Miltech® 300

High Performance Microwave Assemblies

MILTECH® Assemblies are the qualified family of hermetically sealed flexible RF and microwave transmission line assemblies that are optimized and qualified for commercial, military airborne and other demanding applications.

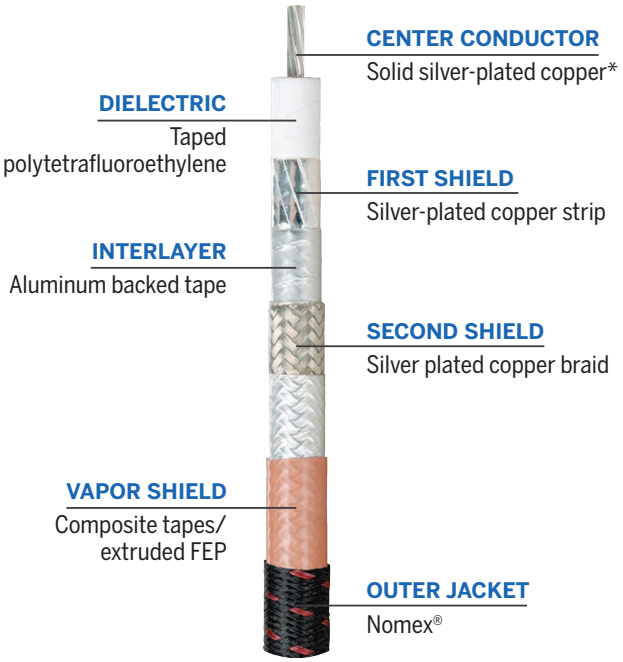
Features:

- Low loss with excellent stability
- Fully vapor sealed for system longevity
- Flexible and highly ruggedized for severe environments

Specifications

Ω Impedance 50 Ohms | Op Temp -67 to 392°F -55 to 200°C

	Units	
Diameter	in (mm)	0.30 (0.3)
Weight	lb/ft (kg/m)	0.085 (0.12648)
Minimum Bend Radius	in (mm)	1.750 (44.45)
Maximum Frequency	GHz	18
Capacitance	pF/ft (pF/m)	26.5 (86.9)
Delay	ns/ft (ns/m)	1.33 (4.36)



Calculation

$$IL = (K1 \times \sqrt{f} + K2 \times f) \times \text{Cable Length} + \text{Connector Loss}$$

Cable Insertion Loss

Length unit must match K value unit

k values

	dB/ft	db/m
K1	0.1645	0.53956
K2	0.000146	0.000477

Cable Insertion Loss at typical Frequencies

	dB/100 ft	db/100 m
500 MHx	3.8	12.3
2000 MHx	7.6	25.1
6000 MHx	13.6	44.7
10000 MHx	17.9	58.7
18000 MHx	24.7	81.0

Loss per connector

Frequency GHz	Straight	Angled
500	0.0375	0.1375
1000	0.05	0.15
2000	0.075	0.175
4000	0.1	0.2
6000	0.11	0.21
8000	0.125	0.225
10000	0.135	0.235
12000	0.14	0.24
14000	0.15	0.25
16000	0.155	0.255
18000	0.237	0.318

Times Microwave Systems
358 Hall Avenue, Wallingford, CT 06492, USA
T 800. 867.2629 F 203. 949.8423
www.timesmicrowave.com

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Standard Replaceable Connectors

Connector Type	Part Number	Weight oz/g
ATNC Plug	SD48555	0.62 (18)
ATNC Plug 45°	SD48576	0.32 (38)
ATNC Plug 90°	SD48573	1.50 (43)
ATNC Jack	SD48601	0.62 (18)
ATNC Jack BKHD	SD48590	0.79 (23)
ATNC 90° Jack BKHD	SD48609	1.58 (45)
N Plug	SD 48721	0.97 (28)
N Plug 90°	SD48628-1	2.06 (59)
N Jack 90° BKHD	SD48629	2.90 (83)
N Jack BKHD	SD48667	1.25 (36)
SC Plug	SD48642	1.65 (47)
SC Jack BKHD	SD48680	2.50 (71)
SMA Plug	SD48530	0.62 (18)
SMA Plug 90°	SD48608	1.02 (30)
TK Plug	SD48554	0.73 (21)

