



## ECHELON MAX EM-B220 Series

### Ultra Low Loss Phase Stable Cable Assemblies, SMA 18GHz

#### Features

- VSWR 1.35:1 Max up to 18GHz
- SMA Connectors both ends
- 83% Phase Velocity
- Double Shielded
- Shielding Effectivity 90dB
- 2.2 mm FEP Outer Jacket, Gray
- EM-B220 Series Ultra Low Loss
- Phase and Amplitude Stable



#### ELECTRICAL SPECIFICATION (25° C, sea level)

Description	Min	Typ	Max	Units/Note
Impedance		50Ω		Ohm
Frequency	DC		18	GHz
VSWR, 18GHz			1.35:1	@18GHz
Velocity of Propagation		82		%
Dielectric Withstand		1000		Volts
RF Shielding	90			dB
Capacitance		80		pF/m
Temperature	-55		165	° C
Phase change vs bending		±0.3		° /GHz
Phase change vs temperature		750		PPM, (-45 - 85 ° C)

#### Performance by Frequency (Cable Only)

Frequency (MHz)	Insertion Loss(25° C) dB/ft	Average Power(25° C @ Sea Level) Watts
1000	0.194	97
2000	0.276	68
3000	0.341	55
4000	0.395	42
6000	0.489	39
8000	0.568	33
10000	0.639	29
15000	0.793	25
18000	0.875	22

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MECHANICAL SPECIFICATION, CONNECTORS		
Description	Connector 1	Connector 2
Type	SMA Male	SMA Female
Interface Spec	MIL-STD-348	MIL-STD-348
Mating Cycles	500	500
Hex Wrench Size	5/16 in	N/A
Mating Torque	8-10in-lbs/0.9-1.13nm	8-10in-lbs/0.9-1.13nm
Material	Stainless Steel	Stainless Steel
Pin/Receptacle	Gold Plated BeCu	Gold Plated BeCu
Dielectric Type	PTFE	PTFE

MECHANICAL SPECIFICATION, CABLE	
Description	Specification
Cable Type	EM-B220
Diameter	0.122in. (3.1mm)
Weight	0.181lb/ft(0.027kg/m)
Minimum Bend Radius, Static	0.346in. (8.8mm)
Minimum Bend Radius, Dynamic	0.866in. (22.0mm)
Length Tolerance	±0.196in(±5mm)

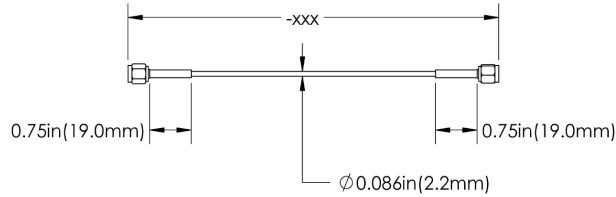
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#### Ordering Information



Connector Options:  
SMA

Part Number Configurator			
Series, SMA	Connector 1	Connector 2	Length (in)
EM-B220SMA	XX	XX	-XXX

Connector 1		Connector 2	
SMA Male, Straight	MS	SMA Male, Straight	MS
SMA Male, Right Angle	MR	SMA Male, Right Angle	MR
SMA Female Bulkhead	FB	SMA Female Bulkhead	FB

\*\*\* - If Connector 1 = Connector, 2 omit Connector 2

#### Example:

EM-B220SMAMSMR-012, 12 inch cable with straight SMA male to right angle SMA male.

EM-B220SMAMS-024, 24 inch cable with straight SMA male both ends.

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