ERAVANT
MAKING MILLIMETERWAVE ACCESSIBLE

D BAND UPDATES

January 2021

CONTENTS

INTRODUCTION

ERAVANT designs and manufactures total solutions for microwave and millimeterwave applications covering 10 MHz to 220 GHz and up to 325 GHz.

- This presentation introduces Eravant's selective standard product offerings in the D-Band (110 to 170 GHz).
- Our full product offering, including Limited Run models, are listed on our website at www.eravant.com.

Additional products and presentations are available upon customer request:

- Custom models for components and subassemblies can be configured to customers' specifications.
- Presentations about Ka, Q, U, V, E, W, F and G-Bands are available.
- Presentations for specific applications like 5G/IoT, Space, Test Instrumentation, Communications, and Radar are also available online.

ERAVANT PRODUCT COVERAGE

ERAVANT offers Total Product Solutions to configure any system applications in the Frequency Range of DC to 220 GHz and up to 325 GHz.

D Band products are mainly used in

- THz communication systems
- Automotive Radar systems
- 5G systems
- Scientific and industrial systems
- Test equipment and set ups

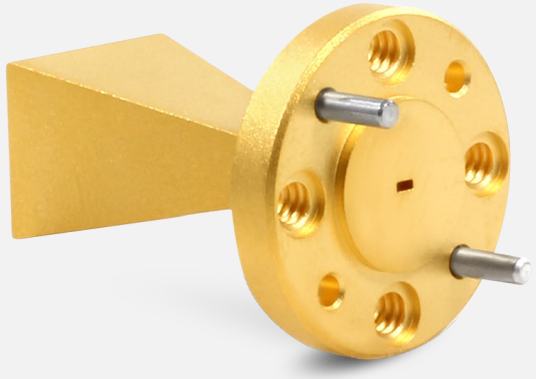
The intent of this presentation is to present the ERAVANT product offerings in D Band to help the customers having a quick overview of available product families for their project and system planning. The model selected is for illustration purpose only. The full product offerings under many models with various performance in the same product family are available on Eravant's website.

ANTENNAS

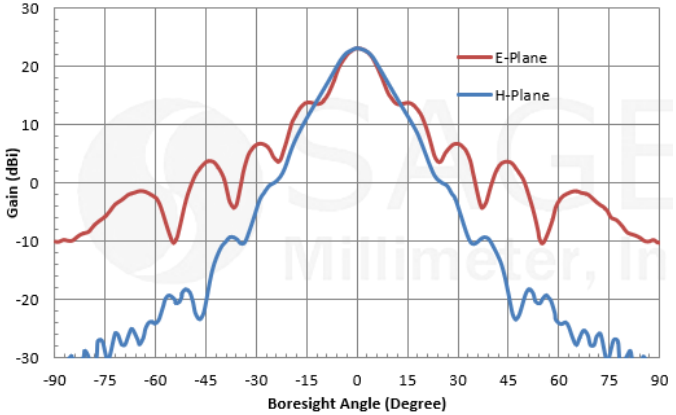
RECTANGULAR HORN ANTENNA

SAR-2309-06-S2

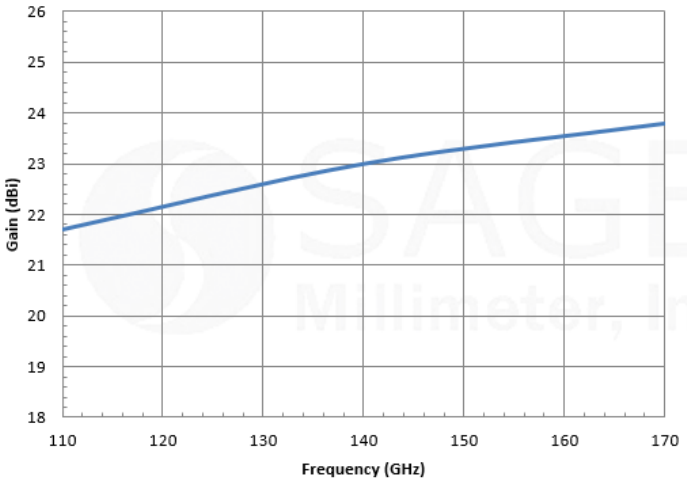
Parameter	Minimum	Typical	Maximum
Frequency	110 GHz		170 GHz
Gain	21 dBi	23 dBi	24 dBi
Polarization		Linear	
3 dB Beamwidth, E-Plane		11°	
3 dB Beamwidth, H-Plane		12°	
Sidelobes, E-Plane		-14 dB	
Sidelobes, H-Plane		-30 dB	
Return Loss		23 dBi	



Typical Antenna Pattern @ 140 GHz



Typical Gain vs. Frequency



CONICAL HORN ANTENNA

SAC-2309-075-S2

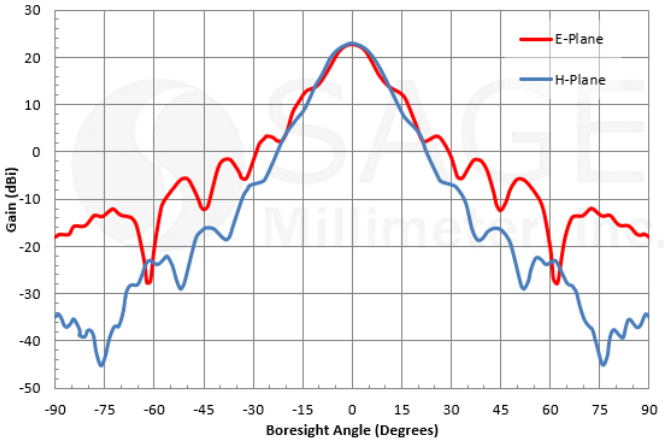
Parameter	Minimum	Typical	Maximum
Frequency*	115 GHz		140 GHz
Gain		23 dBi	
3 dB Beamwidth, E-plane		11°	
3 dB Beamwidth, H-plane		13°	
Sidelobes, E-plane		-20 dB	
Sidelobes, H-plane		-28 dB	
Return Loss		23 dBi	

**Note: Can operate from 110 to 140 GHz if the dominant mode is maintained.*

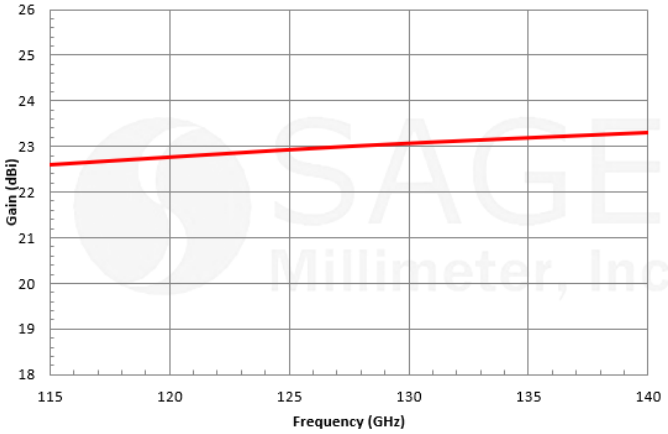
Features:

- Circular Waveguide Interface
- Precisely Machined and Gold Plated
- High Return Loss
- Linear and Circular Polarization

