RADITEK INC.

RoHS COMPLIANT

code-e7

Solid State Power Amplifier, Broadband

800-4200MHz, 42dB Gain, SMA Female Connectors, 15 Watts

RAMP-800-4200M-42d-Sf-15W-e7

- Solid-state Class AB linear design
- Instantaneous ultra broadband
- Built-in Sequence Regulator and Monitoring circuits
- Small and lightweight
- Suitable for most modulation types
- 50 ohm input/output impedance
- Highly rugged and reliable

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

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	800		4200	MHz
Power Output CW	PSAT	15			Watt
Power Output @ 1 dB Gain Compression Point	P1dB	10	12		Watt
Power Gain @ 1 dB Gain Compression Point	G1dB	42			dB
Input Power for Rated Pout	PIN		0		dBm
Small Signal Gain Flatness	ÄG		±1.5	±2.0	dB
Input/Output VSWR @ 50Ù	S11/S22			-10	dB
Noise Figure	NF		7	10	dB
Third Order Intercept Point 2-tone IMD, 33 dBm/Tone, Ä = 100 KHz	IP3	50	55		dBm
Harmonics @ 1 dB Gain Compression Point	H		-30	-20	dBc
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage	VDC	12	13	15	Volt
Current Consumption	ID		8	9	Amp
Operating Frequency	BW	800		4200	MHz

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	11.1 x 5.0 x 1.0	Inch	Max
Weight	3.5	lb.	Max
RF Connectors In/Out	SMA female		
DC / Shutdown Connectors	Hybrid Dsub 7 Pin		
Cooling	External Heatsink		

ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit
Operating Temperature	Tc	0		50	°C
Non-operating 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		

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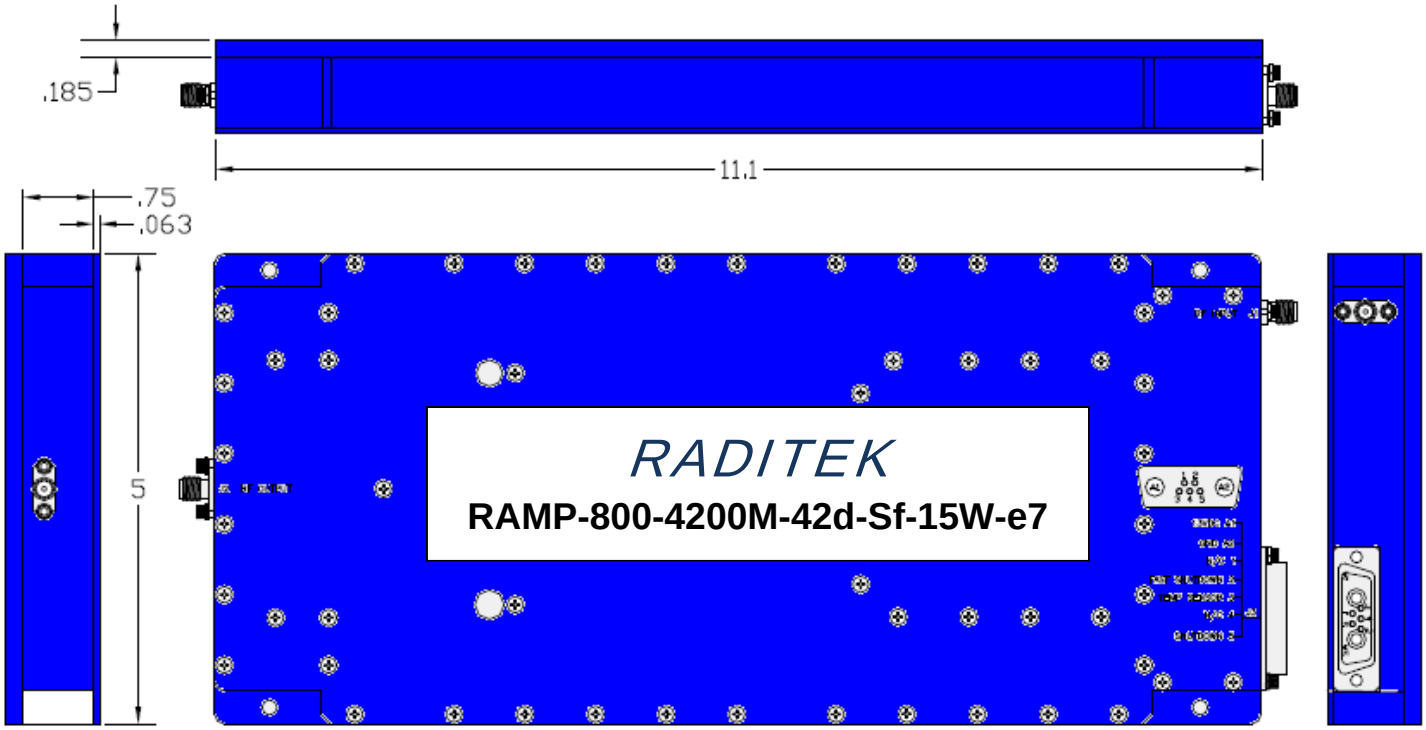
PROTECTIONS

