

Junkosha Microwave/mmWave Coaxial Cable Assembly



7 Series - Phase Stability Multi Purpose Applications

E Type

Up to 67.0 GHz

7 series Assemblies offer phase stability in multi purpose applications delivering reliable electrical performance, especially in phase & amplitude stability against temperature, to support repeatable measurement results.

Genuine Flexibility

7 Series Assemblies provide stress free implementation and exhibits no “spring-back” for both operator and devices.

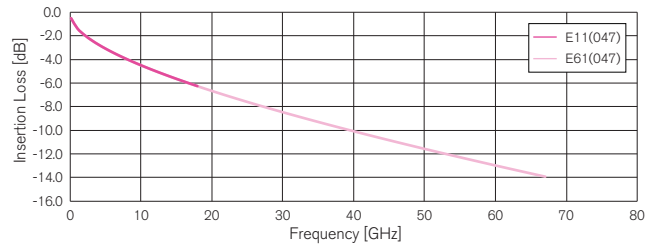
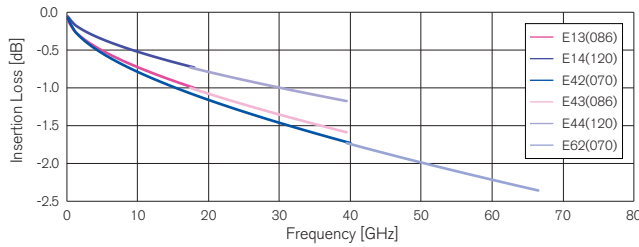
Phase & Amplitude Stability

7 Series Assemblies have proven Phase & Amplitude Stability in both Flexure and Temperature changes, thanks to Junkosha Engineered ePTFE tape wrapping technology.

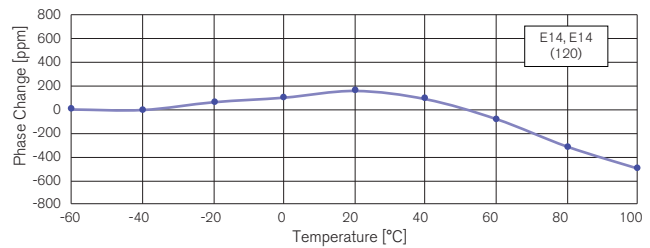
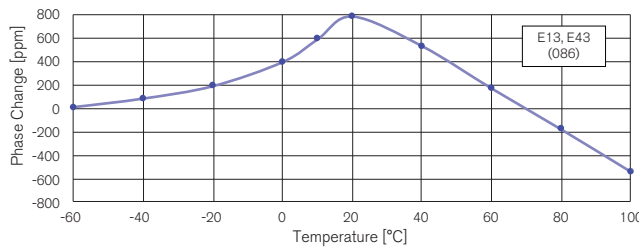
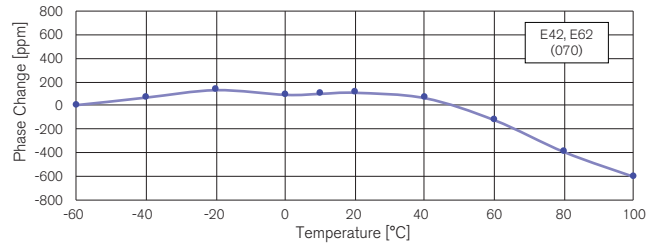
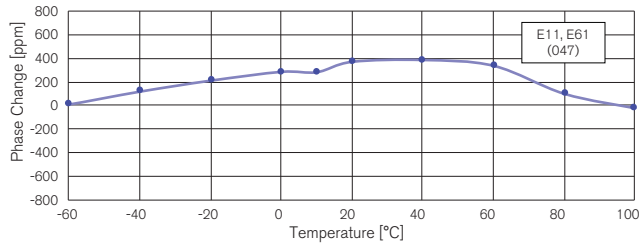
Specifications

Cable Type		E11 (047)	E13 (086)	E14 (120)	E42 (070)	E43 (086)	E44 (120)	E61 (047)	E62 (070)
Electrical Properties	Maximum Operating Frequency [GHz]	18	18	18	40	40	40	67	67
	Characteristic Impedance [Ω]	50							
	Typical Capacitance [pF]	84	87	85	83	87	85	84	83
	Nominal Velocity of Propagation [%]	79	78	80	80	78	80	79	80
	Typical Insertion loss [dB/ft (dB/m)]	1.9 (6.3)	1.0 (3.3)	0.7 (2.4)	1.7 (5.7)	1.6 (5.2)	1.2 (3.9)	4.2 (13.9)	2.4 (7.7)
	Maximum Insertion loss [dB/ft (dB/m)]	2.1 (7.0)	1.1 (3.67)	0.78 (2.6)	1.9 (6.3)	1.8 (5.9)	1.3 (4.4)	4.8 (15.6)	2.7 (8.7)
	Typical VSWR	1.43	1.4	1.4	1.43	1.43	1.44	1.43	1.43
	Shielding Effectiveness to 18GHz (dB)	90							
Mechanical Properties	Cable Outer Diameter [in (mm)]	0.047 (1.2)	0.086 (2.2)	0.120 (3.0)	0.070 (1.8)	0.086 (2.2)	0.120 (3.0)	0.047 (1.2)	0.070 (1.8)
	Minimum Bending Radius [in (mm)]	0.39 (10)	0.39 (10)	0.59 (15)	0.39 (10)	0.39 (10)	0.59 (15)	0.39 (10)	0.39 (10)
	Typical Cable Mass [oz/ft (g/m)]	0.06 (5.1)	0.13 (12)	0.27 (25)	0.11 (10)	0.13 (12)	0.27 (25)	0.06 (5.1)	0.11 (10)
	Operating Temperature Range [°C]	-65 ~ +125							

Cable Typical Insertion Loss



Phase Stability vs Temperature @18.5GHz



Connectors

Connector Type	Frequency [GHz]	Cable Type						
		E13 [18.0 GHz]	E14 [18.0 GHz]	E42 [40.0 GHz]	E43 [40.0 GHz]	E44 [40.0 GHz]	E61 [67.0 GHz]	E62 [67.0 GHz]
SMA (m) Straight	18.0	AMS	AMS	AMS	AMS	AMS	AMS	AMS
SMA (m) Right Angle	12.0	AMR			AMR		AMR	
SMA (f) Straight	18.0	AFS			AFS			
SMP (f) Straight	18.0	S1FS			S1FS		S1FS	
SMP (f) Right Angle	12.0	S1FR			S1FR			
2.92mm (m) Straight	40.0	KMS			KMS			
1.85mm (m) Straight	67.0	VMS			VMS		VMS	
SMPM (f) Straight	67.0	S2FS			S2FS		S2FS	

Additional Customized Option

Phase Matching (Skew Matching)

- Relative Matching
Set assemblies (2 or more) are made within specified electrical length. The electrical length variation in the set is controlled.
- Absolute Matching
Assembly(s) is made within specified electrical length tolerance which is set as a standard. This helps when ordering replacement cable(s).

Inter – Intra Lot Phase Behavior Control

- When using multiple cables in Radar or Phase critical applications, the behavior control vs emperature helps reliability over times over time within rapidly changing environments.

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