RADITEK INC.

RoHS COMPLIANT

code-e7

High Power Amplifier, Solid State, Broadband

500-2500MHz, 50dB Gain, SMA Female Connectors, 100 Watts

RAMP-500-2500M-50d-Sf-100W-e7

- Solid-state Class AB linear design
- Instantaneous ultra broadband
- Suitable for most modulation types
- Small and lightweight
- 50 ohm input/output impedance
- High reliability and ruggedness
- Built-in control, monitoring and protection circuits

ELECTRICAL SPECIFICATIONS @ +28 VDC, 25°C, 50 Ω System

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	500		2500	MHz
Power Output CW	P_{SAT}	100	125		Watt
Output Power @ 1dB Gain Compression Point	P_{1dB}	60	80		Watt
Gain @ P1 dB Gain Compression Point	G_p	50			dB
Input Power for Rated Pout	P_{IN}		0		dBm
Gain Flatness @ rated output power	ΔG_P			±1.0	dB
Input Return Loss	S11			-12	dB
Noise Figure	NF			10	dB
Third Order Intercept Point	IP3		+55		dBm
Harmonics @ rated output power	H		-20		dBc
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage	VDC	26	28	30	Volt
Current Consumption @ rated Pout	IDD		10	15	Amp
Quiescent Current	ISD		1.2		Amp
Standby Current Consumption @ Shutdown	IDQ			400	mA
Switching Time, 1 KHz TTL, P_{IN} = 0 dBm	T_{ON}/T_{OFF}		2.0	5.0	uSec

ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit
Operating Case Temperature	Tc	-40		+80	°C
Storage Temperature	Tstg	-40		+85	°C
Relative humidity (non-condensing)	RH			95	%
Altitude (MIL-STD-810F Method 500.4)	ALT	10,000		30,000	Feet
Shock / Vibration (MIL-STD-810F Method 516.5)	SH / VI		Airborne		

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	10.0 x 5.0 x 1.0	Inch	Max
Weight	2.5	lb.	Max
RF Connectors In/Out	SMA female		
DC / Control Connector	D-Sub, 9-Pins, Male		
Cooling	External Heatsink		

WORLD HQ: 1702L Meridian Ave. Suite 127, San Jose, Ca 95125, U.S.A.
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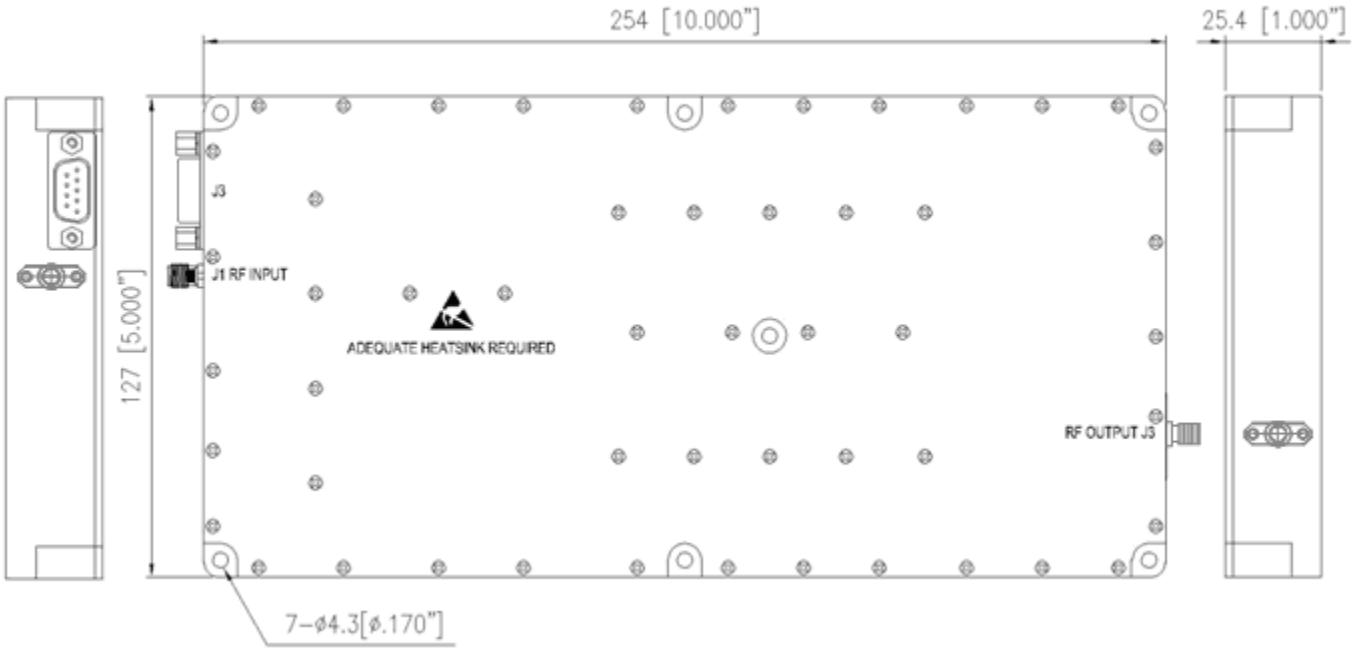
PROTECTIONS

