



Blue Tops RF Modules > Low Noise Regenerative Divider

Features:

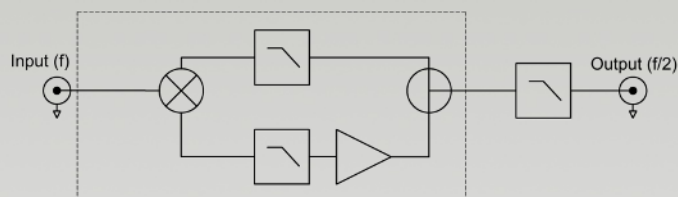
- Input Frequency: 2 GHz to 12 GHz
- Single f/2 Output
- Includes Input Amplifier
- Intrinsic Phase Noise to -170 dBc/Hz
- Integral Outputs Filters

Applications:

- Synthesizer Building Block
- Communication Systems
- Radar Systems
- Electronic Warfare Systems

Description:

The LNRD8 is a regenerative frequency divide-by-two module with one f/2 output. The input power can range from +10 to +13 dBm. Division is accomplished with a low noise mixer and amplifier yielding exceptional phase noise performance. The module includes the high-level mixer, filters, amplifier and power splitter. The typical output noise floor is -170 dBc/Hz (-168 dBc/Hz, guaranteed) and the close-in noise is significantly lower than the best crystal sources making the LNRD8 a nearly ideal frequency divider. This divider is designed for a fixed input frequency between 2 GHz and 12 GHz.



Electrical Specifications

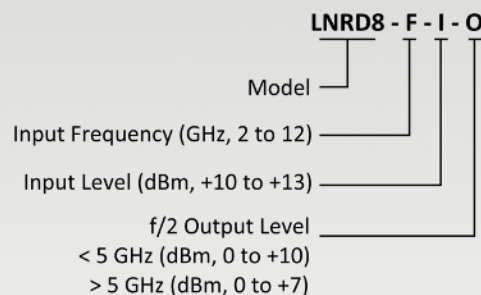
Division Factor	Divide-by-2
Input Frequency	2 GHz to 12 GHz, fixed
Input Level	+10 dBm to +13 dBm
Output Frequency	1 GHz to 6 GHz, fixed
Output Level	≤ 5 GHz, to +10 dBm (±2 dB) > 5 GHz, to +7 dBm (±2 dB)
Phase Noise, Residual (Intrinsic, Output Referred, 10 GHz Model)	-168 dBc/Hz (100 kHz offset)
Harmonics	≤ -25 dBc
Sub-Harmonics	≤ -50 dBc
Spurious (Excluding Supply Line Related Spurs)	≤ -80 dBc
Supply Voltage	+15 VDC ±2%
Current Draw	≤ 100 mA
Operating Temperature	0 to +50°C
Storage Temperature	-40 to +85°C

Mechanical

Dimensions	2.5" x 1.5" x 0.55"
DC Supply	Feed Thru Capacitor Solder Pin
Ground	Turret Terminal Solder Pin
RF Input / Output	SMA female *

* SMA female connectors are used unless otherwise specified. Other options include SMA male, right angle SMAs, BNC female and others. Contact factory for custom configurations.

Ordering Information:



Standard P/N	Input Frequency	Division Factor	Input Level	Output Frequency	Output Level	Output Referred Residual Phase Noise (100 kHz offset)	Supply Voltage
LNRD8-2.5-13-10	2.5 GHz	÷2	+13 dBm	1.25 GHz	+10 dBm	≤ -170 dBc/Hz	+15 VDC
LNRD8-2.56-13-10	2.56 GHz	÷2	+13 dBm	1.28 GHz	+10 dBm	≤ -170 dBc/Hz	+15 VDC
LNRD8-5-13-7	5 GHz	÷2	+13 dBm	2.5 GHz	+7 dBm	≤ -168 dBc/Hz	+15 VDC
LNRD8-5.12-13-7	5.12 GHz	÷2	+13 dBm	2.56 GHz	+7 dBm	≤ -168 dBc/Hz	+15 VDC
LNRD8-10-13-7	10 GHz	÷2	+13 dBm	5 GHz	+7 dBm	≤ -168 dBc/Hz	+15 VDC
LNRD8-10.24-13-7	10.24 GHz	÷2	+13 dBm	5.12 GHz	+7 dBm	≤ -168 dBc/Hz	+15 VDC



Crystal Oscillators

• **RF Modules**

• Frequency Sources

• IMAs

• Military

• Space





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