MULTIBAND TO L-BAND BLOCK DOWNCONVERTERS

FEATURES

- Automatic 5/10 MHz internal/external reference selection
- Three monitor control ports:
  1. Standard RS-485/RS-422 remote interface which can be substituted with RS-232
  2. RS-485/RS-422 control interface (J7) which can be configured to control an external HPA or as an alternate remote interface
  3. 10/100 Base-T Ethernet interface
- RF/IF signal monitor port
- 30 dB gain control
- Low phase noise
- 64 memory locations
- High frequency stability
- Summary alarm
- CE certification

OPTIONS

- Higher stability reference
- Remote RS-232

This series of band-switching block downconverters translates to L-Band. Local control is by a front panel keyboard and remote control is available through a remote interface. Up to 64 discrete band and attenuation settings may be programmed into a nonvolatile memory.

MULTIBAND TO L-BAND BLOCK DOWNCONVERTERS

DOWNCONVERTERS

INPUT FREQUENCY (GHz)	OUTPUT FREQUENCY (GHz)	LO FREQUENCY (GHz)	MODEL NUMBER
10.7 to 11.45	0.95 to 1.7	9.75	DNB-3B
11.45 to 12.2	0.95 to 1.7	10.5	
12.2 to 12.75	0.95 to 1.5	11.25	
10.95 to 11.7	0.95 to 1.7	10	DNB-3B-1
11.7 to 12.2	0.95 to 1.45	10.75	
12.2 to 12.75	0.95 to 1.5	11.25	
10.7 to 11.75	0.95 to 2	9.75	DNB-2B
11.7 to 12.75	0.95 to 2	10.75	
3.4 to 4.2	0.95 to 1.75	8.8/11.25	DNB-4B
10.7 to 11.45	0.95 to 1.7	9.75	
11.45 to 12.2	0.95 to 1.7	10.5	
12.2 to 12.755	0.95 to 1.505	11.25	
3.4 to 4.2	0.95 to 1.75	8.8/11.25	DNB-4B-1
10.95 to 11.7	0.95 to 1.7	10	
11.7 to 12.2	0.95 to 1.45	10.75	
12.2 to 12.75	0.95 to 1.5	11.25	
3.4 to 4.2	0.95 to 1.75	5.15*	DNB-4B-IN
10.7 to 11.45	0.95 to 1.7	9.75	
11.45 to 12.2	0.95 to 1.7	10.5	
12.2 to 12.755	0.95 to 1.505	11.25	
3.4 to 4.2	0.95 to 1.75	5.15*	DNB-4B-1-IN
10.95 to 11.7	0.95 to 1.7	10	
11.7 to 12.5	0.95 to 1.75	10.75	
11.955 to 12.755	0.95 to 1.75	11.005	

* Model includes frequency inversion

SPECIFICATIONS	DOWNCONVERTER
Frequency sense	No inversion, except DNB-X-IN C-Band inverting
Input characteristics	
Impedance	50 ohms
Return loss	20 dB minimum
LO leakage	-80 dBm maximum
Output characteristics	
Impedance	50 ohms
Return loss	18 dB minimum
Power output (P1 dB)	+10 dBm minimum
Transfer characteristics	
Gain at minimum attenuation	30 dB minimum
Image rejection	60 dB minimum
Level stability	±0.25 dB/day at constant temperature
Noise figure at min attenuation	15 dB maximum
Amplitude response	±0.5 dB/±40 MHz, ±2 dB over output band
Group delay	1 ns peak-to-peak maximum
Intermodulation distortion (third order)	With two 0 dBm output signals, 40 dBc minimum
Spurious outputs	
Signal-related	65 dBc minimum
Signal-independent	-70 dBm maximum
Gain adjustment	30 dB in 0.2 dB steps
Phase noise	See graph on page six
Frequency stability	$\pm 2 \times 10^{-8}$, 0 to 50 °C (higher stability options available), $\pm 5 \times 10^{-9}$/day typical (fixed temperature after 24 hours on time)
Automatic reference configuration	External 5 or 10 MHz, +4 ±3 dBm. If external reference is below +1 dBm nominal, the converter will automatically lock to the internal reference.
Remote interface	RS-485/RS-422 user selectable and 10/100 Base-T Ethernet interface providing: Web-browser-based configuration, SNMP 1.0 configuration alarm reporting via SNMP trap, telnet access, password protection

OPTIONS

Missing option numbers are not applicable for this product.

