MI-WAVE
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970 SERIES
WR-22 Q-BAND DOWNCONVERTER
for Satcom Applications

KEY FEATURES

- RF Frequency: 37.5 to 42.5 GHz
- IF Frequency: DC to 10 GHz
- Integrated LO: Internal synthesizer
- LO Control: Configurable GUI or API commands
- Conversion Gain: 35 dB
- Output Power: Up to +30 dBm
- Digital Step Attenuator: 22 dB attenuation range
- Phase Control Resolution: 0.002°
- LO Operating Modes: CW, Sweep, and Hop modes with external trigger capability
- Integrated Filtering: Embedded RF cavity filter
- Power Requirement: Single +15 V supply

Q-Band Downconverter
High-performance Q-band downconverter covering RF input with DC to 10 GHz IF output, designed for demanding microwave and millimeter-wave applications. The unit features an integrated synthesizer-based LO that can be controlled through a GUI or API commands for easy system integration. It provides 35 dB gain, up to +30 dBm output power, and includes a 22 dB digital step attenuator for flexible level control.

Ultra-fine phase control with 0.002° resolution enables precise signal alignment. The LO supports CW, Sweep, and Hop modes, including external trigger operation for advanced test and system applications. An embedded RF cavity filter enhances spectral purity, and the module operates from a single +15 V supply.

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970B-37.5/42.5/383

TEST DATA SHEET

SN: XXXXX

Physical Properties

970 Series Frequency Downconverter

RF Interface	WR22 Waveguide
IF Interface	SMA-Female Coax Connector
Material	Aluminum Housing
Finish	Black Anodize Finish
LO	Internal (Synthesizer with API or GUI)

Electrical Specifications @ 25° C — Test Data

Parameters	Min	Typ	Max
RF Frequency Range	37.5 GHz		42.5 GHz
IF Frequency Range:	DC		10 GHz
Conversion Gain		35 dB	
Output Power			+ 30 dBm
DSA Attenuation Range			22 dB
Phase Control Resolution		0.002°	
Power Supply (Single)		+15V	

NOTES:

LO Operating Modes: CW, Sweep, and Hop modes with external trigger capability
Filtering: Integrated RF Cavity Filter

Tested by: N/A

Tested on: 3/4/26