Typical Antenna Pattern @ 127.5 GHz



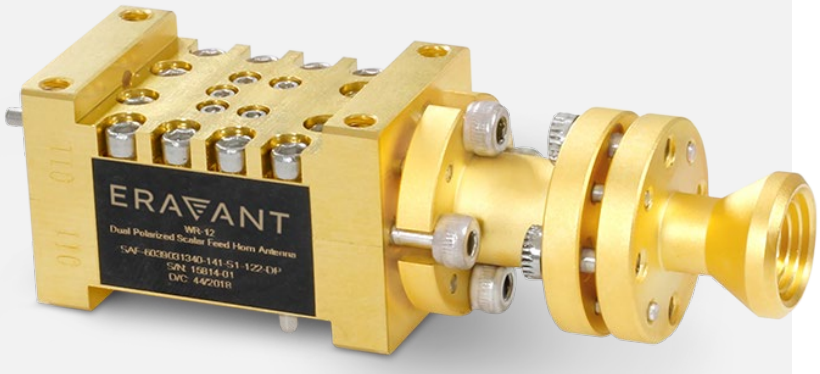
Typical Gain vs. Frequency

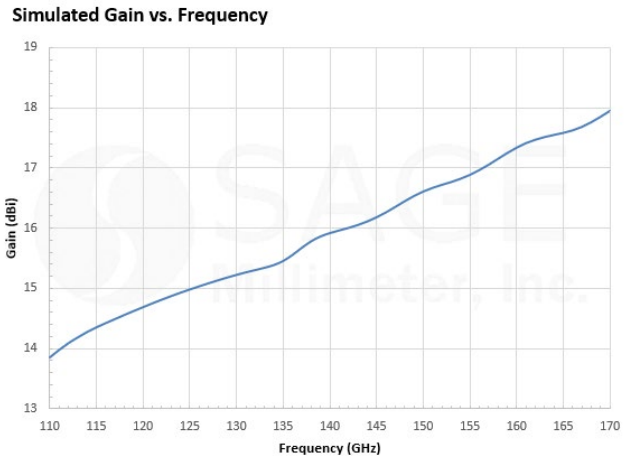


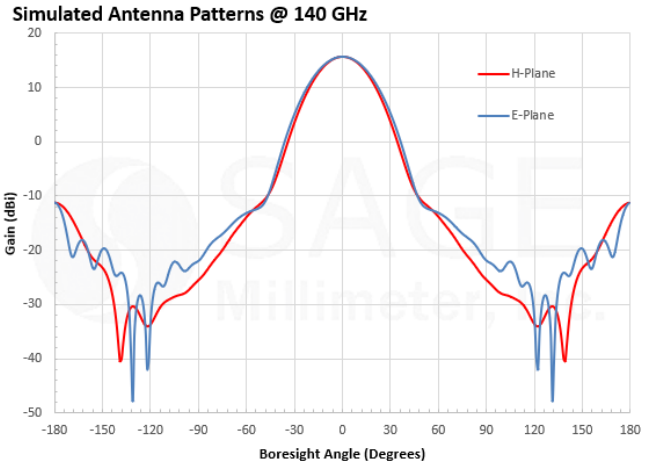
DUAL POLARIZED ANTENNA,
110 TO 170 GHz

SAF-1141741340-065-S1-075-DP

Parameter	Minimum	Typical	Maximum
Frequency	110 GHz	140 GHz	170 GHz
Gain		13 dBi	
3 dB Beamwidth, E-plane		40°	
3 dB Beamwidth, H-plane		40°	
Sidelobe Levels		-25 dB	
V and H Port Isolation		30 dB	
RF Connector	WR-10 with UG-387/U-M Flange		
Weight		0.1 lbs	







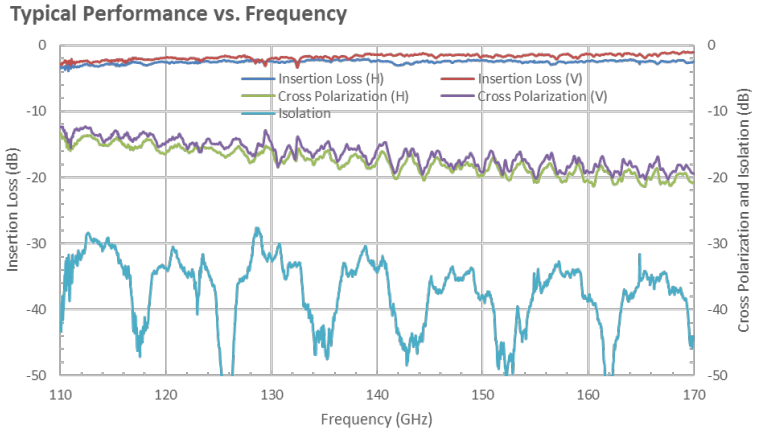
FULL BAND ORTHOMODE TRANSDUCER

SAT-FD-06506-S1

Parameter	Minimum	Typical	Maximum
Frequency	110 GHz		170 GHz
Insertion Loss, Vertical		2.5 dB	
Insertion Loss, Horizontal		2.5 dB	
Isolation		30 dB	
Cross Polarization		18 dB	

Features:

- High Isolation
- Low Insertion Loss
- Full Band Coverage
- 18 dB Cross-pol Rejection



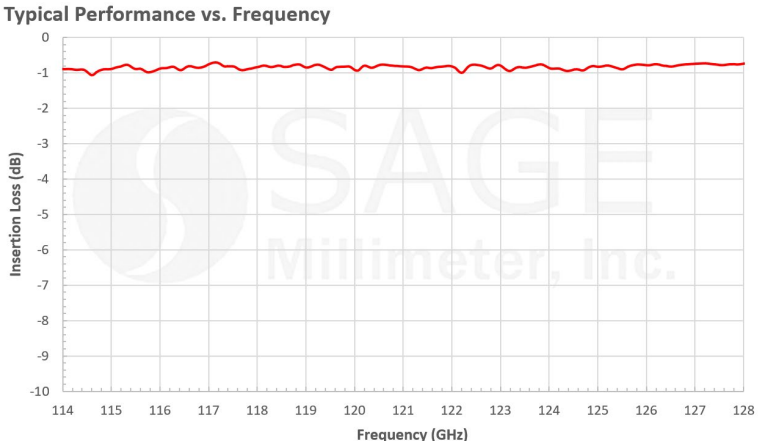
LINEAR TO CIRCULAR POLARIZER

SAS-124-07506-F1

Parameter	Minimum	Typical	Maximum
Frequency	114 GHz		128 GHz
Insertion Loss, Vertical		2.5 dB	
Insertion Loss, Horizontal		2.5 dB	
Isolation		30 dB	
Cross Polarization		18 dB	

Features:

- Good Axial Ratio
- Low Insertion Loss
- Broad Band Coverage



AMPLIFIERS

LOW NOISE AMPLIFIER

110 to 170 GHz

SBL-1141741365-0606-E1

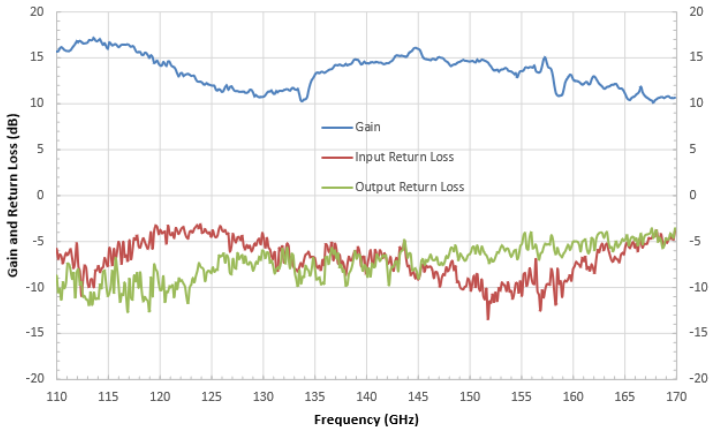
Parameter	Minimum	Typical	Maximum
Frequency	110 GHz		170 GHz
Gain		13 dB	
Noise Figure		6.5 dB	
P_{in}			+10 dBm
Input Return Loss		6 dB	
Output Return Loss		6 dB	
DC Voltage	+6 V_{DC}	+8 V_{DC}	+12 V_{DC}
DC Supply Current		30 mA	

Features:

- Full Waveguide Band Coverage
- State-of-the-Art Noise Figure
- Low Power Consumption

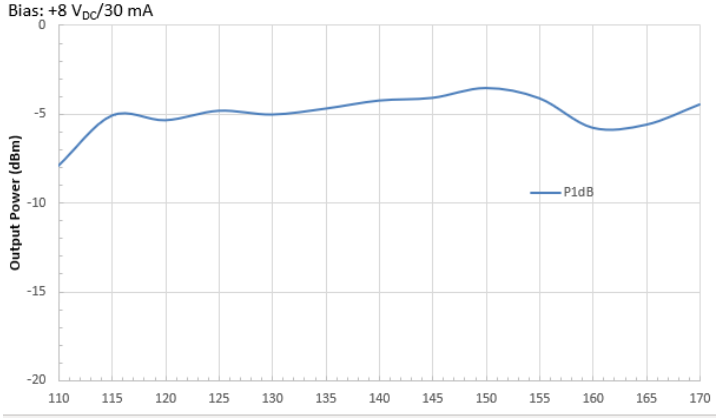
Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/30 mA



Output Power vs. Frequency

Bias: +8 V_{DC}/30 mA



LOW NOISE AMPLIFIER

110 to 170 GHz

SBL-1141741860-0606-EI

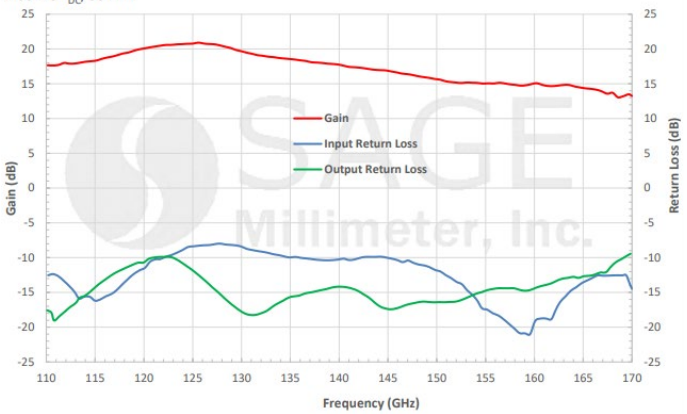
Parameter	Minimum	Typical	Maximum
Frequency	110 GHz		170 GHz
Gain		18 dB	
Noise Figure		6.0 dB	
P_{in}			-25 dBm
Input Return Loss		6 dB	
Output Return Loss		6 dB	
DC Voltage		+3 V_{DC}	+5 V_{DC}
DC Supply Current		60 mA	

Features:

- Full Waveguide Band Coverage
- State-of-the-Art Noise Figure
- Low Power Consumption

