

20 GHz TO 40 GHz ULTRA-WIDEBAND BLOCK DOWNCONVERTER



DC SERIES MODEL DC-20/40G



FEATURES

- 20 GHz to 40 GHz RF input
- Very low phase noise
- Extends input receive bands of DC-0.5/20G to 40 GHz

The Narda-MITEQ model DC-20/40G is a high-performance, single conversion inverting ultra-wideband block downconverter system. The system converts an input signal in a 20 GHz to 40 GHz band to an output of 3.2 GHz to 16.8 GHz, and allows an input of 0.5 GHz to 20 GHz to pass through with no conversion. This block downconverter is designed to be used with Narda-MITEQ Model DC-0.5/20G ultra-broadband 2 Hz resolution tunable downconverter to extend the input receive band to 0.5 GHz to 40 GHz.

SPECIFICATIONS

Input characteristics													
Input frequency	20 GHz to 40 GHz												
Level	to -35 dBm fully compliant												
Impedance	50 ohms												
Input VSWR	2.0:1 typical, 2.5:1 maximum												
Noise figure	15 dB typical, 18 dB maximum												
Output characteristics													
	<table border="0"> <tr> <td>RF Input Bands</td> <td>RF Output Bands</td> </tr> <tr> <td>20 GHz to 26.5 GHz</td> <td>10.3 GHz to 16.8 GHz</td> </tr> <tr> <td>26.5 GHz to 40 GHz</td> <td>3.2 GHz to 16.7 GHz</td> </tr> <tr> <td>0.5 GHz to 20 GHz</td> <td>Pass-thru</td> </tr> </table>	RF Input Bands	RF Output Bands	20 GHz to 26.5 GHz	10.3 GHz to 16.8 GHz	26.5 GHz to 40 GHz	3.2 GHz to 16.7 GHz	0.5 GHz to 20 GHz	Pass-thru				
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0.5 GHz to 20 GHz	Pass-thru												
Power output (1 dB compression)	-15 dBm												
Impedance	50 ohms												
Output VSWR	2.0:1 typical, 2.2:1 maximum												
Transfer characteristics													
Conversion type	Single												
Frequency sense	Inverting												
Gain	0 ±2 dB												
Gain flatness	1.4 dB maximum in any 500 MHz slot												
Inband spurious	-55 dBc typical												
Image rejection	55 dB typical												
LO leakage	-70 dBm maximum												
Single sideband phase noise													
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GENERAL SPECIFICATIONS

PRIMARY POWER REQUIREMENTS

Voltage.....90 VAC to 250 VAC
Frequency47 Hz to 63 Hz

PHYSICAL

Weight.....19 lb. [8.62 kg] nominal
Dimensions.....19" [482.60 mm] x 1.75" [44.45 mm] x 22" [558.80 mm]

Rear-panel connectors

RF IN.....2.92 mm female
RF OUTSMA female
Remote interfaceDEM-9S for RS-422/RS-485/RS-232
Summary alarmDE-9P
External reference inputBNC female
Reference output.....BNC female
Opto interface to DC-8/20G and
DC-0.5/20G10-pin header with ejector

ENVIRONMENTAL

Operating

Temperature.....0°C to 50°C
Full compliance temperature range10°C to 40°C
Relative humidity.....Up to 95% at 30°C, noncondensing
Atmospheric pressureUp to 10,000 feet

Nonoperating

Temperature.....-50°C to +70°C
Relative humidity.....Up to 95% at 40°C, noncondensing
Atmospheric pressureUp to 40,000 feet
Shock and vibrationRough handling

TYPICAL REAR-PANEL VIEW



ORDERING INFORMATION

Specify by part number: DC-20/40G

The material presented in this datasheet was current at the time of publication. Narda-MITEQ's continuing product improvement program makes it necessary to reserve the right to change our mechanical and electrical specifications without notice. If either of these parameters is critical, please contact the factory to verify that the information is current.

This material consists of Narda-MITEQ general capabilities information and does not contain controlled technical data as defined within the International Traffic in Arms (ITAR) Part 120.10 or Export Administration Regulations (EAR) Part 734.7-11.
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