Input Overdrive	+10 dBm	Max
Load VSWR	□‡ @ all load phase & amplitude	Nom
Thermal Overload	85□‹C shutdown	Max

INTERFACE CONNECTOR - Dsub Hybrid 7 Pins

Pin #	Description	Specifications
A1	VDD	+13 ± 1 VDC
A2	GND	Ground
1	N/C	Spare
2	Fast Shutdown	Short to Open
3	Temp Sense	Analog voltage relative to Module's Temperature @ 10 mV/°C
4	N/C	Spare
5	Shutdown	Amplifier Enable: TTL "Low" or Open Amplifier Disable: TTL "High"

Adequate Heat Sink Required
OUTLINE DRAWING



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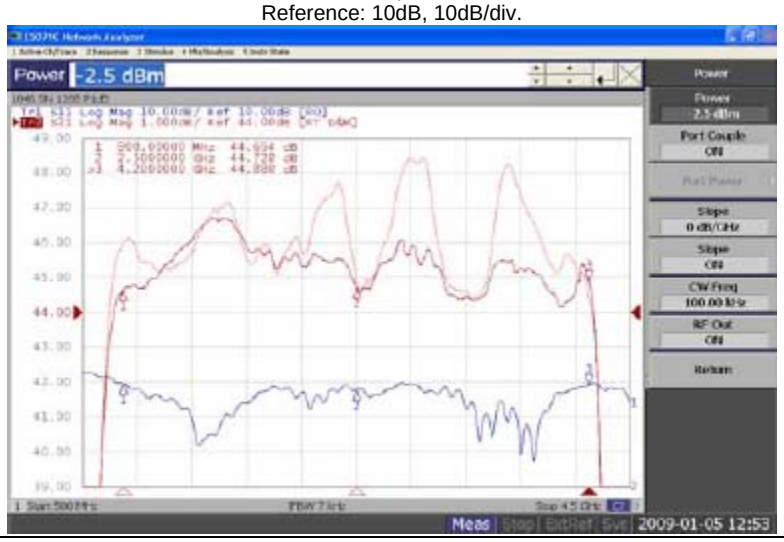
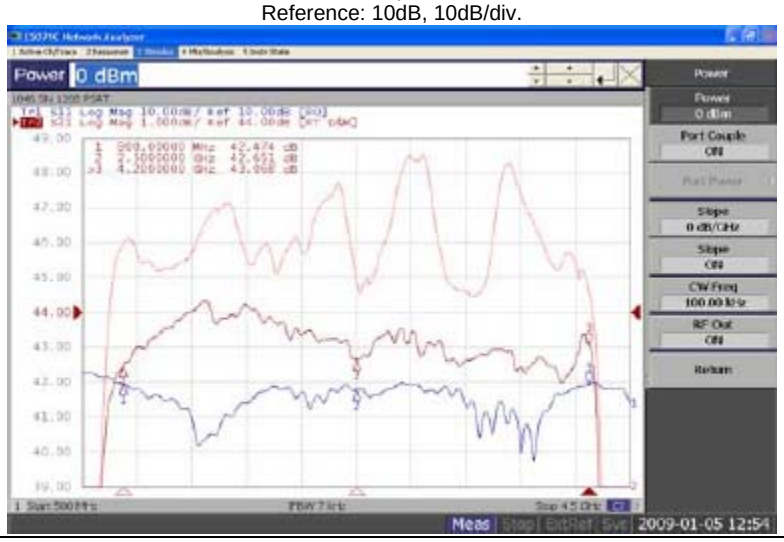
TYPICAL PERFORMANCE PLOTS

Plots 1 - Small Signal and P_{1dB} Gain
Top Curve: Small Signal Gain @ P_{IN} = -20dBm
Middle Curve: Power Gain @ P_{1dB}, P_{IN} = -2.5dBm
Reference: 44dB, 1dB/div.
Bottom Curve: Input Return Loss
Reference: 10dB, 10dB/div.



Plot 2 - Small Signal and PSAT
Top Curve: Small Signal Gain @ PIN = -20dBm
Middle Curve: PSAT @ PIN = 0dBm
Reference: 44dB, 1dB/div.
Bottom Curve: Input Return Loss
Reference: 10dB, 10dB/div.



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