

## FDR Series

## 0.01-1.0GHz Input Frequency Doubler

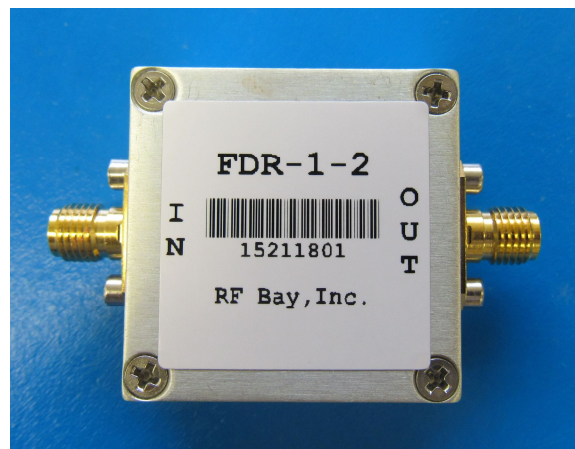
### Features

- Input Frequency: 0.01 – 1.0GHz
- Output Frequency: 0.02 – 2.0GHz
- Conversion Loss: 12dB
- F0 Isolation: 35dB
- Input Drive Level: +12 to +16dBm
- No DC Power Required
- SMA Connector

### Description

FDR-1-2 is a passive frequency doubler operates with input frequency range from 10MHz to 1.0GHz and output frequency range from 20MHz to 2.0GHz.