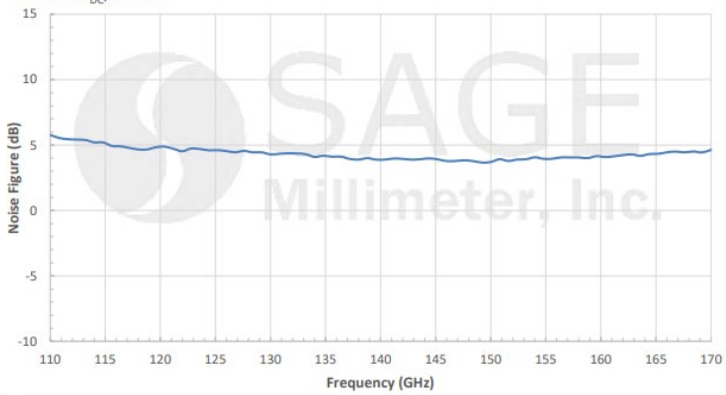
Typical Performance vs. Frequency

Bias: +3V_{DC}/60 mA



Typical Noise Figure vs Frequency

Bias: +3V_{DC}/60 mA



FREQUENCY MULTIPLIERS

X2 PASSIVE MULTIPLIER

SFP-06212-S2

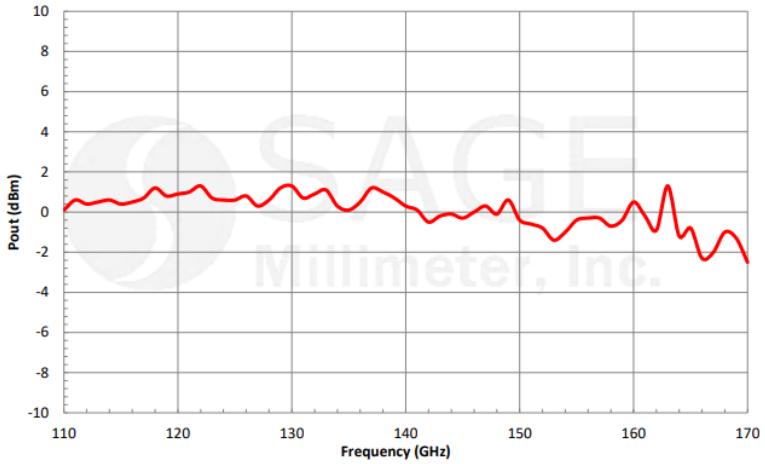
Parameter	Minimum	Typical	Maximum
Input Frequency	55 GHz		85 GHz
Output Frequency	110 GHz		170 GHz
Input Power		+16 dBm	+18 dBm
Output Power		+0 dBm	
Harmonic Suppression		20 dB	

Features:

- Minimal Conversion Loss
- No External Bias
- Compact Package

Typical Performance vs Frequency

Input Power = +15 dBm



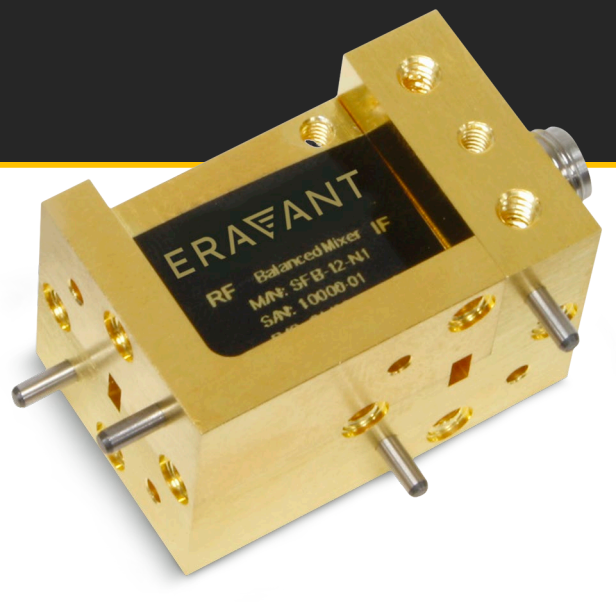
BALANCED MIXER

SFB-06-N1

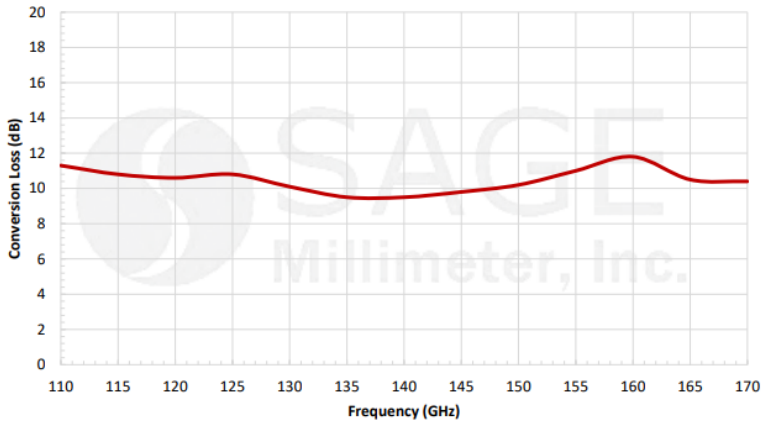
Parameter	Minimum	Typical	Maximum
RF Frequency	110 GHz		170 GHz
LO Frequency	110 GHz		170 GHz
IF Frequency	DC		40 GHz
LO Pumping Power		+13 dBm	+15 dBm
Conversion Loss		12 dB	15 dB
Input P_{1dB}		-3 dBm	
RF to LO Isolation		30 dB	
Combined RF and LO Power			+18 dBm

Features:

- Full Waveguide Band Coverage
- Low Conversion Loss
- High IF Frequency up to 40 GHz and Beyond
- Compact Package



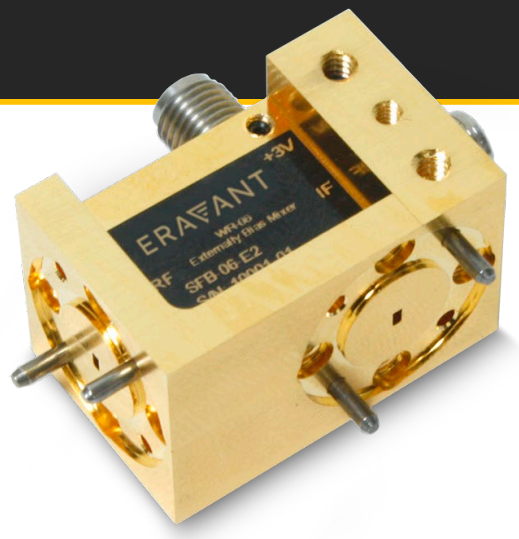
Typical Conversion Loss vs. Frequency
RF: -20 dBm; LO: 146 GHz/+13 dBm



EXTERNALLY BIASED BALANCED MIXER

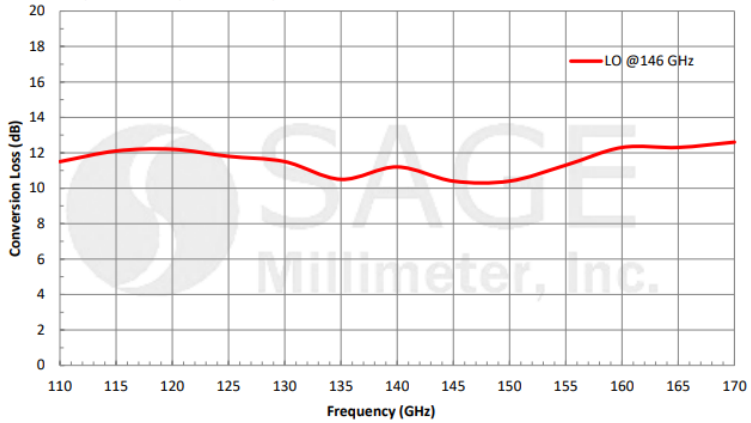
SFB-06-E2

Parameter	Minimum	Typical	Maximum
RF Frequency Range	110 GHz		170 GHz
LO Frequency Range	110 GHz		170 GHz
IF Frequency Range	DC		40 GHz
Required LO Pumping Power	+0 dBm	+3 dBm	+10 dBm
Conversion Loss		13 dB	
Input P-1 dB		-10 dBm	
Combined RF and LO Power			+16 dBm
External Bias Voltage		+5 V_{DC}/2mA	+5 V_{DC}/5mA



Typical Conversion Loss vs. Frequency

LO: +3 dBm, RF: -20 dBm, Bias: +5 Vdc/2 mA



Features:

- Full Waveguide Band Coverage
- Low Conversion Loss
- High IF Frequency up to 40 GHz and Beyond
- Compact Package

