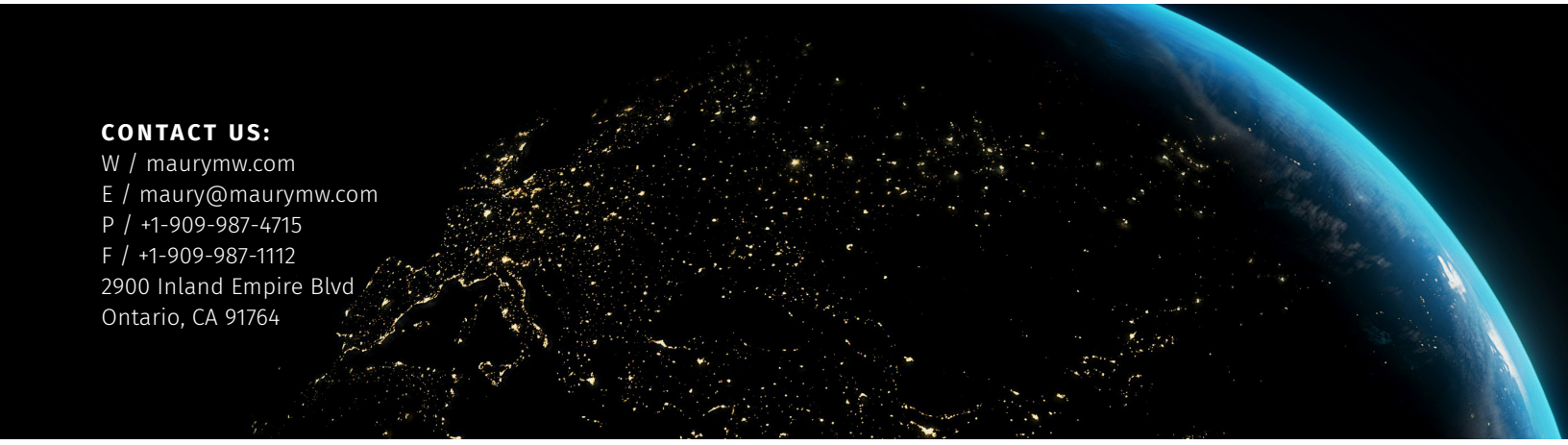
CC	GG	LL
N (Type N) 716 (7/16)	MM (Male to Male)	Custom length

EXAMPLE:

The following is a StabilityPower 6 GHz cable assembly with 7/16 male connectors on both ends and 60" overall length.

Configuration Sample





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