### Picture



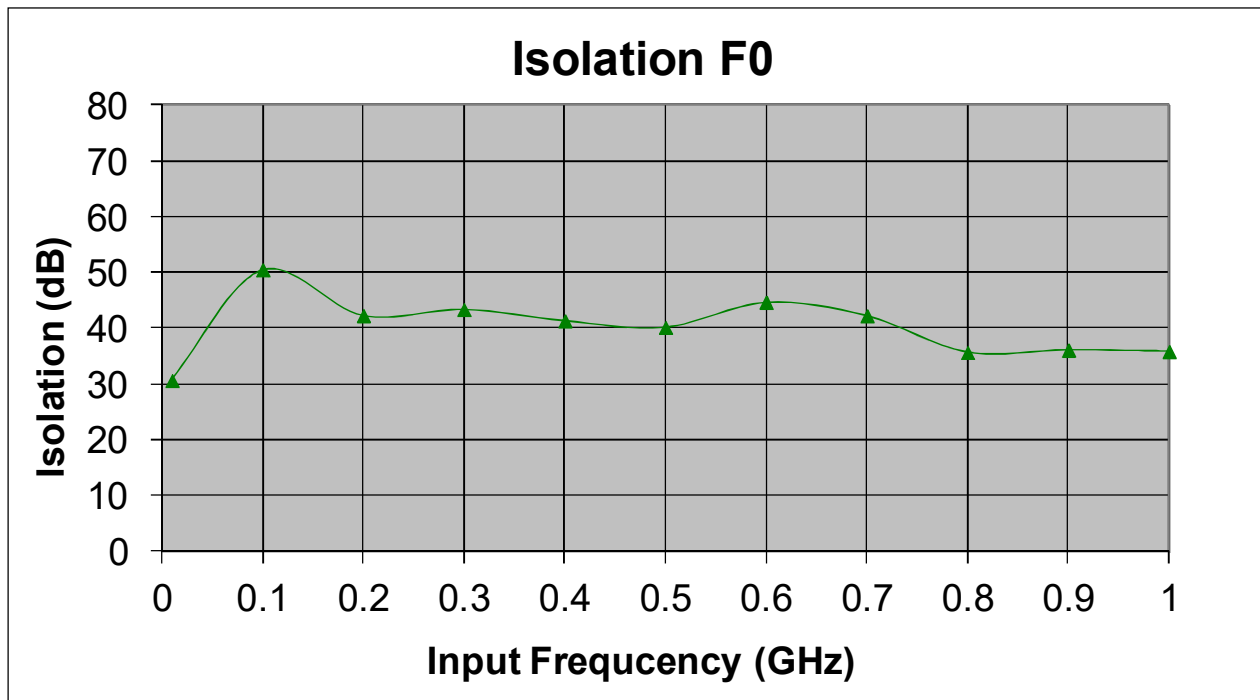
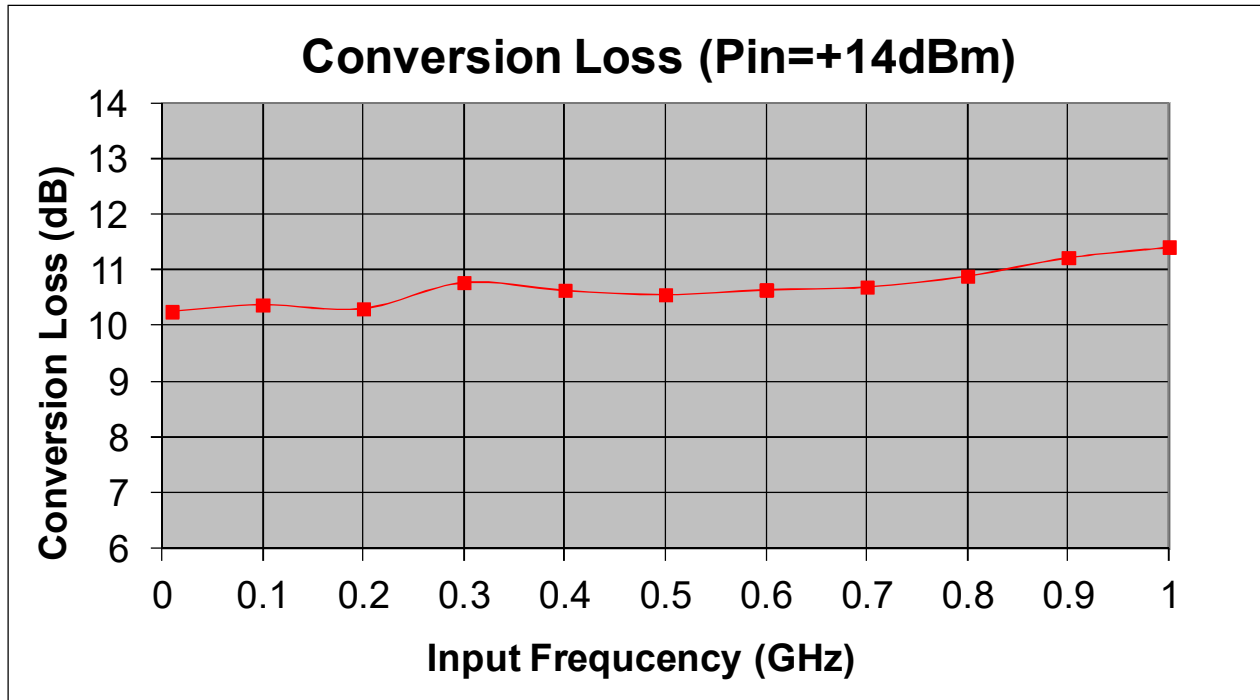
### Electrical Specifications @ +25 °C, $Z_{IN} = Z_{OUT} = 50\Omega$ , $P_{IN} = +14\text{dBm}$

Parameter	Unit	Min.	Typ.	Max.
Input Frequency Range F0	GHz	0.01		1
Output Frequency Range 2F0	GHz	0.02		2
Conversion Loss	dB		12	16
Input power $P_{IN}$	dBm	+12		+16
F0 Isolation *	dB	20	35	
3F0 Isolation *	dB	20	37	
Input VSWR $S_{11}$ @ 500MHz			1.5:1	2.0:1
Output VSWR $S_{22}$ @ 1000MHz			1.5:1	2.0:1