10. High-frequency stability reference
    - C. ±2 x 10^{-9}, 0 °C to 50 °C,
      1 x 10^{-9}/day typical (fixed temperature after 24 hours on time).
    - G. Self calibrating tracking reference with controlled slew rate. Internal reference tracks external reference and uses external reference to correct for aging of the internal reference. The internal reference changes frequency at a maximum rate of 0.06 ppm/second. When external reference is lost, the reference frequency is held at the previous value. Frequency stability on internal reference: ±5 x 10^{-8}, 0 °C to 50 °C, 1 x 10^{-9}/day typical (fixed temperature after 72 hours on time).
      5 x 10^{-8}/year typical
    - H. Self calibrating tracking reference with controlled slew rate. Internal reference tracks external reference and uses external reference to correct for aging of the internal reference. The internal reference changes frequency at a maximum rate of 0.06 ppm/second. When external reference is lost, the reference frequency is held at the previous value. Frequency stability on internal reference: ±2 x 10^{-9}, 0 °C to 50 °C, 1 x 10^{-9}/day typical (fixed temperature after 72 hours on time).
      5 x 10^{-8}/year typical
17. Remote control
    - C. RS-232

Note: For literature describing local control (front panel) and remote control (bus protocols), refer to L3 Narda-MITEQ Technical Note 25T055.

ACCESSORIES

Dedicated remote control panel.

Model Number RCTR-T055.

Provides remote control and status over a dedicated RS-485 bus.

GENERAL SPECIFICATIONS

PRIMARY POWER REQUIREMENTS

Voltage.....90 VAC to 250 VAC

Frequency .....47 Hz to 63 Hz

Consumption.....30 W typical

SUMMARY ALARM

Contact closure/open for DC voltage and/or LO alarm

PHYSICAL

Weight.....16 lb. [7.25 kg] nominal

Overall dimensions.....19” [482.6 mm] x 1.75” [44.45 mm] panel x
22” [558.8 mm] maximum (chassis depth 20” [508 mm])

Connectors

- RF .....SMA female
- RF monitor .....SMA female
- IF.....N female
- IF monitor.....SMA female
- External reference .....BNC female
- LO monitor .....SMA female
- Remote interface.....DEM-9S for RS-485, RS-422 and RS-232, RJ-45 female for Ethernet
- Summary alarm DE-9P
- Primary power input IEC-320

ENVIRONMENTAL

Operating

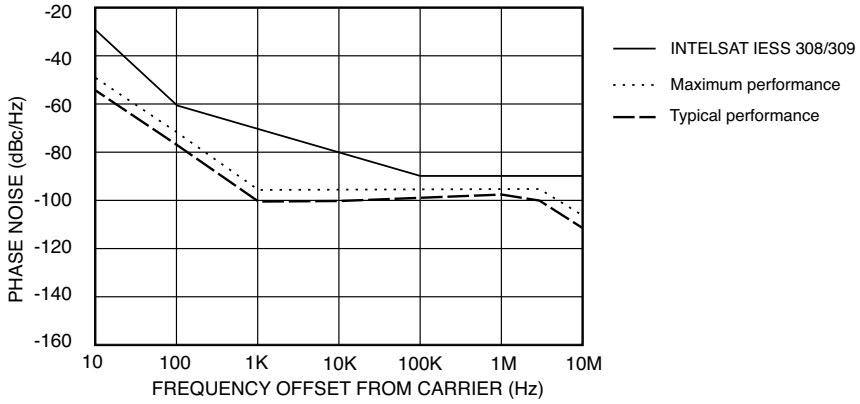
- Ambient temperature.....0 °C to 50 °C
- Relative humidity.....Up to 95% at 30 °C
- Atmospheric pressure .....Up to 10,000 feet

Nonoperating

- Ambient temperature.....-50 °C to +70 °C
- Relative humidity.....Up to 95% at 40 °C
- Atmospheric pressure .....Up to 40,000 feet
- Shock and vibration .....Normal handling by commercial carriers

PHASE NOISE SPECIFICATIONS

TYPICAL PHASE NOISE CHARACTERISTICS
(1.0 Hz BANDWIDTH)



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