FREQUENCY CONVERTERS

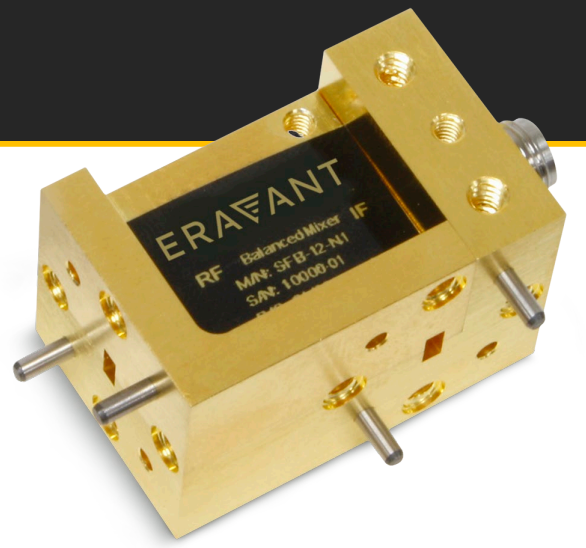
BALANCED UPCONVERTER

SFU-06-N11

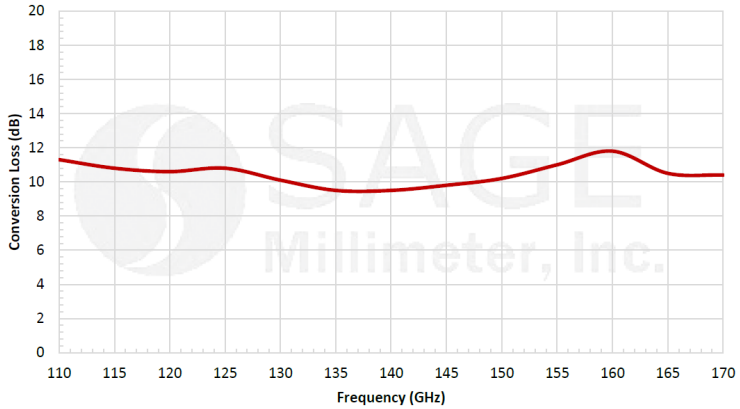
Parameter	Minimum	Typical	Maximum
RF Frequency	110 GHz		170 GHz
LO Frequency	110 GHz		170 GHz
IF Frequency	DC		40 GHz
LO Pumping Power		+13 dBm	+15 dBm
Conversion Loss		13 dB	16 dB
Input P_{1dB}		-3 dBm	
RF to LO Isolation		30 dB	
Combined RF and LO Power			+18 dBm

Features:

- Full Waveguide Band Coverage
- Low Conversion Loss
- High IF Frequency up to 40 GHz and Beyond
- Compact Package



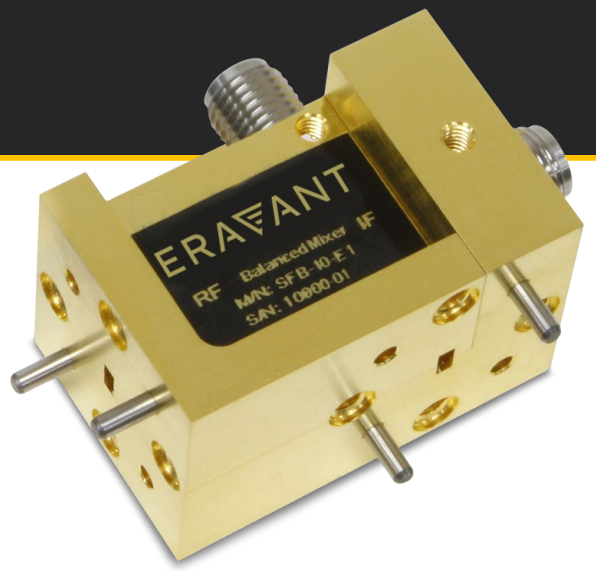
Typical Conversion Loss vs. Frequency
IF: -20 dBm; LO: 146 GHz/+13 dBm



EXTERNALLY BIASED UPCONVERTER

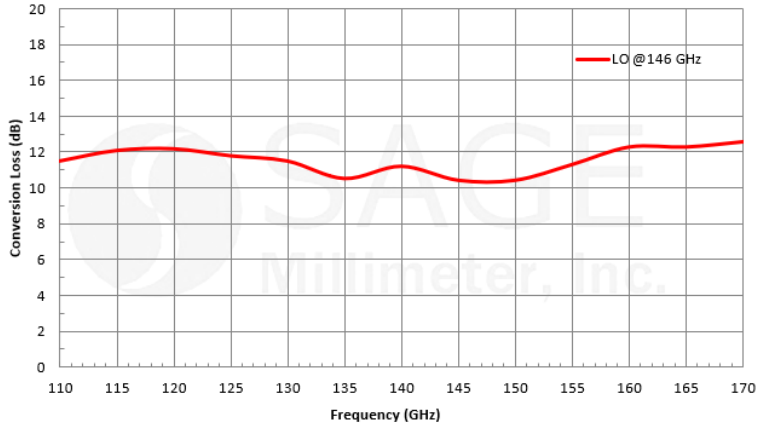
SFU-06-E2

Parameter	Minimum	Typical	Maximum
RF Frequency Range	110 GHz		170 GHz
LO Frequency Range	110 GHz		170 GHz
IF Frequency Range	DC		40 GHz
Required LO Pumping Power	+0 dBm	+3 dBm	+10 dBm
Conversion Loss		14 dB	
Input P-1 dB		-10 dBm	
Combined RF and LO Power			+16 dBm
External Bias Voltage		+5 V_{DC}/2mA	+5 V_{DC}/5mA



Typical Conversion Loss vs. Frequency

LO: +3 dBm, IF: -20 dBm, Bias: +5 Vdc/2 mA



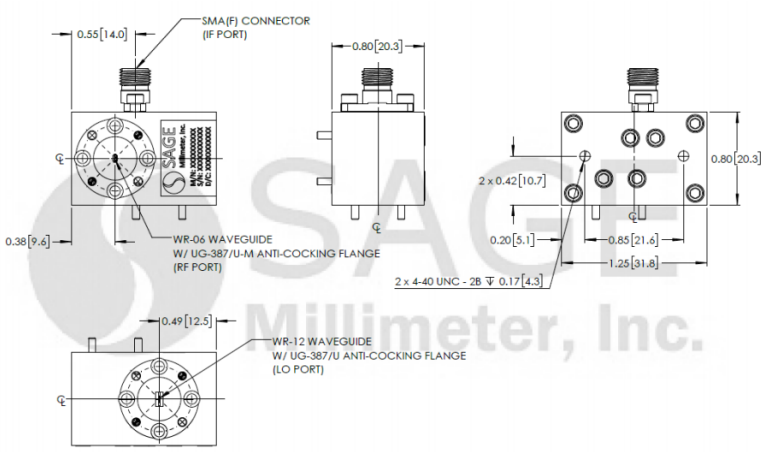
Features:

- Full Waveguide Band Coverage
- Low Conversion Loss
- High IF Frequency up to 40 GHz and Beyond
- Compact Package

SUBHARMONICALLY PUMPED MIXER

SFS-06-N3

Parameter	Minimum	Typical	Maximum
RF Frequency	110 GHz		170 GHz
LO Frequency	55 GHz		85 GHz
IF Frequency	DC		5 GHz
LO Pumping Power		+16 dBm	
Conversion Loss		16 dB	
LO to IF Isolation		30 dB	
Combined RF and LO Power			+20 dBm



Features:

- Full Band Operation
- LO=1/2 RF
- Second Harmonic Mixing
- Compact Package

HARMONIC MIXER

SFH-06SFSF-A3

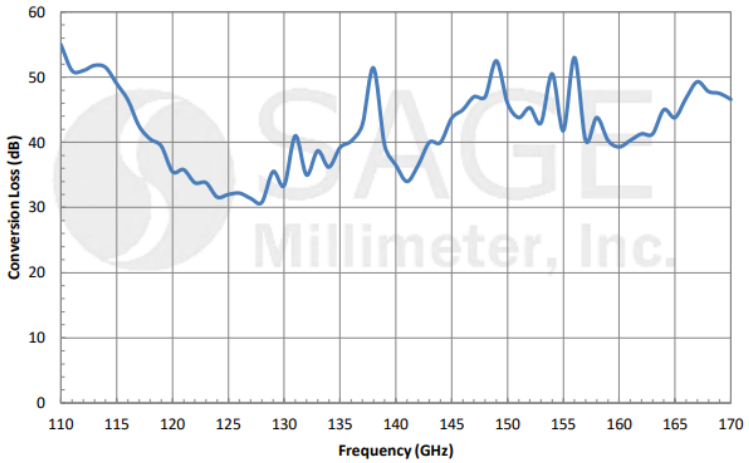
Parameter	Minimum	Typical	Maximum
RF Frequency	110 GHz		170 GHz
LO Frequency	3.0 GHz		6.1 GHz
IF Frequency	DC		1.3 GHz
LO Pumping Power		+16 dBm	+19 dBm
Harmonic Number		28	
Conversion Loss		50 dB	
Combined RF and LO Power			+20 dBm

Features:

- Full Band Operation
- Even Harmonics
- Balanced
- No External Bias Required
- 28th Harmonic Calibrated
- Other Even Harmonic Calibration Table Available
- Compact Package

