

KA-Series Cable Sets are for 40 GHz RF applications. They incorporate ultra low loss taped PTFE triple shielded coaxial cable and low VSWR stainless steel K (2.92mm) connectors

Applications

- EW Systems - 18~40 GHz
- Test Cables upto 40 GHz
- Ka-Band communications

Substitute for

Radiall SHF3M
Micro-Coax Utiflex UFB142A



Specifications of Ultra Low Loss 40 GHz Coaxial Cable

Center Conductor	Solid Silver Covered Copper
Dielectric	Taped PTFE
Inner Shield	Flat silver plated copper strip
Interlayer	Aluminum polyimide tape
Outer Shield	Round silver plated copper
Jacket	Teflon FEP
Mini. Bend Radius	< 23 mm
Impedance	50
Insertion Loss @ 40 GHz	< 2.85 dB/meter
Power Handling @ 40 GHz	> 20 watt CW
Shielding Effectiveness	Better than -90 dB
Capacitance	25 pF/feet
Velocity of Propagation	80%
Temperature Range	-55°C to +105° C

K (2.92 mm) Connector Specifications

MIL Standard	MIL-PRF-39012	Insulation	PTFE
Outer Conductor	Passivated Stainless Steel	Frequency	DC~40 GHz
Center Conductor	BeCu, Gold Plated		

Ordering Codes Description

(Length) (Connector 1) (Connector 2)
 KA - □ □ - □ (□ / □) - □ (□ / □) - □
L L 1 2 3 1 2 3 U

LL	Length	0.5 = 0.5 ; 1 = 1.0 ; 2 = 2.0
1	Connector Series	K = K
2	Male/Female Designator	M = Male
3	Orientation of Connector	ST = Straight
U	Unit of Length	M = Meter ; F = Feet ; I = Inch

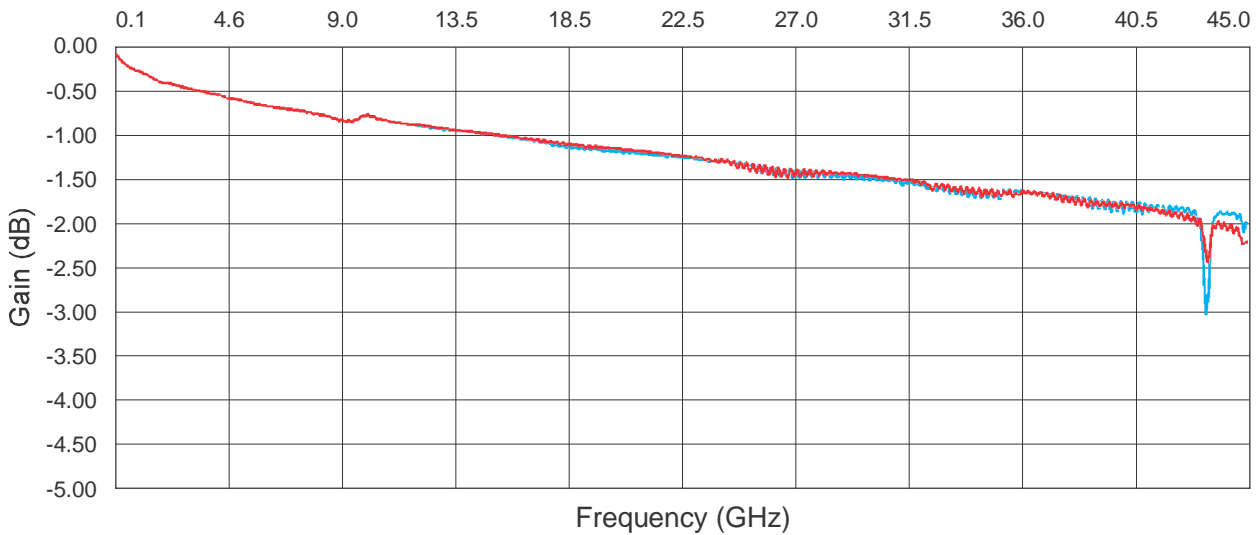
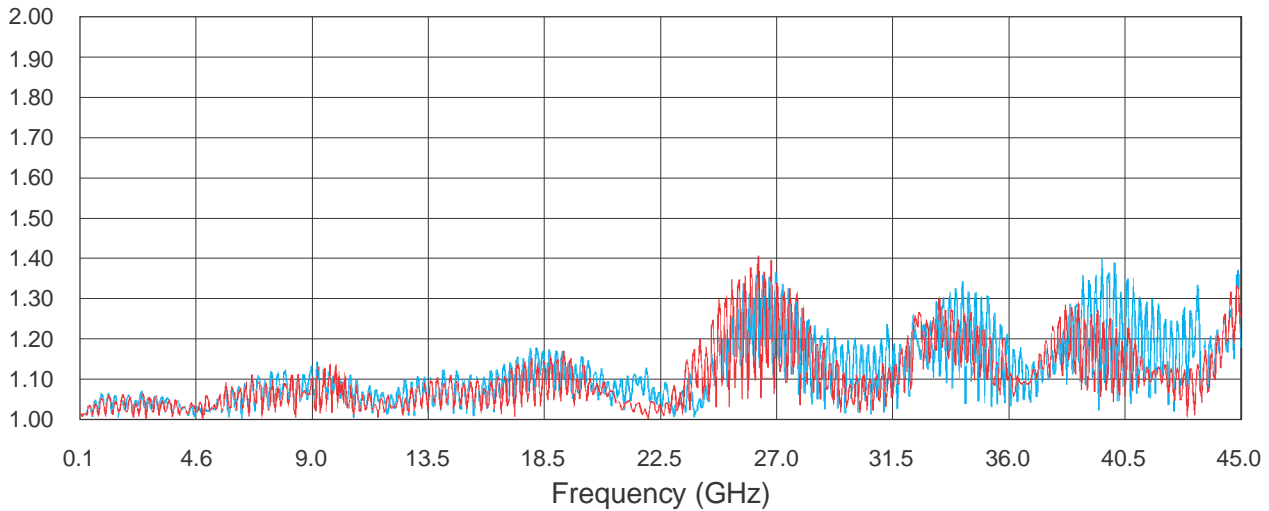
1 meter KA-Series cable set with K(Male) on both sides = KA-1.0-K(M/ST)-K(M/ST)-M