Input Overdrive	+15 dBm	Max
Load VSWR @ rated output power	∞ @ all load phase & amplitude	Nom
Thermal Overload	85°C	Typ

INTERFACE CONNECTOR - Dsub, 9 Pin

Pin #	Description	Specifications
1	N/C	Reserved
2	Current Monitor	Analog voltage relative to I_D @ 50 mV/100 mA
3	Temperature Sense	Analog voltage relative to Module's Temperature @ 10 mV/°C + 500 mV
4	N/C	Reserved
5	Shutdown	Amplifier Enable: TTL "Low" (Logic 0) or Open Amplifier Disable: TTL "High" (Logic 1)
6	VDD	+28 VDC to ±2 VDC
7	VDD	+28 VDC to ±2 VDC
8	GND	Ground
9	GND	Ground

OUTLINE DRAWING



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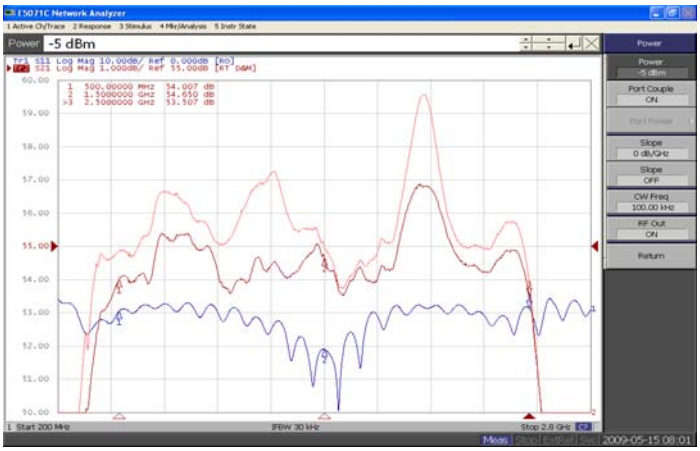
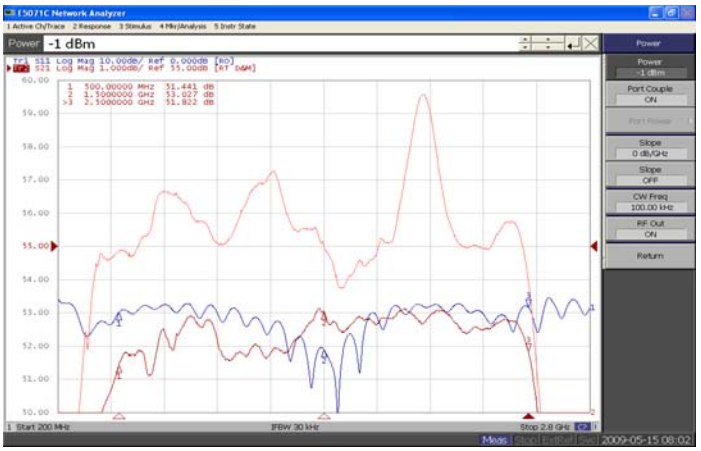
TYPICAL PERFORMANCE PLOTS

Plots 1 – Small Signal and P_{1dB} Gain
Top Curve: Small Signal Gain @ Pin = -20dBm
Middle Curve: P1dB @ Pin = -5.0dBm
Reference: 55dB, 1dB/Div.
Bottom Curve: Input VSWR
Reference: 10dB, 0dB/Div.



Plot 2 – Small Signal and P_{SAT}
Top Curve: Small Signal Gain @ Pin = -20dBm
Reference: 55dB, 1dB/Div.
Middle Curve: Input VSWR
Reference: 10dB, 0dB/Div.
Bottom Curve: Psat @Pin = -1.0dBm
Reference: 55dB, 1dB/Div.



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