SUSPENDED SUBSTRATE STRIPLINE COAXIAL

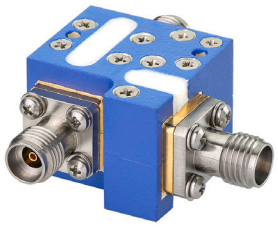
Diplexer

ZDSS-K10G13G+

50Ω DC to 40 GHz (DC-10.5, 13.5-20 GHz) 2.92mm Female

KEY FEATURES

- Low Passband Insertion Loss of 1 dB Typ.
- High Rejection of 90 dB Typ. in High Pass Channel and 70dB Typ. up to 40 GHz in Low Pass Channel
- Good Return Loss of 14 dB Typ.

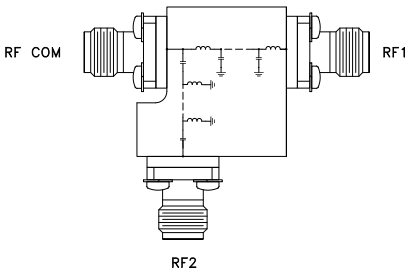


Generic photo used for illustration purposes only

APPLICATIONS

- Test & Measurement
- Quantum Computing
- Electronic Countermeasures

FUNCTIONAL DIAGRAM



PRODUCT OVERVIEW

Mini-Circuits' Suspended Substrate Stripline filters offer low insertion loss combined with wide stopband, good power handling & temperature stability, small form factor with rugged build ideal for harsh operating environments making them an excellent choice for wideband instruments and systems like ECM, ECCM, ELINT and ultra-broadband receivers. Low pass, high pass, band pass, diplexer and multiplexer designs can be realized with this technology with passband, stopband up to 40GHz and stopband width greater than 6x cutoff frequency.

ELECTRICAL SPECIFICATIONS AT +25°C

Parameter		Function (Port)	Frequency (GHz)	Min.	Typ.	Max.	Unit
Passband	Insertion Loss	Low Pass (RF COM-RF1)	DC - 10.5	—	1.0	2	dB
		High Pass (RF COM-RF2)	13.5 - 20	—	1.5	3	
	Return Loss	Low Pass (RF1)	DC - 10.5	—	14	—	dB
		High Pass (RF2)	13.5 - 20	—	10	—	
		Common (RF COM)	DC - 10.5	—	14	—	
			13.5 - 20	—	10	—	
Stopband Rejection		Low Pass (RF COM-RF1)	13.5 - 16	—	20	—	dB
			16 - 20	30	50	—	
			20 - 25	50	70	—	
			25 - 40	—	70	—	
		High Pass (RF COM-RF2)	DC - 6	60	90	—	
			6 - 9	50	70	—	
			9 - 10.5	25	50	—	

ABSOLUTE MAXIMUM RATINGS[1]

Parameter	Ratings
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +100 °C
Input Power[2]	10W @ 25°C

1. Permanent damage may occur if any of these limits are exceeded.
2. Power rating applies only to signals within the passband.

