

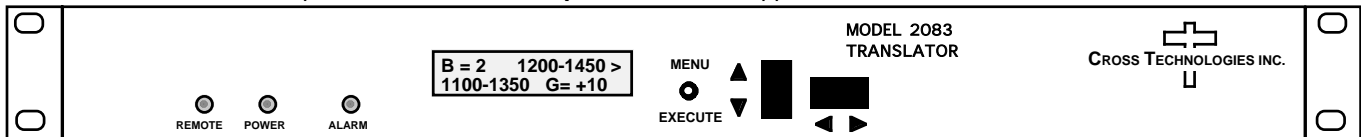


DATA SHEET

Rev. B 2/11/10

Series 2083-1413 Agile L to L Translator

The **2083-1413 Agile L to L Translator** converts a 950-1200 or 1200-1450 MHz block to 1100-1350 MHz block with no spectrum inversion, low group delay and flat frequency response. The 950-1200 or 1200-1450 MHz input is mixed with synthesized local oscillator (LO) signals, first to 3100 MHz center frequency and then to the 1100-1350 MHz output. Multi-function push button switches select the input frequency range and gain. Frequency translation and gain (0 to +20 dB, selectable in 1 dB steps) settings appear on the LCD display. LEDs light when power is on (green) or a PLL alarm occurs (red). Connectors are BNC female for RF input and output and for **(optional)** external 10 MHz reference (+3 ±3 dBm in). The unit is in an 1 3/4" X 19" X 16" deep rack mount chassis. **Option -H** is a 0.01 ppm reference.



2083-1413 Agile L to L Translator

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Input Impedance/RL	75 Ω/12 dB
Frequency,	950-1200 or 1200-1450 MHz
Input Level	-10 to -30 dBm
Input 1 dB compression	0 dBm

Output Characteristics

Impedance/RL	75 Ω/12 dB
Output Level, Range	-10 to -30 dBm
Output 1 dB compression	0 dBm
Frequency	1100-1350 MHz

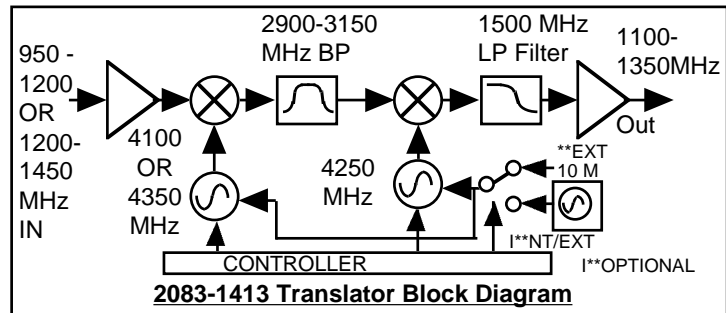
Channel Characteristics

Gain	0 to +20 ± 1 dB, selectable in 1 dB steps
Frequency Response	± 1.0 dB, 250 MHz bandwidth; ± 0.5 dB, any 36 MHz increment
Spurious Response	< -45 dBC in band ; < -50 dBm out of band
Group Delay, max	0.01 ns/MHz ² , parabolic, 0.03ns/MHz, linear, 1 ns ripple any 36 MHz BW
Frequency Sense	Non-inverting

Synthesizer Characteristics

Frequency Accuracy	± 1 ppm max over temp: Optional, High Stability (± 0.01 ppm) Option -H
Reference	10 MHz Internal; Internal/External selectable is Option -E

Phase Noise @ Freq	100Hz	1kHz	10kHz	100kHz	1MHz
dBC/Hz	-65	-70	-80	-90	-100
Typical	-70	-80	-85	-95	-115



Controls, Indicators

Frequency Translation	Setting shown on LCD display
Gain Selection	pushbutton switches; setting shown on LCD display; Set to 0 to +20 dB (-10 dBm max out)
DC Power; PLL Alarm	Green LED; Red LED

Other

Connectors	RF In and Out and (optional) external 10 MHz reference In, BNC, female, 75 ohm
Connector, Alarm	DB9 - NO or NC contact closure on Alarm
Size	19 inch standard chassis 1.75" high X 16.0" deep
Power	100-240 (±10%) VAC, 47-63 Hz, 30 watts max.

OPTIONS

-E	External 10 MHz reference In
-D	BNC, female, 50 ohms for L-Band In and Out
-H	High Stability (± 0.01 ppm) internal reference

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

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