

RCVR-100A Custom Microwave Receiver

FEATURES

- 7 -40 GHz RF Input Range
- Up to 8 GHz RF Bandwidth
- Up to 1 GHz IF Bandwidth
- Tune Speed down to 1 μ Sec
- Low LO Phase Noise
- MIL-STD Screening Available

APPLICATIONS

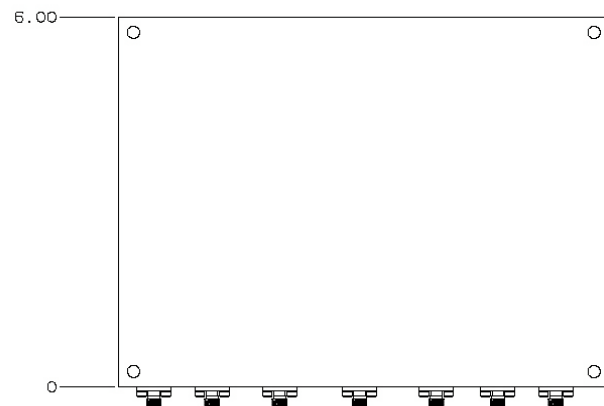
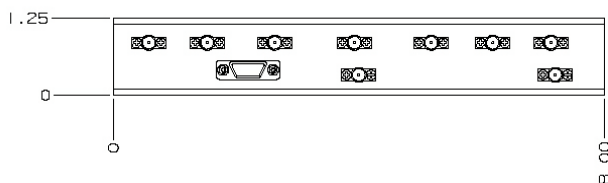
- ELINT / EW
- Radar Test Equipment
- Microwave Radio
- Instrumentation Module



DESCRIPTION

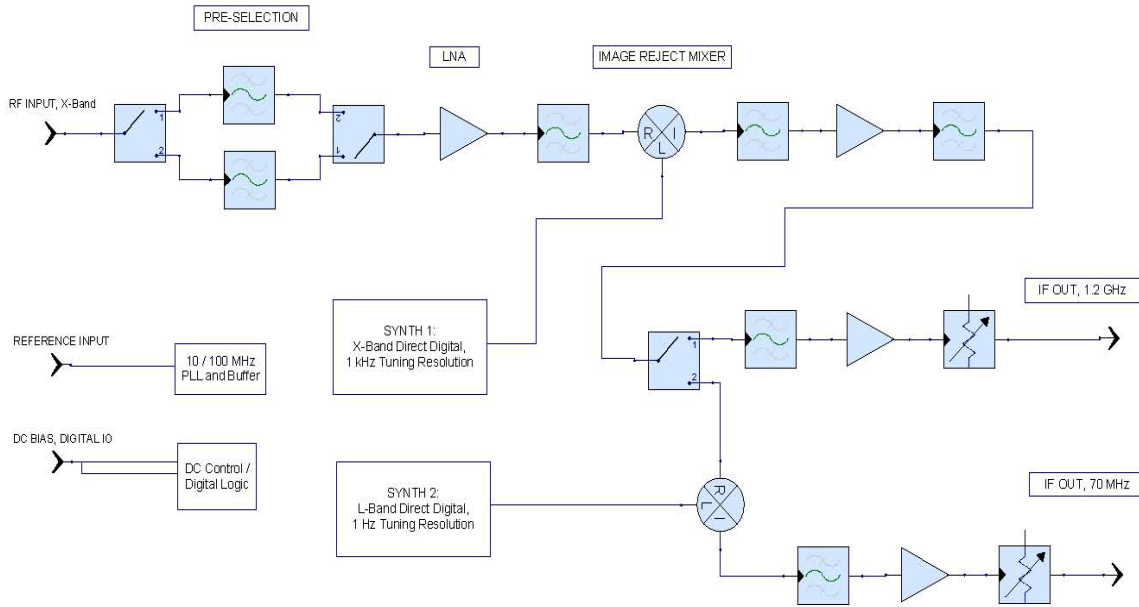
This high performance Microwave Receiver / Tuner is designed for systems that require wide dynamic range, fast tuning and superior LO phase noise. The receiver has a selectable IF of 1.25 GHz, 160 MHz or 70 MHz it also includes built-in RF and IF attenuators. The user can select an internal reference or provide an external reference signal that is automatically detected by the unit. Because of the modular design the RCVR-100A can be easily modified for your specific requirements. Many configurations and frequency bands can incorporate the same basic architecture, saving the customer NRE and shortening development time for a custom module. A perfect fit for ELINT, Radar, or radio link requirements.

Outline Drawing:



RCVR-100A
Custom Microwave Receiver

Simplified Block Diagram



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Custom Microwave Receiver

PERFORMANCE SPECIFICATIONS *

PARAMETER	VALUE	OPTIONS
RF Input	7 to 40 GHz	
Bandwidth	Up to 2 GHz	
Step Size	1 MHz	1 Hz
Tuning Speed	< 50 μ S,	500 μ Sec
Input Power	0 dBm	+15dBm (max)
Linear Dyn Range	90 dB	10 MHz IF BW
P _{1dB}	-10 dBm	
P _{3dB}	+5dBm	
Input VSWR	2.0:1	
IF Outputs	1.25 GHz	160 and 70 MHz
Instant IF	100 MHz	up to 1 GHz
Noise Figure	10 dB	2.5 dB
RF to IF Gain	15 dB	
Image Rejection	-50 dB	
LO Phase Noise	0.5° RMS	
LO Radiation	-90 dBm	
Spurious at IF output	-70 dBc	
IF Attenuation	Up to 60 dB	1 dB steps
RF Attenuation	Up to 30 dB	1 dB steps
Internal/External Ref Frequency	10 / 100 MHz	+/- 50 ppb
Input Reference Power	0 dBm	
Programming (LVTTTL)	SPI Serial	

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PERFORMANCE SPECIFICATIONS, Continued

Parameter	Value	Options
Supply Voltage	+/-5 VDC, +12 VDC, 15 watts Total Power (max)	
Environmental		
Vibration	(as required)	
Shock	(as required)	
Operating Temp	-20 to +75 deg. C	-40 to +85 deg. C
Physical	7" x 5" x 1"	Custom Packages
		Available

* Other configurations available, consult factory



Certificate # A2498US