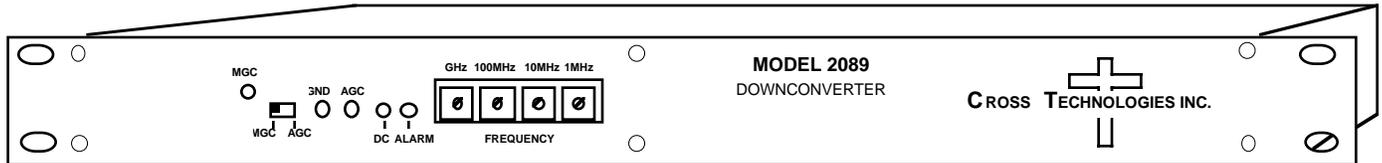


2089-24A 2.0 - 2.4 GHz Downconverter

2089-24A 2.0 - 2.4 GHz Downconverters - The Series 2089-24A Downconverter Converts 2.0 - 2.4 GHz IF signal to a 70 MHz IF with no spectrum inversion, low group delay, and flat frequency response. The 2.0 - 2.4 GHz input is mixed with synthesized local oscillator (LO) signals, first to 600 MHz and finally to 70 MHz. The frequency is selected using four front panel BCD switches, and is selectable in 1 MHz increments. The reference oscillator is a 25 MHz internal oscillator. Front panel LEDs light when DC power is applied (green) or when a PLL alarm occurs (red). Gain is selectable to be either manually adjustable (MGC) or automatically adjusted (AGC). Front panel test points allow for monitoring the AGC voltage (and corresponding AGC gain) when in AGC mode, and a front panel potentiometer allows for gain adjustment when in MGC mode. The MGC gain is adjustable from 20 to 50 dB. Connectors are Type N female for the RF input and BNC female for the IF output. A terminal strip is mounted on the rear panel and provides a closure to ground when the PLL is out of lock. The 2089-24A Downconverter is housed in a 1 3/4" X 19" X 14" deep rack mount chassis.



2089-24A DOWNCONVERTER

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance/RL	50 Ω/10 dB
Frequency	2.0 to 2.4 GHz
Noise Figure, Max.	15 dB max gain
Input Level range	-30 to -70 dBm
Input 1 dB compression	-20 dBm

Output Characteristics

Impedance/RL	75 Ω /15 dB
Frequency	70 ± 10 MHz
Output Level, max linear	-20 dBm
Output 1 dB compression	-5 dBm

Channel Characteristics

Gain	10 to 50 dB (automatically adjusted in AGC mode, manually adjustable in MGC mode)
AGC reaction time	~ 2 sec, 10 to 50 dB gain change on step input
Image Rejection	> 45 dB, min; >50 dB typical
Spurious Response	<-40 dBC in band
Frequency Response	± 1.5 dB, entire band; ± 0.5 dB, any 10 MHz increment

Synthesizer Characteristics

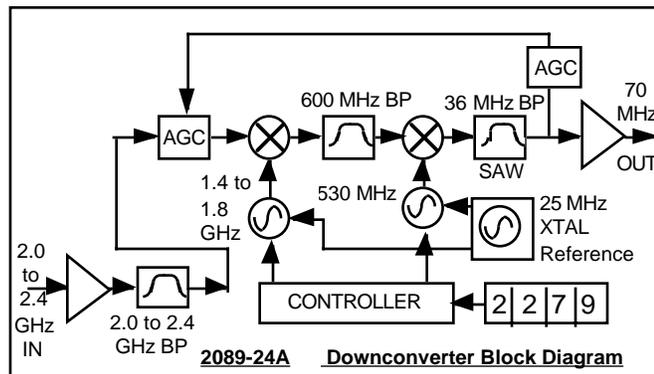
Frequency Accuracy	±25 kHz max over temp
Phase Noise (dBC/Hz)	≤ -75, 10 kHz; ≤ -90, 100 kHz; ≤ -100, 1 MHz

Controls, Indicators

Frequency Select	BCD Switches select input center frequency in 1 MHz steps
Gain Select	Front panel slide switch selects MGC or AGC
Gain Adjust	Front panel potentiometer adjusts gain in MGC mode
DC Power; PLL Alarm	Green LED; Red LED

Other

IF; RF Connectors	BNC, female; Type N, female
Connector, Alarm	Terminal Strip - open collector to ground (30ma max) on Alarm
Size	19 inch standard chassis 1.75"high X 14.0" deep
Power	90 - 260 VAC, 47 - 63 Hz, 30 watts max.



*+10 to +40 degrees C; Specifications subject to change without notice