\* Isolation with respect to output power level of 2F0

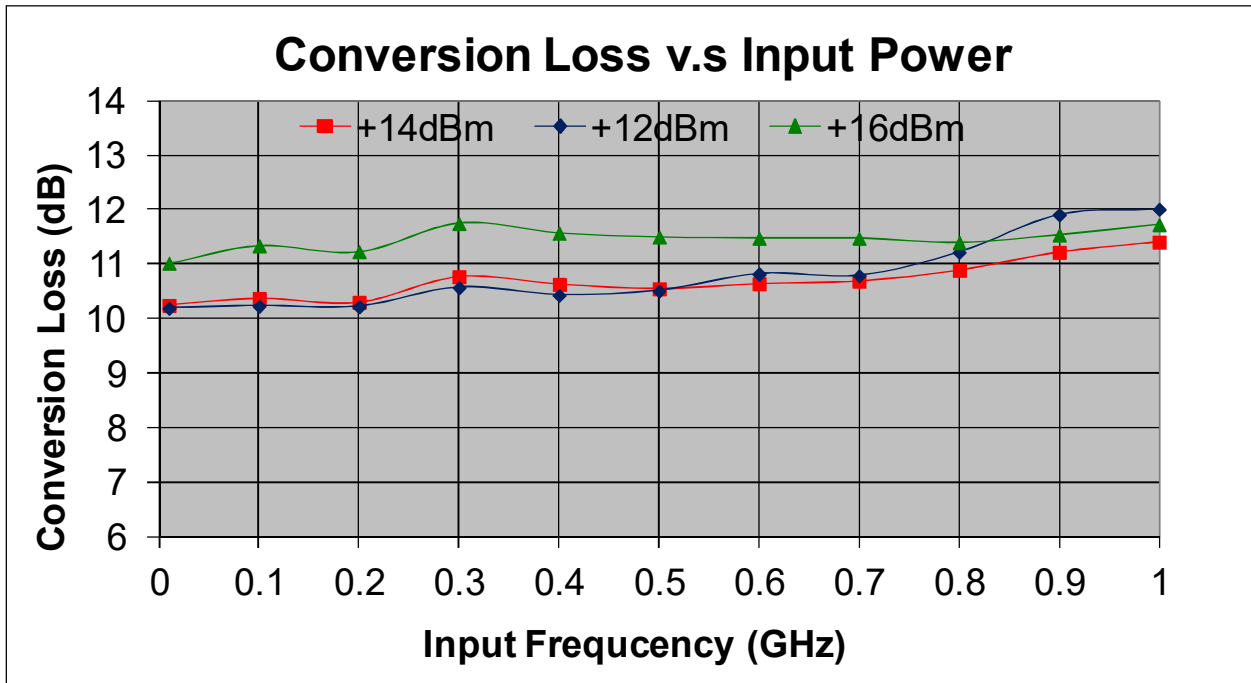
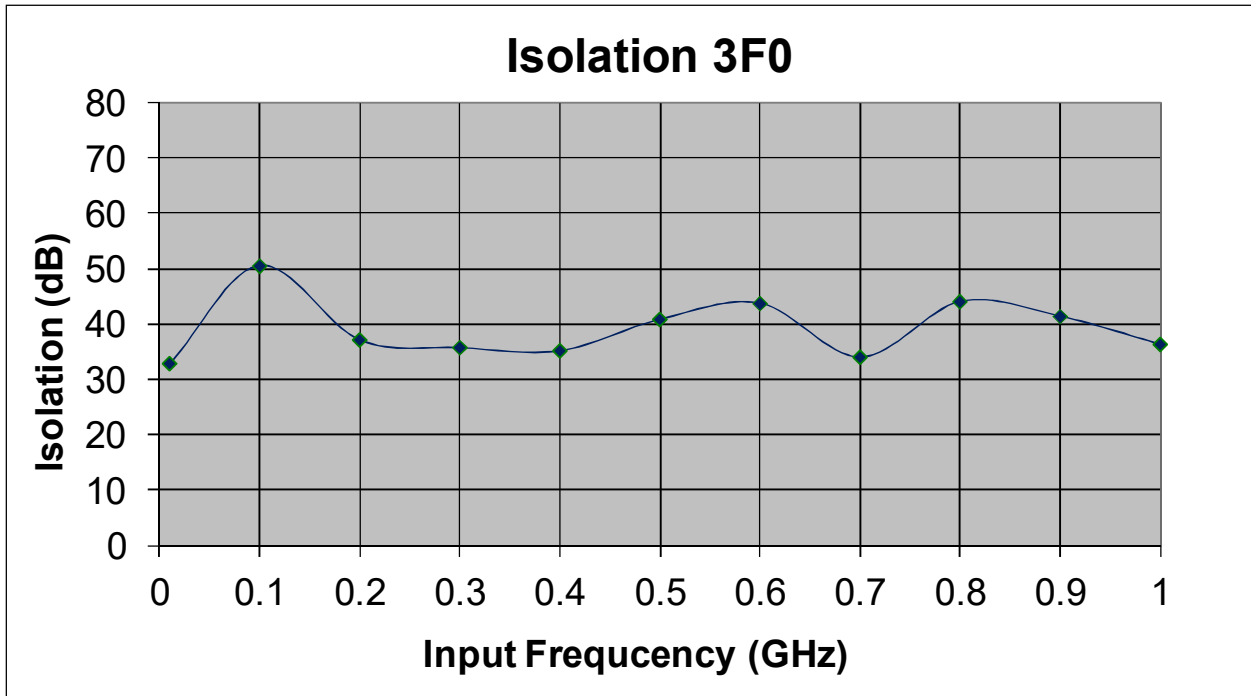
**FDR Series**

