



# C-Band Block Frequency Converters

## Technical Specifications

Up-Converter		Down-Converter	
<b>IF Input</b>		<b>RF Input</b>	
Frequency range	(See table on front page)	Frequency range	(See table on front page)
Impedance	50 Ω	Impedance	50 Ω
Input Connector	SMA (female)	Input Connector	SMA (female)
Return loss	16 dB	Return loss	18 dB
<b>RF Output</b>		<b>IF Output</b>	
Output power (P1dB)	0 dBm	Frequency range	(See table on front page)
Frequency range	(See table on front page)	Output level	+5 dBm at P1dB
IMD3 (two tone)	-40 dBc max @ -10 dBm output	Output Connector	sMA female
Output connector	SMA (female)	Connector Impedance	50 Ω
Connector Impedance	50 Ω	Return Loss	16 dB
Return loss	18 dB		
<b>Transfer Characteristics</b>		<b>Transfer Characteristics</b>	
Conversion Gain	20 dB @ max gain setting	Conversion Gain	40 dB @ max gain setting
Gain adjustment	20 dB	Gain adjustment	20 dB
Attenuator step size	0.1 dB	Attenuator step size	0.1 dB
Gain flatness	±1.5 dB p-p over 575 MHz 1.0 dB p-p over 40 MHz	Gain flatness	±2.0 dB p-p over 800 MHz (NINV Down Converters)+ 1.0 dB p-p over 40 MHz
Gain stability	±0.25 dB max. /24 hours ±1 dB over temp. range	Gain stability	±0.25 dB max. / 24 hours ±1 dB over temp. range
Spurious	-55 dBc carrier related @ -10 dBm < -60 dBm non-carrier related	Spurious	-55 dBc @ -10 dBm
Phase noise	Meets or Exceeds IESS 308/309	Image rejection	60 dB
		Noise Figure	20 dB
		Phase noise	Meets or Exceeds IESS 308/309
<b>Reference</b>		<b>Mechanical</b>	
External Reference	10 MHz, +/- 3 dBm input level	Dimensions	Width 19" (482.6 mm)
Internal reference stability	± 2 x 10 <sup>-10</sup> / day		Height 1U 1.75" (44.5 mm)
Aging	± 5 x 10 <sup>-8</sup> / year		Depth 24" (609.6 mm)
<b>Environmental</b>		<b>Power Supply</b>	
Operational	0°C to +50°C standard	Voltage	90 – 265 VAC (47 – 63 Hz)
Storage	-55°C to +85°C	Power	50W (typical)
Humidity	Non-condensing	Connector	IEC 603320 10A
Altitude	3,000m AMSL	<b>Monitor and Control</b>	
		RS 485	DB9
		RS 232	DB9
		Discrete	DB9
		Ethernet (optional)	RJ45 F

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