



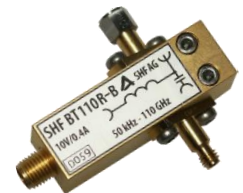
SHF RF Passive Components, Connectors & Cables



Bias Tees

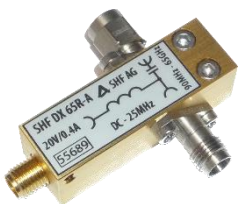
Based on our air line construction, all our bias tees have resonance-free transmission over the whole specified operating frequency range. We do also offer custom modifications and variations. For example, “DC- Feeders” are bias tees without the capacitor. Therefore, they provide slightly lower insertion loss in case they are connected to an AC-coupled device which already has a capacitor on its input.

P/N	Bandwidth	Available Options
SHF BT45R	45 GHz	<ul style="list-style-type: none">▲ All possible gender configurations of 2.92 mm (K) connectors▲ High voltage▲ High current▲ High voltage & high current
SHF BT65R	65 GHz	<ul style="list-style-type: none">▲ All possible gender configurations of 1.85 mm (V) connectors▲ High voltage▲ High current▲ High voltage & high current
SHF BT110R	110 GHz	<ul style="list-style-type: none">▲ All possible gender Configurations of 1.0 mm connectors▲ High voltage



Diplexers

Diplexers are bias tees with a certain bandwidth in the low frequency path to combine or separate high frequency and low frequency signals into or from a single line.



P/N	Bandwidth	Available Options
SHF DX45R	45 GHz	<ul style="list-style-type: none">▲ All possible gender configurations of 2.92 mm (K) connectors▲ High voltage & high current▲ Different passband windows for LF and HF path
SHF DX65R	65 GHz	<ul style="list-style-type: none">▲ All possible gender configurations of 1.85 mm (V) connectors▲ High voltage
SHF DX110R	110 GHz	<ul style="list-style-type: none">▲ All possible gender configurations of 1.0 mm connectors▲ High voltage

DC Blocks

Small, high performance DC blocks with an extremely broad bandwidth covering 20 kHz to greater than 110 GHz. Just as our bias tees, the SHF DC blocks offer low group delay and low insertion loss.

P/N	Bandwidth	Available Options
SHF DCB45R	45 GHz	<ul style="list-style-type: none"> ▲ All possible gender configurations of 2.92 mm (K) connectors ▲ High voltage
SHF DCB65R	65 GHz	<ul style="list-style-type: none"> ▲ All possible gender configurations of 1.85 mm (V) connectors ▲ High voltage
SHF DCB110R	110 GHz	<ul style="list-style-type: none"> ▲ All possible gender configurations of 1.0 mm connectors ▲ High voltage



NEW: Attenuators

Compact fixed attenuators up to 110 GHz with an extremely flat frequency response.



P/N	Bandwidth	Available Options
SHF ATT67 A	67 GHz	<ul style="list-style-type: none"> ▲ All possible gender configurations of 1.85 mm (V) connectors ▲ 3, 6, 8, 9, 10, 13, 16 or 20 dB attenuation
SHF ATT110 A	110 GHz	<ul style="list-style-type: none"> ▲ All possible gender configurations of 1.0 mm connectors ▲ 1.0 mm to 1.85 mm (V) connector combinations ▲ 3, 6, 8, 9, 10, 13, 16 or 20 dB attenuation

NEW: Terminations

This 50 Ω load offers excellent input reflection coefficients in a very compact and lightweight design.

P/N	Bandwidth	Available Options
SHF TRM110 A	110 GHz	<ul style="list-style-type: none"> ▲ All possible gender configurations of 1.0 mm connectors



NEW: Power Dividers

Our broadband power dividers split the inputs signal volage into two equal parts. With the characteristic impedance of 50 Ohms (when all ports are terminated) this results in a 6 dB insertion loss from the input to one output port (neglecting the extremely low inherent loss of the transmission channel). Alternatively, the devices can also be used in reverse direction to combine two signals.

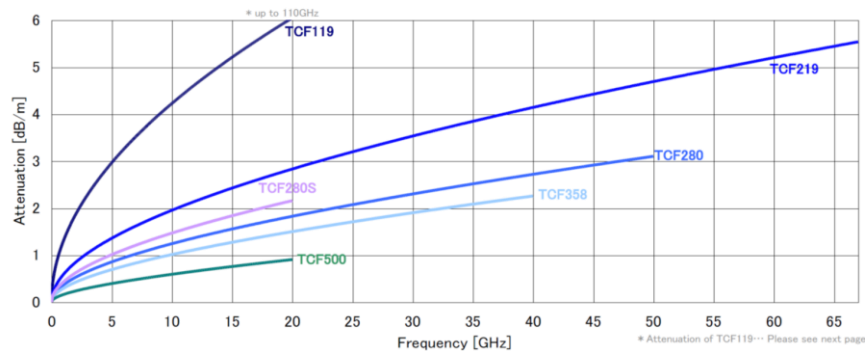


P/N	Bandwidth	Available Options
SHF PDV18 A	18 GHz	
SHF PDV67 A	67 GHz	<ul style="list-style-type: none"> ▲ All possible gender configurations of 1.85 mm (V) connectors
SHF PDV110 A	110 GHz	<ul style="list-style-type: none"> ▲ All possible gender configurations of 1.0 mm connectors ▲ 1.0 mm to 1.85 mm connector combinations



Flexible Cable Assemblies

Totoku's cable assemblies exhibit excellent flexibility and maintain their phase stability over temperature and bending. The extremely low attenuation (see chart below) is realized by using silver plated copper and E-PTFE with a low dielectric constant. There is a huge variety of different options e.g. for phase matching (< 1 ps), right angle connectors or armoring available.