Typical Conversion Loss vs. Frequency

P_{RF} = -20 dBm



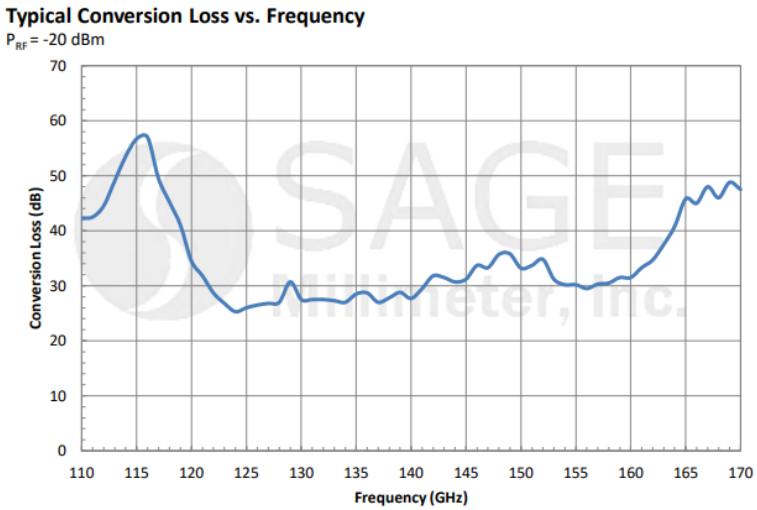
SPECTRUM ANALYZER HARMONIC MIXER

SFH-06SFSF-A3-2

Parameter	Minimum	Typical	Maximum
RF Frequency	110 GHz		170 GHz
LO Frequency	5.0 GHz		12.0 GHz
IF Frequency	DC		1.3 GHz
LO Pumping Power		+16 dBm	+19 dBm
Harmonic Number		14	
Conversion Loss		45 dB	
Combined RF and LO Power			+20 dBm

Features:

- Full Band Operation
- Even Harmonics
- No External Bias Required
- 14th Harmonic Calibrated
- Other Even Harmonic Calibration Table Available
- Compact Package

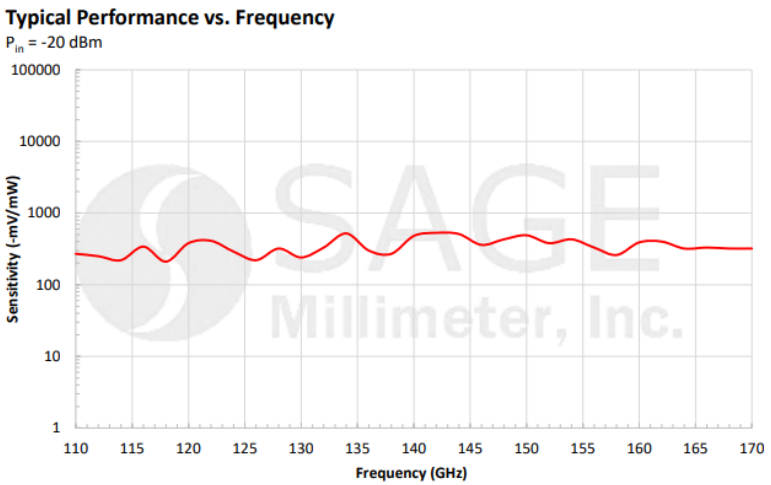


DETECTORS

AMPLITUDE DETECTOR

SFD-114174-06SF-N1 & SFD-114174-06SF-P1

Parameter	Minimum	Typical	Maximum
Frequency Range	110 GHz		170 GHz
Sensitivity (SFD-114174-06SF-N1)		-300 mV/mV	
Sensitivity (SFD-114174-06SF-P1)		+300 mV/mV	
Sensitivity Flatness		± 2.0 dB	
Linear Detection Range	-45 dBm	-10 dBm	0 dBm
RF Input Power		-20 dBm	+17 dBm
Video Bandwidth		10 MHz	



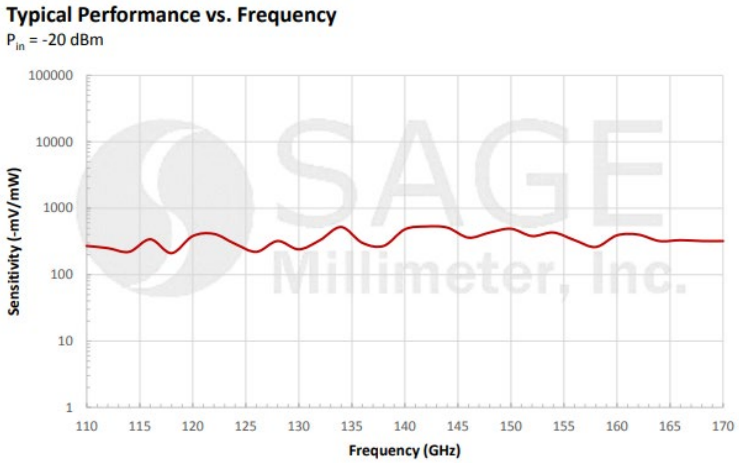
Features:

- Full Waveguide Band Operation
- Positive and Negative Output Selection
- High Sensitivity Without Tuning
- High Sensitivity Stability Over Broad Temperature Range
- The Models with Integrated Faraday Isolator Available under STD-06SF-NI and STD-06SF-PI.

AMPLITUDE DETECTOR WITH ISOLATOR

STD-06SF-NI & STD-06SF-PI

Parameter	Minimum	Typical	Maximum
Frequency Range	110 GHz		170 GHz
Sensitivity (STD-06SF-NI)		-300 mV/mV	
Sensitivity (STD-06SF-PI)		+300 mV/mV	
Sensitivity Flatness		± 2.0 dB	
Linear Detection Range	-45 dBm	-10 dBm	0 dBm
RF Input Power		-20 dBm	+17 dBm
Video Bandwidth		10 MHz	



Features:

- Full Waveguide Band Operation
- Positive and Negative Output Selection
- High Sensitivity Without Tuning
- High Sensitivity Stability Over Broad Temperature Range
- The Models without Integrated Faraday Isolator Available under SFD-114174-06SF-N1 and SFD-114174-06SF-P1

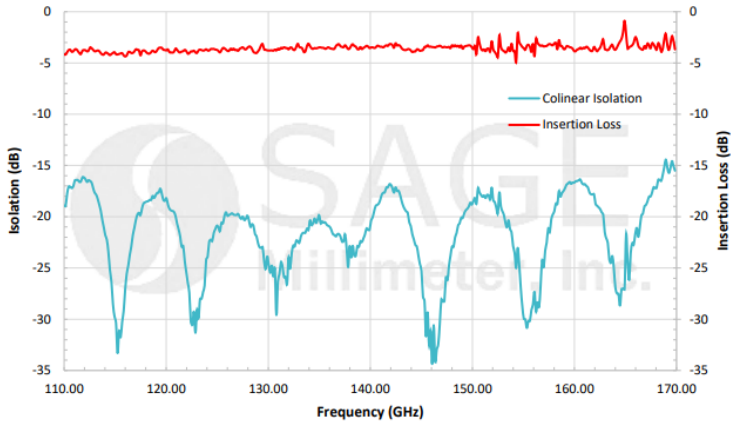
PASSIVE COMPONENTS

WAVEGUIDE 2-WAY POWER DIVIDER

SWP-11417402-06-S1

Parameter	Minimum	Typical	Maximum
Frequency	110 GHz		170 GHz
Power Unbalance		±063 dB	
Insertion Loss		1.5 dB	
Isolation		20 dB	
Input / Output Return Loss			15 dB

Typical Isolation and Insertion Loss vs Frequency



Features:

- 2, 4, 8, 16, 32 Ways
- Right Angle & Inline Configuration
- Low Insertion Loss
- High Isolation
- Compact Package

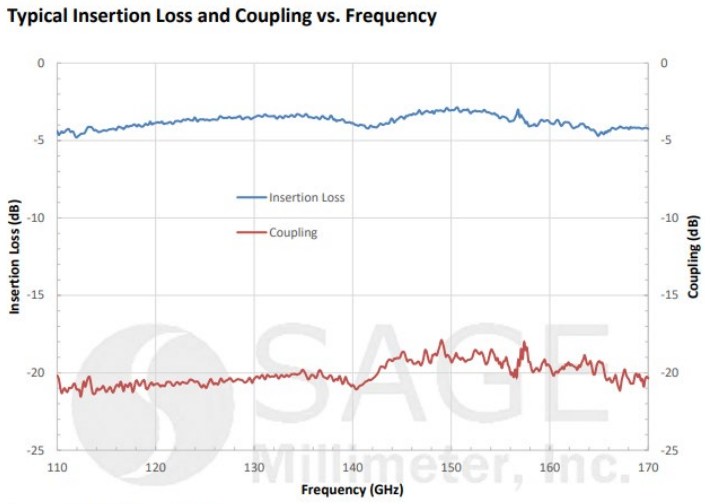
WAVEGUIDE DIRECTIONAL COUPLER

SWD-2025H-06-SB

Parameter	Minimum	Typical	Maximum
Frequency	110 GHz		170 GHz
Insertion Loss*		3.0 dB	
Coupling*		20 dB	
Directivity*		25 dB	
Main Line VSWR			1.2:1

Features:

- Full Band Operation
- 3, 6, 10, 20, 30, 40 dB
- Dual Directional
- Bi-Directional
- Waveguide Version
- Low Insertion Loss
- High Directivity



