



Blue Tops RF Modules > Low Noise Regenerative Divider

Features:

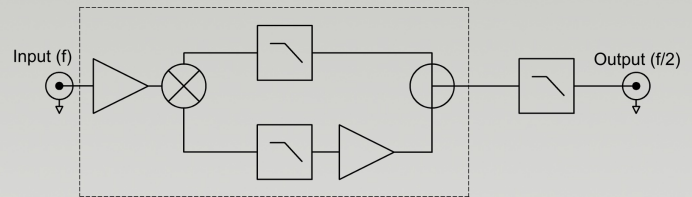
- Input Frequency: 10 MHz to 2 GHz
- Single (f/2) Output
- Includes Input Amplifier
- Intrinsic Phase Noise to -175 dBc/Hz
- Integral Outputs Filters

Applications:

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

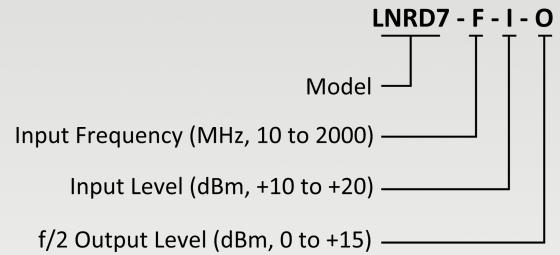
Description:

The LNRD7 is a regenerative frequency divide-by-two module with one f/2 output. This module adds an input amplifier to the LNRD6 topology to accommodate lower input power applications. The input power can range from +10 to +20 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 -175 dBc/Hz (-172 dBc/Hz, guaranteed) and the close-in noise is significantly lower than the best crystal sources making the LNRD7 a nearly ideal frequency divider. This divider is designed for a fixed input frequency between 10 MHz and 2000 MHz.



Electrical Specifications	
Division Factor	Divide-by-2
Input Frequency	10 to 2000 MHz, fixed
Input Level	+10 dBm to +20 dBm, fixed (±1 dB)
Output Frequency	5 to 1000 MHz, fixed
Output Level	to +15 dBm (±2 dB)
Phase Noise, Residual (Intrinsic, Output Referred, 2000 MHz Model)	-172 dBc/Hz (100 kHz offset)
Harmonics	≤ -30 dBc
Sub-Harmonics	≤ -40 dBc
Spurious (Excluding Supply Line Related Spurs)	≤ -80 dBc
Supply Voltage	+15 VDC ±2%
Current Draw	≤ 200 mA
Operating Temperature	0 to +50°C
Storage Temperature	-40 to +85°C
Mechanical	
Dimensions	3" x 1.25" x 0.8"
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
LNRD7-20-10-13	20 MHz	÷2	+10 dBm	10 MHz	+13 dBm	≤ -175 dBc/Hz	+15 VDC
LNRD7-50-10-13	50 MHz	÷2	+10 dBm	25 MHz	+13 dBm	≤ -175 dBc/Hz	+15 VDC
LNRD7-100-10-15	100 MHz	÷2	+10 dBm	50 MHz	+15 dBm	≤ -175 dBc/Hz	+15 VDC
LNRD7-500-13-13	500 MHz	÷2	+13 dBm	250 MHz	+13 dBm	≤ -174 dBc/Hz	+15 VDC
LNRD7-1000-13-13	1000 MHz	÷2	+13 dBm	500 MHz	+13 dBm	≤ -173 dBc/Hz	+15 VDC
LNRD7-2000-10-15	2000 MHz	÷2	+10 dBm	1000 MHz	+15 dBm	≤ -172 dBc/Hz	+15 VDC



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