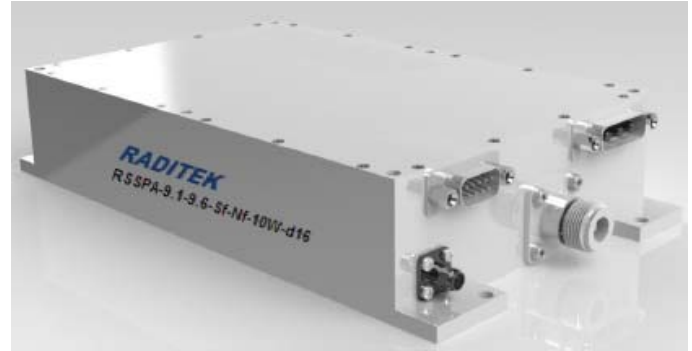


RADITEK

SSPA 10Watts

Solid State Power Amplifier 9.1-9.6GHz 10 Watts Pulse Power (@40% duty cycle)

- Amplifier should be mounted on a heat sink with forced air cooling.
- RF sample monitoring via SMA female connector
- DC monitoring of RF output level



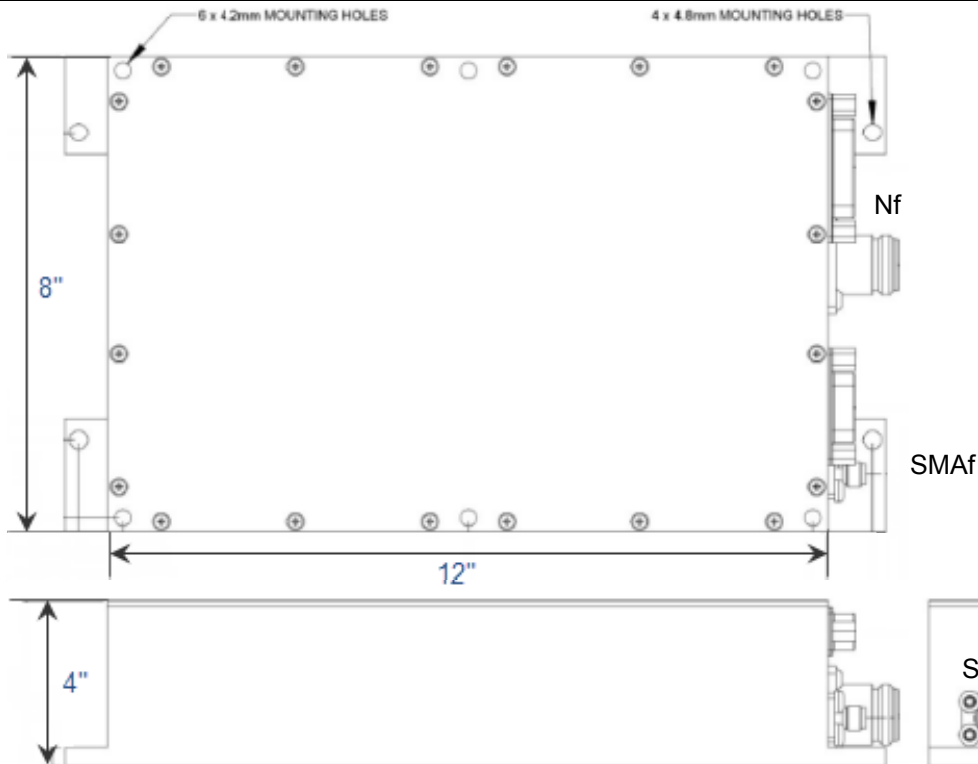
Order Examples: RAMP-M-9.1-9.6-Sf-Nf-40d28V-10Wpul-d16

Description: (SSPA, 9.1-9.6GHz, SMA to N female Connector, 40dB Gain, 28V, 10 Watts pulsed @40% duty cycle)