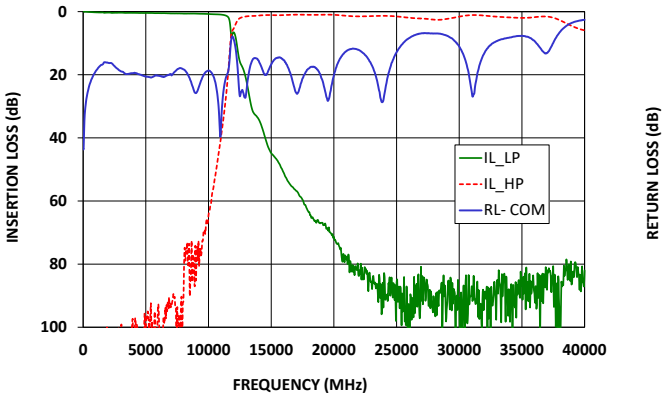
Diplexer

ZDSS-K10G13G+

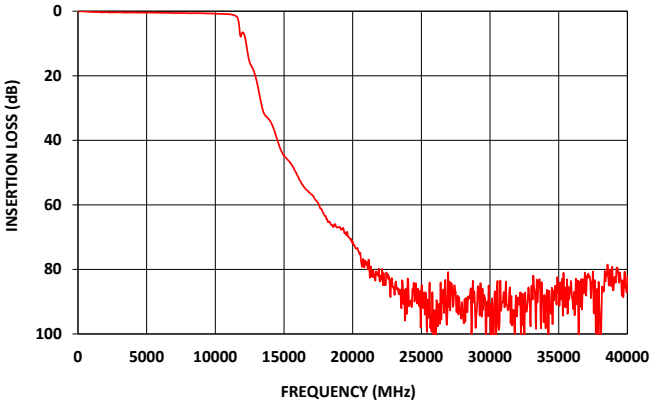
50Ω DC to 40 GHz (DC-10.5, 13.5-20 GHz) 2.92mm Female

TYPICAL PERFORMANCE GRAPHS AT +25°C

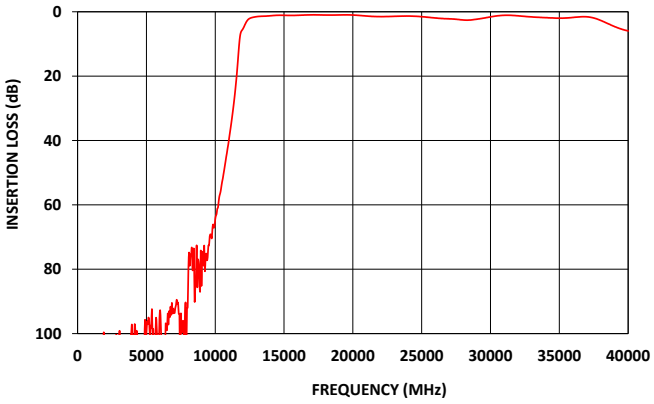
ZDSS-K10G13G+ IL-LP Vs IL-HP Vs RL-COM
(Pin=0dBm)



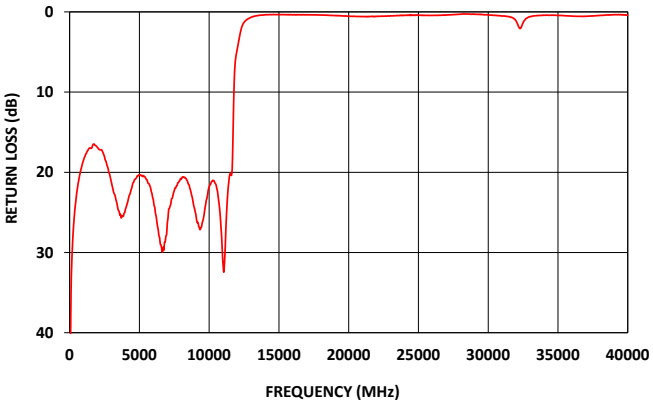
ZDSS-K10G13G+ LOW PASS PORT
INSERTION LOSS (Pin=0dBm)



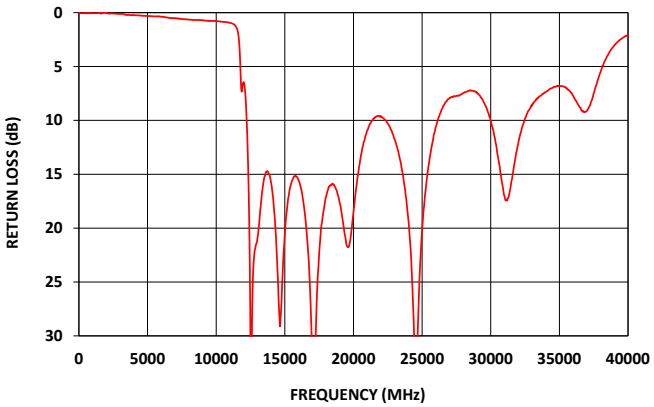
ZDSS-K10G13G+ HIGH PASS PORT
INSERTION LOSS (Pin=0dBm)