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Ka-Band (DC-40 GHz) Ultra Low Loss Pre-Connectorized Cables, KA-Series

Insertion Loss plot of KA-Series Cable Set, 0.5 meter, K (M) Connectors



KA-Series Cable Set Ordering Codes

Ordering Code	Length	Insertion Loss (dB) Typical			VSWR @40 GHz
		18 GHz	26.5 GHz	40 GHz	
KA-0.5-K(M/ST)-K(M/ST)-F	0.5 feet	0.66	0.77	0.95	< 1.5:1
KA-1.0-K(M/ST)-K(M/ST)-F	1 feet	0.95	1.11	1.36	< 1.5:1
KA-0.5-K(M/ST)-K(M/ST)-M	0.5 m	1.34	1.55	1.92	< 1.5:1
KA-1.0-K(M/ST)-K(M/ST)-M	1 m	2.33	2.66	3.31	< 1.5:1
KA-2.0-K(M/ST)-K(M/ST)-M	2 m	4.30	4.89	6.09	< 1.5:1
KA-3.0-K(M/ST)-K(M/ST)-M	3 m	6.27	7.12	8.88	< 1.5:1
KA-4.0-K(M/ST)-K(M/ST)-M	4 m	8.23	9.34	11.66	< 1.5:1
KA-5.0-K(M/ST)-K(M/ST)-M	5 m	10.20	11.57	14.44	< 1.5:1
KA-10.0-K(M/ST)-K(M/ST)-M	10 m	20.05	22.70	28.35	< 1.5:1

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Specifications for 40 GHz Ultra Low Loss & Phase Stable Flexible Cable Assemblies

Length Connector 1 Connector 2 Loss

- Should be flexible and easily routable
- Cable should conform to MIL standards MIL-C-17 Connectors to MIL-PRF-39012

Coaxial Cable Electrical Specifications

- Impedance : 50 ohms
- Working Frequency : DC~40 GHz
- Shielding Effectiveness : better than 90 dB
- Power Handling : > 20 watts CW @ 40 GHz
- Attenuation : < 2.85 dB per meter @ 40 GHz
- Velocity of Propagation : > 79%

Physical & Mechanical Specifications

- Construction should be triple shielded for low loss
- Inner Conductor : Solid Silver Plated Copper
- Dielectric : taped PTFE
- Inner Shield : Flat silver plated copper strip
- Interlayer : Aluminum polyester/polyimide tape
- Outer Shield : Round silver plated copper
- Jacket : Rugged Fluorinated Ethylene Propylene (FEP)
- Overall diameter : < 3.9 mm
- Bend Radius : < 24 mm
- Temperature Range : -55° ~ +200°C
- VSWR : < 1.5:1 @ 40GHz

Connector Specifications Precision K (2.92 mm) Male Straight

- MIL Standard : Should meet MIL-PRF-39012 requirements
- Body : Passivated, Stainless steel
- Center Conductor : Beryllium Copper, Gold Plated
- Nominal Impedance : 50 Ω
- Working Frequency range : DC~40 GHz
- Should meet MIL-STD-202 Standard for environmental conditions