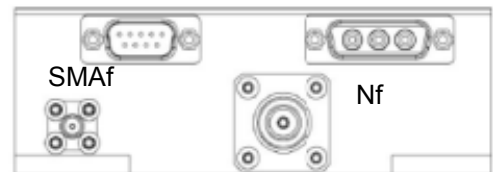
Parameter	Specifications	Units
Operating Frequency Range	9.1 to 9.6	GHz
Transmitter Type	Solid State Power Amplifier (SSPA)	
Gain	40	dB
Max Output Power (Pout)	10W (40dBm) minimum @ 40% duty, over the frequency band & Operating Temperature Range	Watts
Output power flatness	± 1dB @ Pin=0dBm (over operating freq. band & operating temperature)	dB
RF input power	0 ± 2 dbm, Pulsed	dBm
Max I/P power without damage	+10 dBm	dBm
Input and Output VSWR	1.5:1 max (Note: Unit shall accept a load VSWR up to 2.5:1 without damage)	:1
Pulse Width	10 to 30	µ Sec
Duty Cycle	40 max	%
Pulse Repetition Frequency	40 max	KHz
Power variation during RF pulse	< 0.8 dB @ 30 µs pulse width and 40% duty	dB
Phase drift within the	5° max (Linear) pulse (@ peak output)	
RF rise/fall Time	< 50 ns	
Transmit Gating signal (Pritrigger)	Differential pulse which precedes RF by 7µs and ends after 0.8us TTL High – ON, TTL Low -- OFF	
Remote control	RS422 / RS485	
ON OFF isolation	Better than -60	dBc
Harmonics	± -60 (with integrated low pass filter)	dBc
Out of band Spurious levels	-65 max	dBc
Phase noise	-70 dBc/Hz at 100 Hz from carrier (Input source phase noise <-80 dBc/Hz typ Amplifier should not add noise components more than 10dB)	dBc/Hz
Noise figure	<10	dB
System power supply	+28V is internally switched (AC voltage optional)	VDC
Input and Output Impedance	50 Ω ±1	Ohms
Mechanical Specifications		Units
M&C Interface RS422-DB25	a Forward & Reflected power	f. Voltage & Current of critical modules used in SSPA
	b Output VSWR	G. Forward power monitoring
	c. Duty Cycle	H. Reflected power monitoring
	e Temperature	I. Temperature health
	Protection Against Damage (to be provided)	I. Over Temperature, automatic shutdown (resets when temperature returns to normal) II. Over-current (automatic shutdown, requires resetting the unit to clear it) III. Excess VSWR IV. RF input over drive > +10dBm
Alarms	Over temp. with auto clear; Over-current, with man. clear, VSWR, I/P Over drive	

Solid State Power Amplifier Module 9.1-9.6GHz SMA to N female Connector, 10 Watts Pulsed @40% duty cycle

Mechanical Specifications		Units
Transient Protection	EMI/RFI Filter, Suitable surge protection to be provided	
Type of Package	Module 12" x 8" x 4"	Inches
Mounting arrangement	Horizontal	
Cooling	Convection	
Weight	<5 Kg max	Kg
Interfacing connectors		
Control interface	D38999 SERIES III Circular connector	
RF Input RF Output sample	SMA Female	
RF output	N-Female Panel mount	
DC Line	D38999 SERIES III Circular connector	
Front Panel Control & Indicators	LED indication to be provided for power ON and RF power o/p.	
Finish & Paint	Please advise	
General notes	1) Power and Signal connectors should have mating caps with metallic bead chain.	
Environmental & EMI/EMC	Mil std 461F (Designed to meet but not tested)	
4.0 The following functional tests will be carried out for accepting the SSPA	1. Peak power output over operating frequency band 2. Output power flatness 3. Duty 4. Power droop (over the pulse) 5. Harmonics 6. Spurious 7. Phase Noise degradation 8. Output VSWR 9. Rise and Fall time of the transmitter output 10. Endurance test for 48 Hrs	



Outline drawing & dimension



RAMP-M-9.1-9.6-Sf-Nf-40d28V-10Wpul-d16

Specifications may be subject to change

02/07/14

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