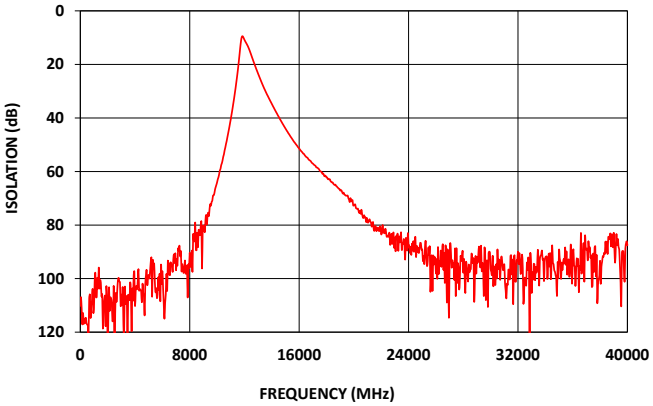
ZDSS-K10G13G+ LOW PASS PORT
RETURN LOSS (Pin=0dBm)



ZDSS-K10G13G+ HIGH PASS PORT
RETURN LOSS (Pin=0dBm)



ZDSS-K10G13G+
CROSS OVER ISOLATION (Pin=0dBm)



Diplexer

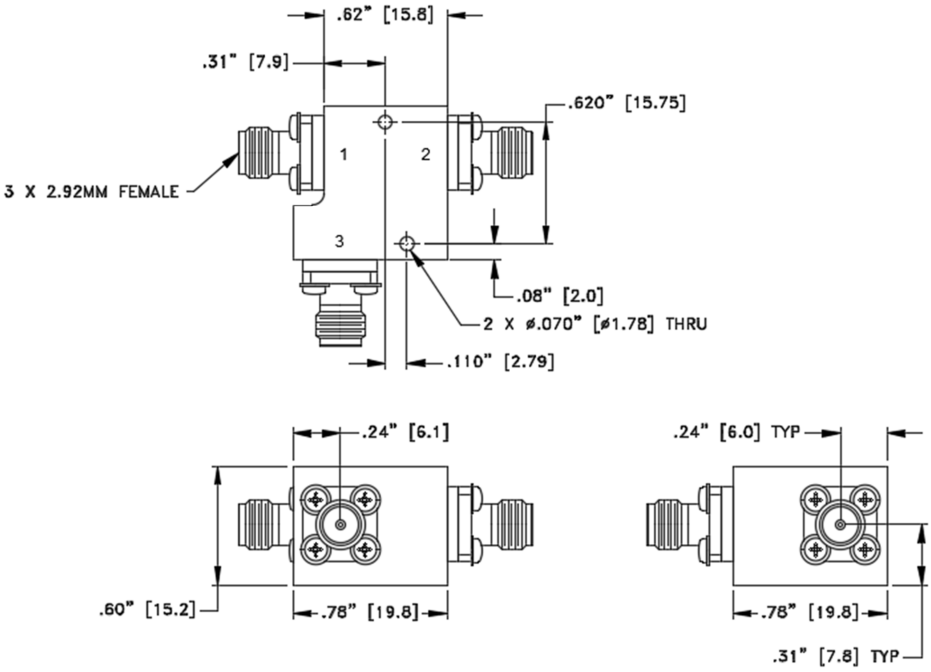
ZDSS-K10G13G+

50Ω DC to 40 GHz (DC-10.5, 13.5-20 GHz) 2.92mm Female

CONNECTOR DESCRIPTION

Function	Marking on Unit	Connector
RF COM (Common)	1	2.92mm Female
RF1 (Low Pass)	2	2.92mm Female
RF2 (High Pass)	3	2.92mm Female

CASE STYLE DRAWING



Weight: 50 grams

Dimensions are in inches[mm]. Tolerance:2PL ±.050; 3PL ±.015

PRODUCT MARKING*: ZDSS-K10G13G+

*Marking may contain other features or characters for internal lot control.

Diplexer

ZDSS-K10G13G+

50Ω DC to 40 GHz (DC-10.5, 13.5-20 GHz) 2.92mm Female

ADDITIONAL INFORMATION IS AVAILABLE ON OUR DASHBOARD CLICK HERE

Performance Data & Graphs	Data Graphs S-Parameter (S3P Files) Data Set (.zip file)
Case Style	ZE3315
RoHS Status	Compliant
Environmental Ratings	ENV001

NOTES

A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits' standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the standard terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/terms/viewterm.html