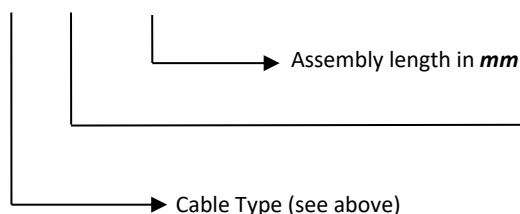


P/N	Connector 1	Connector 2	Bandwidth
TCF107	0.8 mm	0.8 mm	145 GHz
TCF119	0.8 mm	1.0 mm	125 GHz
	1.0 mm		110 GHz / 120 GHz
	1.85 mm		67 GHz
TCF219	1.85 mm (V)	1.85 mm (V)	67 GHz / 70 GHz
	2.4 mm		50 GHz
TCF280	2.4 mm	2.4 mm	50 GHz
	2.92 mm (K)		40 GHz
TCF358	2.92 mm (K)	2.92 mm (K)	40 GHz
	3.5 mm		26.5 GHz
	3.5 mm	3.5 mm	26.5 GHz
TCF500	SMA	SMA	20 GHz
	N	N	18 GHz



Configuration Example Flexible Cable Assemblies:

TCFXXX ◊◊ ○○○○



Connector Configuration:

A: male SMA	B: female SMA
D: male N	E: female N
F: male 3.5 mm	G: female 3.5 mm
K: male 2.92 mm	M: female 2.92 mm
Q: male 2.4 mm	R: female 2.4 mm
T: male 1.85 mm	U: female 1.85 mm
X: male 1.0 mm	Y: female 1.0 mm
ZP: male 0.8 mm	ZJ: female 0.8 mm



Adapters

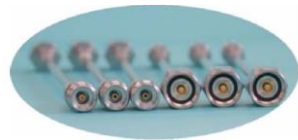
For many years now, we are working together with our Japanese partner KMCO. Our customers can benefit from KMCO's excellent expertise in designing RF connectors when using our RF adapters. The extensive product range covers all adaptation applications beyond 18 GHz and up to 110 GHz.

P/N ¹	Connector 1	Connector 2	BW
KPC100□□	1.0 mm	1.0 mm	110 GHz
KPC185□100□	1.85 mm (V)	1.0 mm	67 GHz
KPC185□□	1.85 mm (V)	1.85 mm (V)	65 GHz
KPC185□-SMPM-FD, KPC185□-SMPM-SB	1.85 mm (V)	SMPM	65 GHz
KPC240□□	2.4 mm	2.4 mm	50 GHz
KPC240□185□	2.4 mm	1.85 mm (V)	50 GHz
KPC292□□	2.92 mm (K)	2.92 mm (K)	40 GHz
KPC292□185□	2.92 mm (K)	1.85 mm (V)	40 GHz
KPC292□240□	2.92 mm (K)	2.4 mm	40 GHz
KPC350□□	3.5 mm	3.5 mm	26.5 GHz
KPC350□240□	3.5 mm	2.4 mm	26.5 GHz



RF Semi-rigid Cable Assemblies

Semi-rigid cable assemblies, which can be customized in length and shape, are the ideal solution for volume use and system prototyping. All cable assemblies are precisely manufactured and have very good physical length accuracy (phase matched cables are available on request).



P/N	Connector 1	Connector 2	Bandwidth
CA100□□	1.0 mm	1.0 mm	110 GHz
CA185□119SMPM	1.85 mm (V)	SMPM (GPPO™)	65 GHz
CA185□□	1.85 mm (V)	1.85 mm (V)	60 GHz
CA240□□	2.4 mm	2.4 mm	50 GHz
CA240□185□	2.4 mm	1.85 mm (V)	50 GHz
CA240□119SMPM	2.4 mm	SMPM (GPPO™)	50 GHz
CA292□□	2.92 mm (K)	2.92 mm (K)	40 GHz
CA292□185□	2.92 mm (K)	1.85 mm (V)	40 GHz
CA292□240□	2.92 mm (K)	2.4 mm	40 GHz
CA292□119SMPM	2.92 mm (K)	SMPM (GPPO™)	40 GHz

RF Semi-Flexible Cable Assemblies

KMCO's hand formable semi-flexible cable assemblies are easy to install in a narrow space. They are designed for broadband measurement, instrument, and system use.

P/N ²	Connector 1	Connector 2	Bandwidth
SFCA100□□	1.0 mm	1.0 mm	110 GHz
SFCA185119□□	1.85 mm	1.85 mm	65 GHz
SFCA119SMPM	SMPM (GPPO™)	SMPM (GPPO™)	65 GHz
SFCA185□119SMPM	1.85 mm (V)	SMPM (GPPO™)	65 GHz
SFCA292119□□	2.92 mm (K)	2.92 mm (K)	40 GHz
SFCA292□119185□	2.92 mm (K)	1.85 mm	40 GHz
SFCA292□119SMPM	2.92 mm (K)	SMPM (GPPO™)	40 GHz



¹ □ represents the connector (M: male, F: female). E.g.: A CA100MF200 is a 200 mm semi-rigid cable with a male and a female 1.0 mm connector.