**0.01-1.0GHz Input Frequency Doubler**



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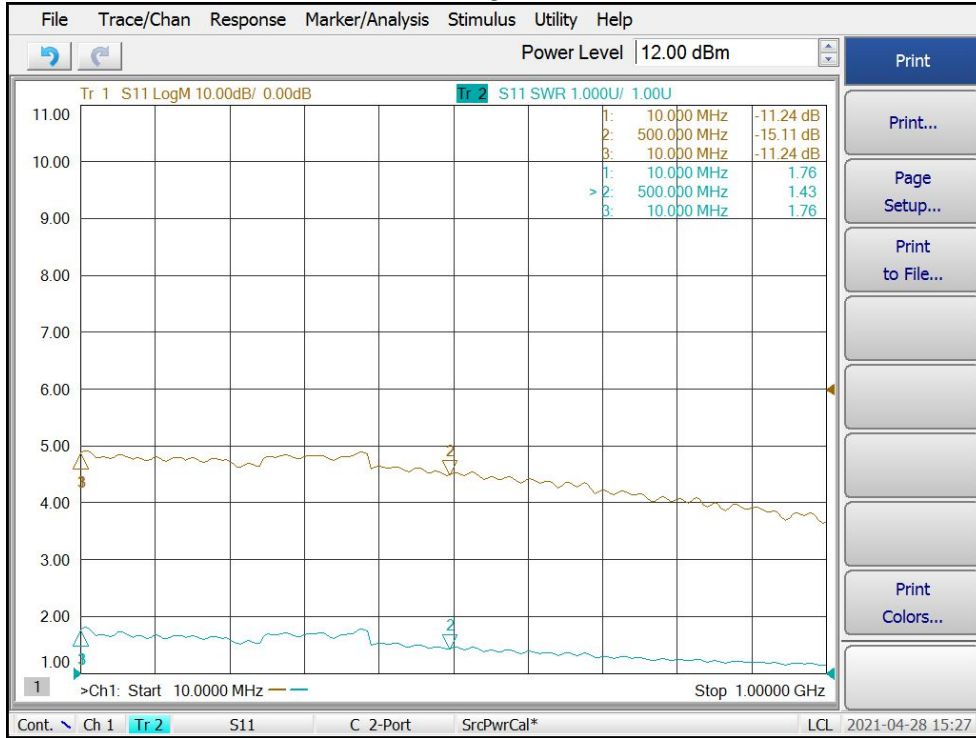
**0.01-1.0GHz Input Frequency Doubler**