*Insertion loss includes coupling loss

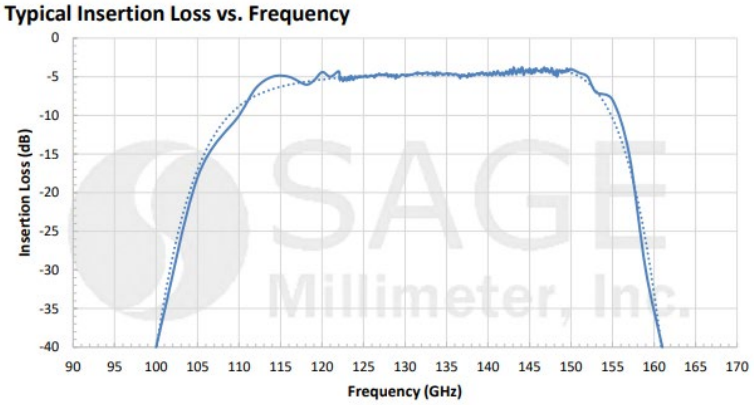
WAVEGUIDE BANDPASS FILTER

SWF-14428340-06-B1

Parameter	Minimum	Typical	Maximum
Passband Frequency	125 GHz		150 GHz
Passband Insertion Loss		4.5 dB	3.5 dB
Passband Ripple		±1.0 dB	
Rejection Frequency, Low Side	DC		100 GHz
Rejection Frequency, High Side	163 GHz		250 GHz
Rejection	35 dB	40 dB	
Passband VSWR		1.5:1	

Features:

- Lowpass, Highpass and Bandpass
- Narrow and Broadband
- Low Insertion Loss
- High Rejection



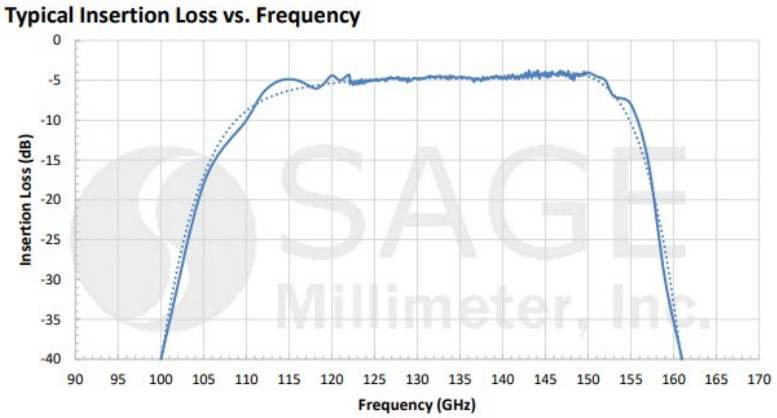
WAVEGUIDE LOWPASS FILTER

SWF-14428340-06-L1

Parameter	Minimum	Typical	Maximum
Passband Frequency	115 GHz		150 GHz
Passband Insertion Loss		4.5 dB	3.5 dB
Passband Ripple		±1.0 dB	
Rejection Frequency, Low Side	DC		100 GHz
Rejection Frequency, High Side	163 GHz		250 GHz
Rejection	35 dB	40 dB	
Passband VSWR		1.5:1	

Features:

- Lowpass, Highpass and Bandpass
- Narrow and Broadband
- Low Insertion Loss
- High Rejection



WAVEGUIDE HIGHPASS FILTER

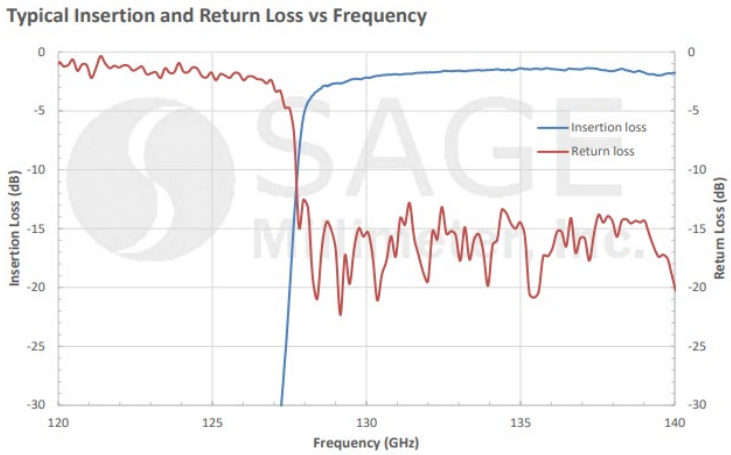
130 GHz

SWF-13413480-06-H1

Parameter	Minimum	Typical	Maximum
Passband Frequency	130 GHz		>200 GHz
Passband Insertion Loss		2.5 dB	
Rejection Frequency	DC		126 GHz
Rejection		80 dB	
Passband VSWR		1.5:1	
Waveguide		WR-06	

Features:

- Lowpass, Highpass and Bandpass
- Narrow and Broadband
- Low Cost
- Low Insertion Loss
- High Rejection

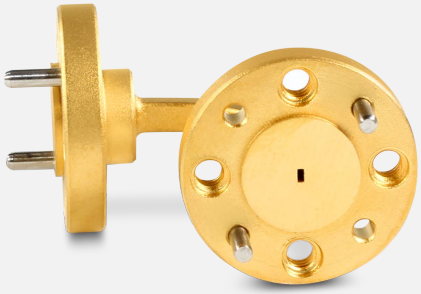


WAVEGUIDES

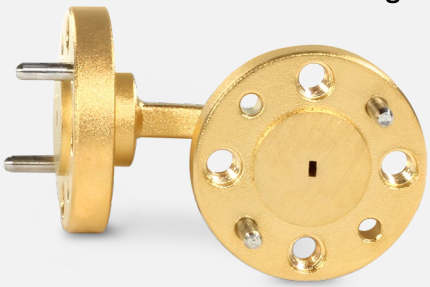
WAVEGUIDES

FEATURES:

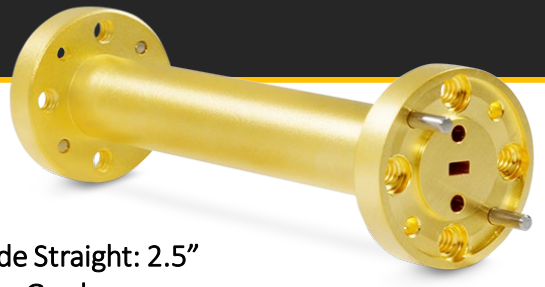
- Metrology Grade Straight: 2.5”
- Straights: 1”, 2”, 3”, 4” etc. and Custom Length
- Bends, H and E-Plane, 45 °, 90° and Custom Angle
- Twists, 45 °, 90° and Custom Angle



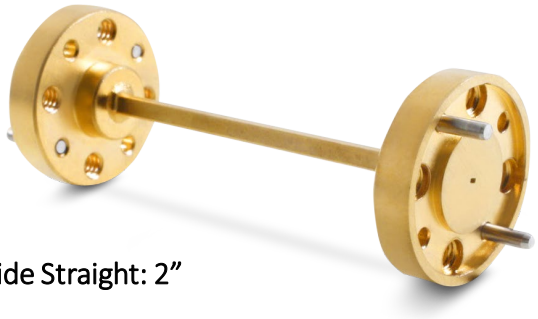
Waveguide E-Bend: 90°



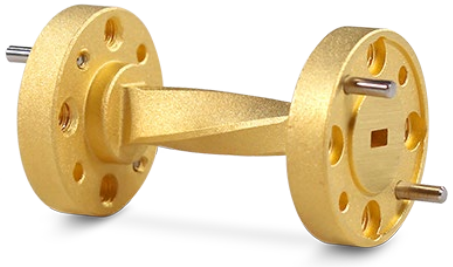
Waveguide H-Bend: 90°



Waveguide Straight: 2.5”
Metrology Grade



Waveguide Straight: 2”



Waveguide Twist: 90°

FERRITE DEVICES

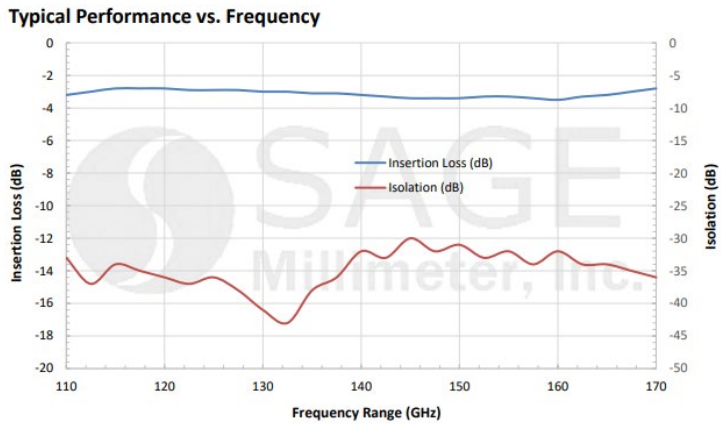
FARADAY ISOLATOR
FULL BAND

STF-06-S1

Parameter	Minimum	Typical	Maximum
RF Frequency	110 GHz		170 GHz
Insertion Loss		3.5 dB	
Isolation		30 dB	
Return Loss		14 dB	
Power Handling		0.8 W (CW)	1.0 W (CW)

Features:

- Full Waveguide Band
- Instrumentation Grade
- Various Port Orientations
- Compact Options
- Low Insertion Loss
- High Rejection



