



SATDC-1004

WIDE IF BANDWIDTH DOWNCONVERTER



**FREQUENCY RANGE:
19.10 and 19.78 GHz**

FEATURES

- Very High Dynamic Range
- Excellent Phase Noise Performance
- Wide Bandwidth Up to 1608 MHz for IF output
- Exceptional Phase Linearity
- Parabolic, Cubic and Ripple: 6, 8 and 6° max
- Ethernet 10/100 BaseT control
- 1U 19" Rack

APPLICATIONS

- ELINT
- SATCOM
- Radar Warning Receivers (RWR)



SPECIFICATIONS AT 25° C

FREQUENCY

Input Frequencies:	19.10 and 19.78 GHz
Tuning Speed:	<100 millisecond
Frequency Accuracy vs. Temperature (Internal Ref):	< +/- 0.1 PPM

Long Term Aging (Internal Ref):	< 1 PPM per Year
Phase Noise (Typical) at output:	.

Offset 10 Hz:	-50 dBc/Hz
Offset 100 Hz:	-70 dBc/Hz
Offset 1 KHz:	-100 dBc/Hz
Offset 10 KHz:	-110 dBc/Hz
Offset 100 KHz:	-110 dBc/Hz
Offset 1 MHz:	-130 dBc/Hz
Offset 10 MHz:	-135 dBc/Hz

RF SECTION

Input Return Loss:	17 dB min
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Conversion Sense:	Non Inverting
Input Power Range:	-35 dBm to -20 dBm, -28dBm nominal

DYNAMIC RANGE

Spurious:	In band -40dBc max out of band -40dBc max
Image Rejection:	< -40 dB
LO Leakage:	< -40 dBm max at output port
Output IP3:	+10 dBm min
Output P1 dB:	+0 dBm min



WIDEBAND IF OUTPUT

Center Frequency:	8000 MHz
Bandwidth (2dB):	+/- 804 MHz centered at 8.0 GHz
RF to IF Gain:	0 dB +/-2 dB
Gain Flatness Over IF BW:	1.2 dB Max Over +/- 804 MHz
IF Signal Monitor:	-15 dBc nom
Impedance:	50 ohms
Output Return Loss:	17 dB
Phase Linearity over +/- 402MHz BW	Parabolic 6° max Cubic 12° max Ripple 8° max

BUILT IN TEST (BIT) CONTROL

Local Manual Control:	Rotary Knob to change Frequency Bands
Remote Programming:	Ethernet 10/100 base T , RS 422/ RS 485 and RS232

ENVIRONMENTAL

Operating Temp Range:	0° to +50 °C
Non Operating:	-30° to +85°C
Relative Humidity:	Up to 95%, Non-Condensing
Altitude:	6,000 Feet
Federal Communications Commission (FCC):	FCC Class A Compatible
Vibration:	Normal Bench Handling
AC Power:	95 to 265 VAC, 47-63 Hz, 100 Watts

MECHANICAL

Size:	19", 1U (1.75" H X 22" D X 17" W)
Weight:	20 Pounds

REAR PANEL CONNECTORS

RF input:	SMA F
IF output:	SMA F
Input Monitor:	SMA F
LO Monitor:	SMA F
IF Monitor:	SMA F
Ethernet:	RJ 45



FEI-Elcom Tech

ABOUT FEI-ELCOM TECH, Inc

Elcom designs and manufactures instruments and modules in the RF and Microwave frequency spectrum for broadband and narrow band applications in ATE, Aerospace/Defense, SIGINT and commercial communications. Proprietary technologies include low phase noise fast switching direct analog synthesis, low noise indirect PLL designs, and RF DSP up to 40GHz.

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