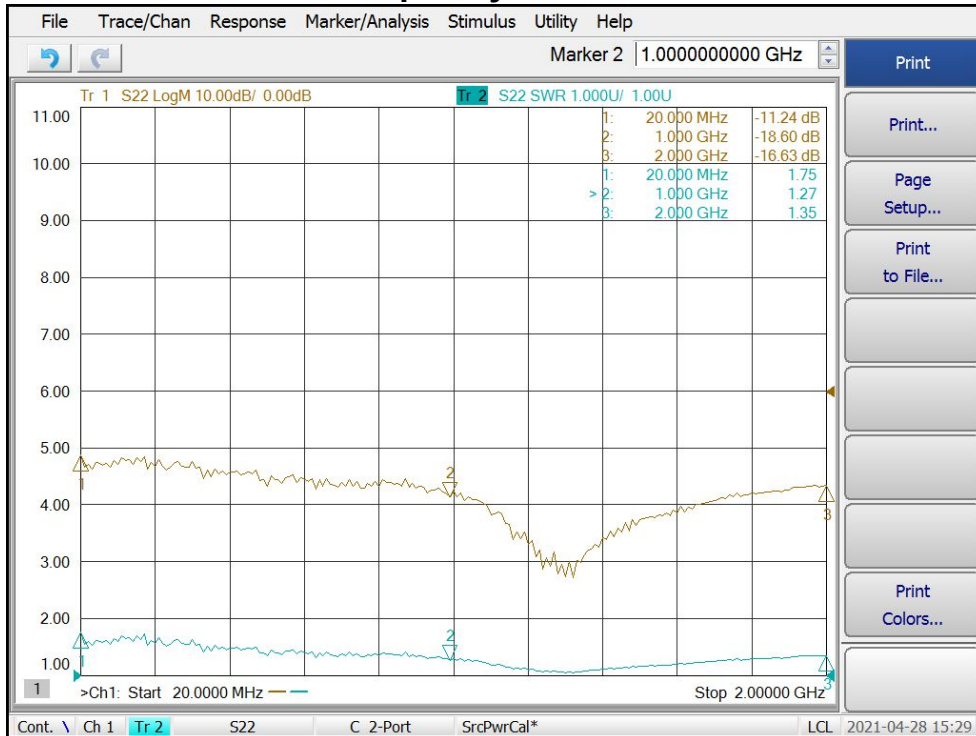
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**Return Loss S11 vs Frequency**



**Return Loss S22 vs Frequency**



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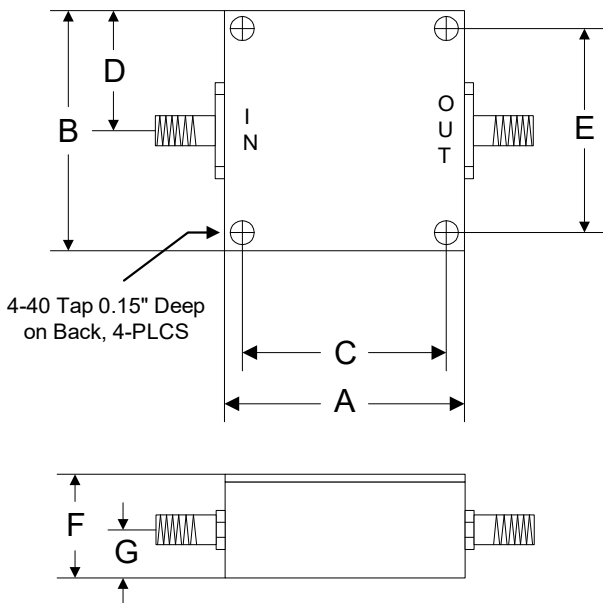
### Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Input Power	+27dBm
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-65 °C to +150 °C

### ESD Sensitive Material



### Outline



	A	B	C	D	E	F	G
Inch	1.250	1.250	1.000	0.625	1.000	0.563	0.250
mm	31.75	31.75	25.40	15.88	25.40	14.29	6.35