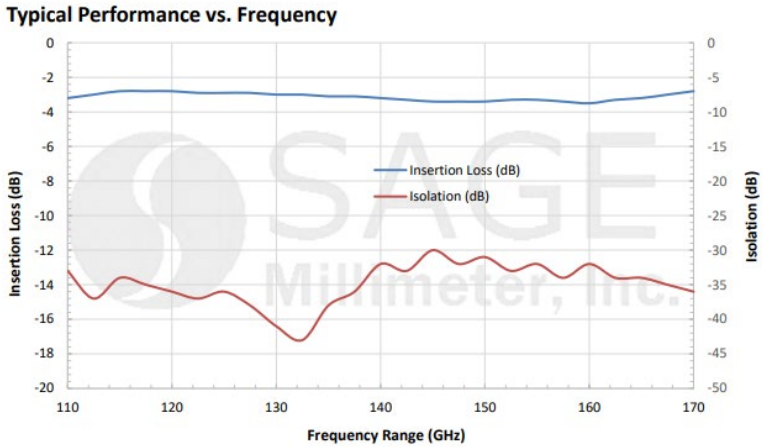
FARADAY ISOLATOR
COMPACT, FULL BAND

STF-06-S1-C

Parameter	Minimum	Typical	Maximum
RF Frequency	110 GHz		170 GHz
Insertion Loss		3.0 dB	
Isolation		28 dB	
Return Loss		14 dB	
Power Handling		0.8 W (CW)	1.0 W (CW)

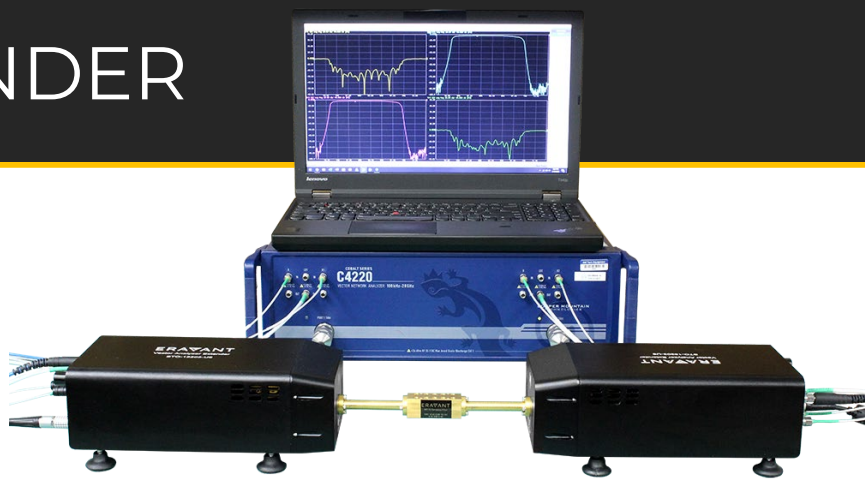
Features:

- Full Waveguide Band
- Instrumentation Grade Options
- Various Port Orientations
- Low Insertion Loss
- High Rejection



TEST EQUIPMENT

FULL BAND
VNA FREQUENCY EXTENDER



STO-06203-U6

Features:

- Full Band Coverage
- Dynamic Range of 110 dB
- AC Power Input: 100 to 240 VAC

Applications:

- Dual Source and 4 Port VNA Extension
- E band S-Parameter Measurement
- Test Lab Instrumentation

Parameter	Minimum	Typical	Maximum
RF Operating Frequency	110 GHz		170 GHz
Test Port Output Power		+1 dBm	
Output Power Control Range		0 to 20 dB	
Dynamic Range @ 10 Hz Bandwidth	100 dB	110 dB	
Test Port Match		30 dB	
Directivity	30 dB	35 dB	
RF Source Input Frequency	9.17 GHz		14.17 GHz
RF Source Input Power	0 dBm	+3 dBm	+6 dBm
LO Source Input Frequency (RF±IF)	9.17 GHz		14.17 GHz
LO Source Input Power	0 dBm	+3 dBm	+6 dBm

FULL BAND WAVEGUIDE CALIBRATION KIT

STQ-TO-06-S1-CKIT1

Features:

- Precisely Machined and Manufactured
- Metrology Grade
- High Electrical Performance

Applications:

- Vector Network Analyzer Calibration
- Scalar Network Analyzer Calibration
- General Test Lab Instrumentation

Item	SAGE Model Number	Quantity
Metrology Fixed Short	STQ-WS-VG-F1	1 Piece
Metrology Fixed Waveguide Load	STQ-WL-0623-S1	1 Piece
Metrology ⅛ Wavelength Offset	STQ-WI-06014-SB	1 Piece
Metrology ¼ Wavelength Offset	STQ-WI-06028-SB	1 Piece
Metrology ⅜ Wavelength Offset	STQ-WI-06042-SB	1 Piece
Waveguide Quick Connect, 0.75" Diameter Flange	SWH-QC-0750C-R2	2 Pieces
Waveguide Screws, 3/32 Hex Head	SWH-332-SS-10	1 Bag (10 Pieces)
Waveguide Screwdriver, 3/32 Hex Head	SWH-332-DS	1 Piece
Calibration Data, USB Drive	STQ-TO-06-S1-U	1 Piece

FULL BAND FREQUENCY EXTENDER

STE-SF1206-00-S1

Features:

- Full Waveguide Band Operation
- High Output Power
- Low Harmonics and Spurious Emission
- Cost Effective
- Instrumentation Grade
- Adjustable/Removable Legs

Applications:

- Network Analyzer Systems
- Frequency Sources
- Test Instrumentations

Parameter	Minimum	Typical	Maximum
Output Frequency Range	110 GHz		170 GHz
Input Frequency Range	9.16 GHz		14.17 GHz
Output Power		+3 dBm	
Input Power	+1 dBm	+5 dBm	+20 dBm
Harmonic Suppression		20 dBc	
Spurious Suppression		60 dBc	
DC Voltage	+13 V	+15V	+16 V
DC Current		550 mA	

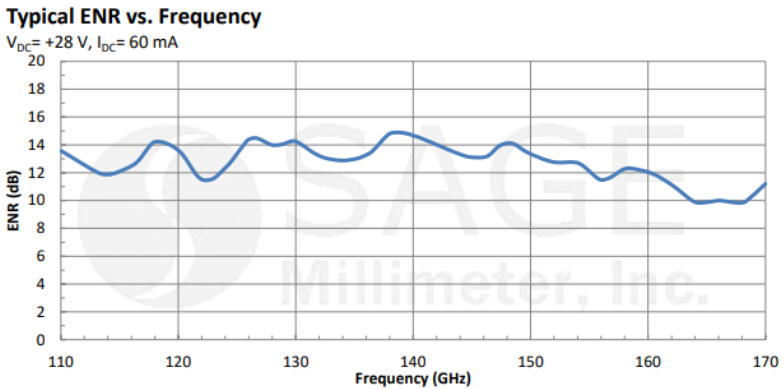
FULL BAND NOISE FIGURE & GAIN TEST EXTENDER

STG-06-S1

Features:

- Full Band Coverage
- Precision Calibrated ENR
- Great ENR and Gain Flatness

Parameter	Minimum	Typical	Maximum
RF Frequency Range	110 GHz		170 GHz
Noise Source: ENR		12.0 dB	
Noise Source: Bias	+ 18 V_{DC}/50mA	+28 V_{DC}/60mA	+30 V_{DC}/75mA
IF Frequency Range	10 MHz		26.5 GHz
LO Frequency Range	9.16 GHz		14.17 GHz
LO Power	+3 dBm	+5 dBm	+20 dBm
N.F. Dynamic Range	0 dB		20 dB
Conversion Gain	15 dB	20 dB	
Down-Converter: Bias		+12 V_{DC}/450mA	+15 V_{DC}/550mA



STZ-06-I1 ENR

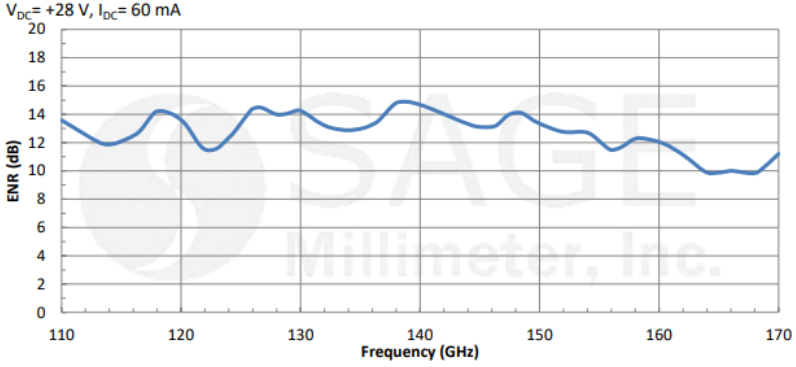
NOISE SOURCE WITH ISOLATOR

STZ-06-I1

Parameter	Minimum	Typical	Maximum
RF Frequency Range	110.0 GHz		170.0 GHz
ENR		12.0 dB	
ENR Flatness		± 3.0 dB	
Temperature Stability		0.01 dB/°C	
Long Term Temperature Stability		0.05 dB/day	
AM Modulation Trigger		TTL	
AM Modulation Rate		1.0 kHz	
DC Bias	+18 V_{DC}/35 mA	+28 V_{DC}/60 mA	+30 V_{DC}/75 mA

