



6GHz RF Signal Source Specifications

Model: RSS-6000

Key Features:

- Wide tuning range: 25 to 6000 MHz, 1 Hz steps
- Universal interface and power via USB
- High power out with automatic level control
- Compact size: 0.90" H x 2.82" W x 3.88" D

RF Performance

Frequency Range	25 to 6000 MHz			
Frequency Step Size	1 Hz			
Output Type	Continuous wave			
Output Maximum Amplitude	25MHz – 3GHz: +13dBm 3GHz – 6GHz: +10dBm			
Output Range	-27dBm to +13dBm , 0.1dB steps (output level set in dBm) [+/- 1db]			
Internal Reference	<ul style="list-style-type: none"> • 40MHz • +/- 0.5ppm over temperature • +/- 1ppm first year aging (+/- 5ppm maximum total over 20 year life) 			
Phase Noise (Maximum)	Frequency	1kHz Offset	10kHz Offset	100kHz Offset
	25-250MHz	-98 dBc	-106 dBc	-112 dBc
	250-1000MHz	-92	-96	-106
	1000-3000MHz	-83	-94	-101
	3000-6000MHz	-80	-85	-92
Spurious	<ul style="list-style-type: none"> • Maximum: < -50dBc • Typical < -70dBc 			
Harmonics	<ul style="list-style-type: none"> • Maximum: -20dBc at +13dBm out 			
Tune Time	Start-up initialization time (from power on to RF out): 1.25 seconds Frequency to frequency change time: 35mS			
RF Output Connector	SMA female			
Reference Connector	<ul style="list-style-type: none"> • SMA female • Software controlled input/output • 40MHz output • 10-70MHz input reference (software programmable frequency) 			

Power

Power Input	<p>3.5mm OD x 1.35mm ID coaxial power jack</p> <ul style="list-style-type: none"> • 6-30VDC In • 300mA at 9V • Center positive • Mating connector: Manufacturer: CUI; P/N: PP3-002D <p>USB (Mini B Female)</p> <ul style="list-style-type: none"> • <500mA
Power Selection	<p>Automatic switching</p> <ul style="list-style-type: none"> • Coaxial power jack selected by default <ul style="list-style-type: none"> • Allows USB interface connection to unpowered hub with coaxial power input • USB power used when coaxial power not present

Interface

Control Electrical Interface	<p>USB</p> <ul style="list-style-type: none"> • Virtual COM port <p>RS232</p> <ul style="list-style-type: none"> • 9-pin male D-sub connector • 9.6, 19.2, 38.4, 57.6, 115.2 (default) kbps, software selectable
Control Interface Selection	<p>Automatic Switching</p> <ul style="list-style-type: none"> • USB interface selected when connected (senses 5V power) • RS232 interface selected when USB not connected
Output Modes	<ul style="list-style-type: none"> • On, Off, On/Off via external trigger
External Trigger	<p>Pin 4 of D-sub connector</p> <p>USB interface selected:</p> <ul style="list-style-type: none"> • 0-3.3V logic levels <p>RS232 interface selected:</p> <ul style="list-style-type: none"> • RS232 +/- levels, can be controlled through software DTR control
Status Indicators	<ul style="list-style-type: none"> • Power /Command • Synthesizer Lock • RF Output • Reference Out • Low Voltage (all LEDs flashing)
Control Data Interface	<ul style="list-style-type: none"> • ASCII text
PC User Interfaces	<ul style="list-style-type: none"> • Third-party terminal application (e.g. HyperTerm) <ul style="list-style-type: none"> • ASCII commands • PC application (Windows XP, Win 7) <ul style="list-style-type: none"> • Adjust frequency and output level • Set power-on defaults • Frequency Sweep, programmable up/down <ul style="list-style-type: none"> ○ Sweep dwell mode: user defined time per step ○ Sweep duration mode: user defined total sweep time • Identify connected units
Internal Memory	<ul style="list-style-type: none"> • Nonvolatile, automatically stores most recent settings

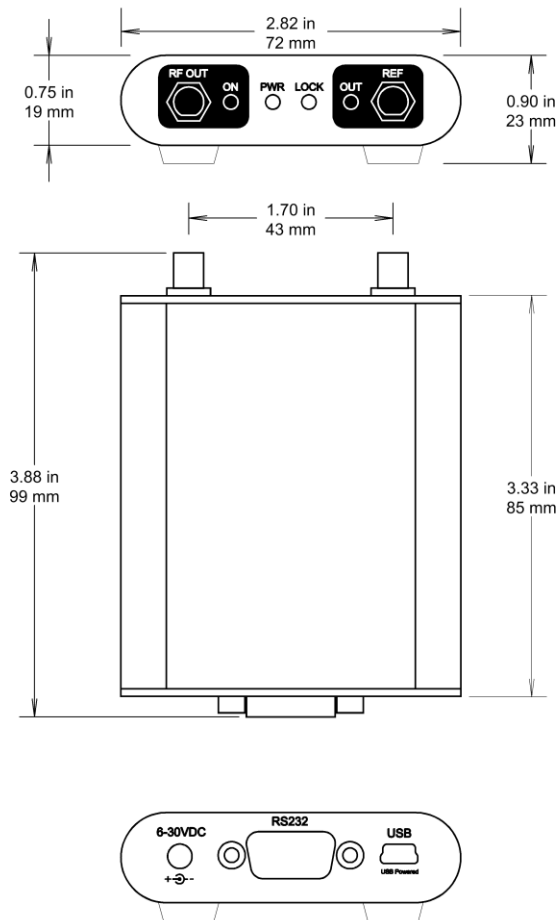
Mechanical

Dimensions	0.90" (23mm) H x 2.82" (72mm) W x 3.88" (99mm) D
Weight	< 300g
Material	<ul style="list-style-type: none"> • Aluminum extrusion • Aluminum endplates with black legend • Rubber feet

Environmental

Operating Temp Range	-20°C to +70°C
	Note: Maximum output power is reduced to +5dBm above 50C and 3000MHz
Storage Temp Range	-40°C to +85°C

Warranty: 1 year. Designed and manufactured in the USA. Custom designs are available.



All specifications are subject to change without notice.