

# DATA SHEET PRELIMINARY 2/22/02

70

MHz

OUT

25 MHz

Reference

19

**XTAL** 

150 MHz LP

# 2089-24 2.0 - 2.4 GHz Downconverter

2089-24 2.0 - 2.4 GHz Downconverters - The Series 2089-24 Downconverter converts 2.0 - 2.4 GHz to a 70 MHz IF with no spectrum inversion, high linearity, good phase noise, flat frequency response, and 1 MHz tuning steps. The 2.0 - 2.4 GHz input is mixed with synthesized local oscillator (LO) signals, first to 900 MHz and finally to 70 MHz IF. Front panel LEDs indicate DC power is applied (green) and if a PLL alarm occurs (red). The gain is set at 10 dB. Connectors are type N female for the RF input and BNC female for the IF output. The 2089-24 is housed in an 1 3/4" X 19 " X 14 " deep rack mount chassis.



2.0

to

2.4

IN

GHz

#### 2089-24 DOWNCONVERTER

2.0 to 2.4 GHz BP 900 MHz BP

970 MHz

CONTROLLER

2089-24 Downconverter Block Diagram

2.9 to

3.3

GHz

#### **EQUIPMENT SPECIFICATIONS\***

#### **Input Characteristics**

Impedance/RL 50 /10 dB Frequency 2.0 to 2.4 GHz

Noise Figure, Max. 15 dB

Input Level range -20 to -30 dBm

Input 1 dB compression -10 dBm

## **Output Characteristics**

Impedance/RL 75 /15 dB Frequency 70 ± 10 MHZ Output Level, max linear -10 dBm Output 1 dB compression 0 dBm

#### **Channel Characteristics**

Gain  $10 \pm 1.0 \text{ dB}$ 

Image Rejection > 45 dB, min; >50 dB typical

Spurious Response <-50 dBC in band

Frequency Response ± 1.5 dB, entire band; ± 0.5 dB, any 10 MHz increment

## Synthesizer Characteristics

Frequency Accuracy ±25 kHz max over temp

Phase Noise (dBC/Hz) <= -75, 10 kHz; <=-90, 100 kHz; <=-100, 1 MHz

# Controls, Indicators

Frequency Select BCD Switches select input center frequency in 1 MHz steps

DC Power; PLL Alarm Green LED; Red LED

#### Other

IF; RF Connectors BNC, female; Type N, female

Size 19 inch standard chassis 1.75"high X 14.0" deep

Power 90 - 260 VAC, 47 - 63 Hz, 30 watts max.

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<sup>\*+10</sup> to +40 degrees C; Specifications subject to change without notice