Typical ENR vs. Frequency

V_{DC}= +28 V, I_{DC}= 60 mA



FIXED ATTENUATOR

STA-10-06-F1

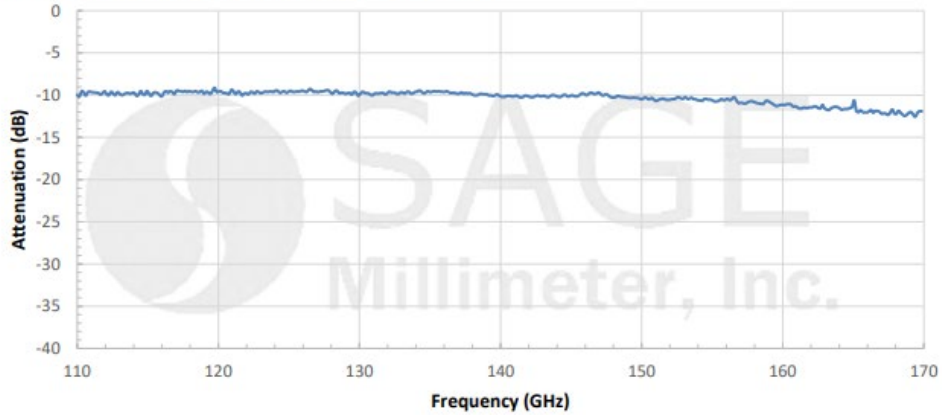
Features:

- Full Band Coverage
- 3, 6, 10, 20, 30, 40, 50 dB
- Custom Attenuation Values

Applications:

- Test Lab
- Instrumentations
- System Integration

Typical Measured Attenuation vs Frequency



LEVEL SETTING ATTENUATOR

STA-30-06-M1

Features:

- Full Band Coverage
- Head Locking Screw
- Precision Machined Housing
- Convenient Level Setting

Applications:

- Test Lab
- Instrumentations
- Manual Test Set

Parameter	Minimum	Typical	Maximum
Frequency Range	110 GHz		170 GHz
Insertion Loss		1.7 dB	
Attenuation Range		30 dB	
Return Loss		20 dB	
Power Handling			300 mW (CW)
Specification Temperature		+25 ˚C	
Operating Temperature	-40 ˚C		+85 ˚C

DIRECT READING ATTENUATOR

STA-60-06-D1

Features:

- Full Band Coverage
- High Attenuation Accuracy
- Large Scaled Dial

Features:

- Test Lab
- Instrumentations
- Manual Test Set

Parameter	Minimum	Typical	Maximum
RF Frequency Range	110 GHz		170 GHz
Insertion Loss		3.0 dB	
Attenuation Range	0 dB		60 dB
Attenuation Accuracy	0.1 dB or 3% of reading, whichever is larger, up to 40 dB		
Return Loss		17 dB	
Power Handling (CW)		50 mW	100 mW

DIGITAL DIRECT READING ATTENUATOR

STA-60-06-D5

Features:

- Full Band Coverage
- High Attenuation Accuracy
- Digital Screen with Back Light

Features:

- Test Lab
- Instrumentations
- Manual Test Set

Parameter	Minimum	Typical	Maximum
RF Frequency Range	110 GHz		170 GHz
Insertion Loss		1.2 dB	2.0 dB
Attenuation Range	0 dB		60 dB
Attenuation Accuracy	0.1 dB or 2% of Setting, whichever is larger, up to 40 dB		
Return Loss		17 dB	
Power Handling (CW)		50 mW	250mW

PROGRAMMABLE ATTENUATOR

STA-60-06-P1

Features:

- Full Band Coverage
- High Attenuation Accuracy
- IEEE-488 and USB Control Ports

Features:

- Test Lab
- Instrumentations
- Auto Test Set

Parameter	Minimum	Typical	Maximum
RF Frequency Range	110 GHz		170 GHz
Insertion Loss		3.0 dB	
Attenuation Range	0 dB		70 dB
Attenuation Accuracy	0.1 dB or 3% of the reading, whichever is larger, up to 40 dB		
Return Loss		20 dB	
Power Handling (CW)		200 mW	400 mW

ERAVANT

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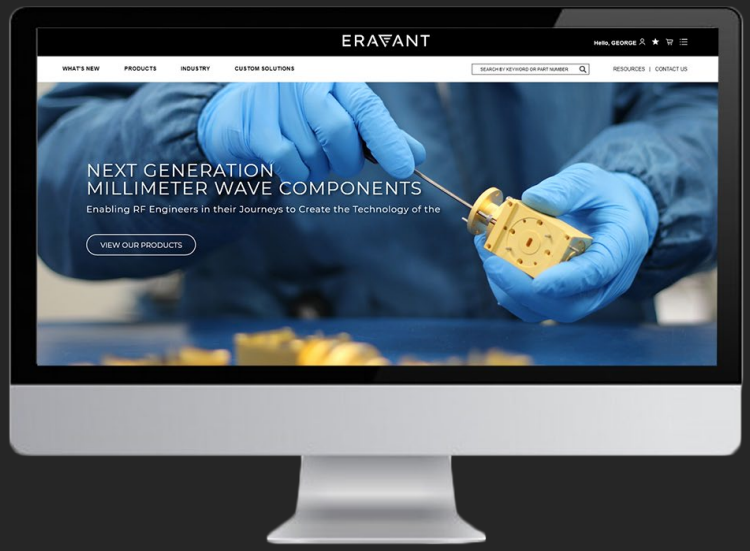
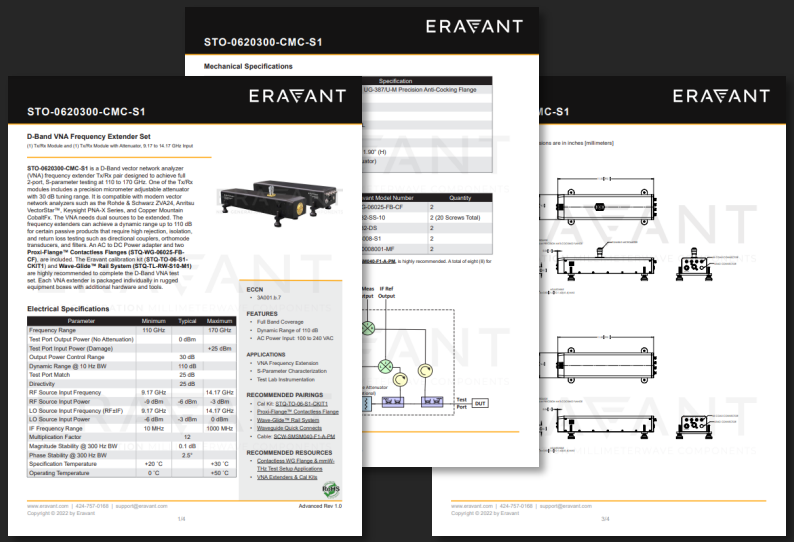


CREATE AN ACCOUNT



PASSIVE FREQUENCY MULTIPLIERS

GRID | TABLE | 28 RESULTS

MODEL	MINIMUM OUTPUT FREQUENCY	MAXIMUM OUTPUT FREQUENCY	OUTPUT POWER	MINIMUM INPUT FREQUENCY	MAXIMUM INPUT FREQUENCY	INPUT POWER	OUTPUT PORT	INPUT PORT	DOWNLOADS	VIEW
SFP-06212-S2	110 GHz	170 GHz	0 dBm	55 GHz	85 GHz	+16 dBm	WR-06 Waveguide	WR-12 Waveguide	Datasheet	View
SFP-06319-U6	110 GHz	170 GHz	-3 dBm	36.67 GHz	56.67 GHz	+20 dBm	WR-06 Waveguide	WR-19 Waveguide	Datasheet	View
SFP-05210-S2	140 GHz	220 GHz	-3 dBm	70 GHz	110 GHz	+17 dBm	WR-05 Waveguide	WR-10 Waveguide	Datasheet	View
SFP-223403205-28SF-S1	22 GHz	40 GHz	+5 dBm	11 GHz	20 GHz	+18 dBm	WR-28 Waveguide	SMA (F)	Datasheet STEP File	View
SFP-243423303-28SF-S1	24 GHz	42 GHz	+3 dBm	8 GHz	14 GHz	+20 dBm	WR-28 Waveguide	SMA (F)	Datasheet STEP File	View
SFP-283SF-U9	26.5 GHz	40.0 GHz	+5 dBm	8.37 GHz	13.33 GHz	+20 dBm	WR-28 Waveguide	SMA (F)	Datasheet	View
SFP-2734033N05-28SF-S1	26.5 GHz	40 GHz	-5 dBm	8.37 GHz	13.33 GHz	+10 dBm	WR-28 Waveguide	SMA (F)	Datasheet STEP File	View
SFP-223SF-S1	33 GHz	50 GHz	+3 dBm	11 GHz	16.67 GHz	+20 dBm	WR-22 Waveguide	SMA (F)	Datasheet STEP File	View
SFP-222KF-S1	33 GHz	50 GHz	+7 dBm	16.5 GHz	25 GHz	+20 dBm	WR-22 Waveguide	2.92 mm (F)	Datasheet STEP File	View
SFP-363573303-19SF-N1	57 GHz	36 GHz	+3 dBm	12 GHz	19 GHz	+20 dBm	WR-19 Waveguide	SMA (F)	Datasheet STEP File	View
SFP-192KF-S1	40 GHz	60 GHz	+6 dBm	20 GHz	30 GHz	+20 dBm	WR-19 Waveguide	2.92 mm (F)	Datasheet STEP File	View