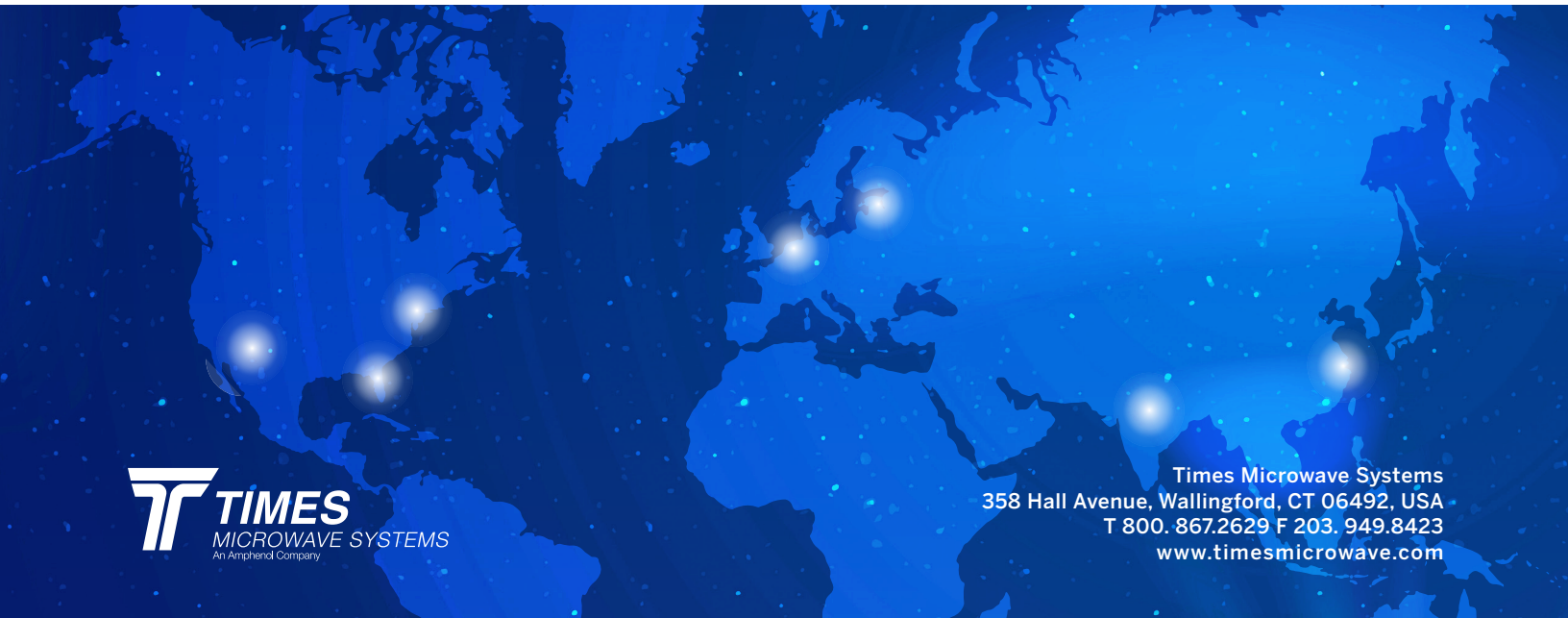
Self-Locking Replaceable Connectors

Connector Type	Part Number	Weight oz/g
ATNC Plug	SD48606	1.06 (30)
ATNC Plug 90°	SD48645	2.11 (60)
N Plug	SD48669	1.55 (44)
SMA Plug	SD48689	1.30 (37)
SMA Plug 90°	SD48688	0.70 (20)
TNC Plug 45°	SD48674	2.15 (61)

Global manufacturing capability: US, and Asia.

Heritage—in the air and on the ground, thousands of assemblies built over decades.

Assembled and tested MilTech assemblies provide assured performance.



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