RADITEK

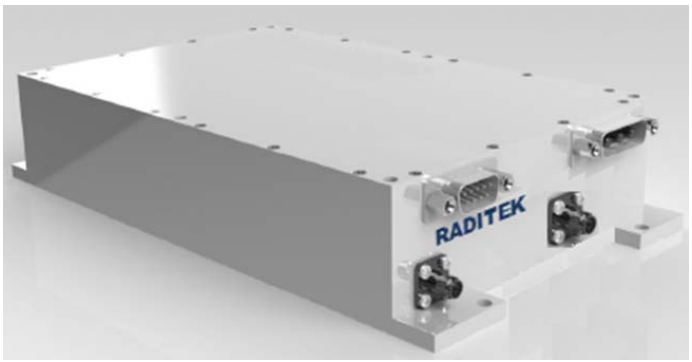
SSPA
80Watts

RoHS COMPLIANT

Solid State Power Amplifier 1.0-2.0GHz

80 Watts Pulse Power (@100% 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-1.0-2.0-Sf-Nf-49d28V-80Wpul-d16**
Description: *(SSPA Module, 1.0-2.0GHz, SMA to N female Connector, 49dBm Gain, 28Volt, 80 Watts pulsed @100% duty cycle)*

Parameter	Specifications		Units
Operating Frequency Range	1.0-2.0		GHz
Transmitter Type	Solid State Power Amplifier (SSPA)		
Max Output Power (Pout)	80W (49dBm) minimum @ 100% 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	100 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
Operating temperature	-40 to +70		ºC
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		

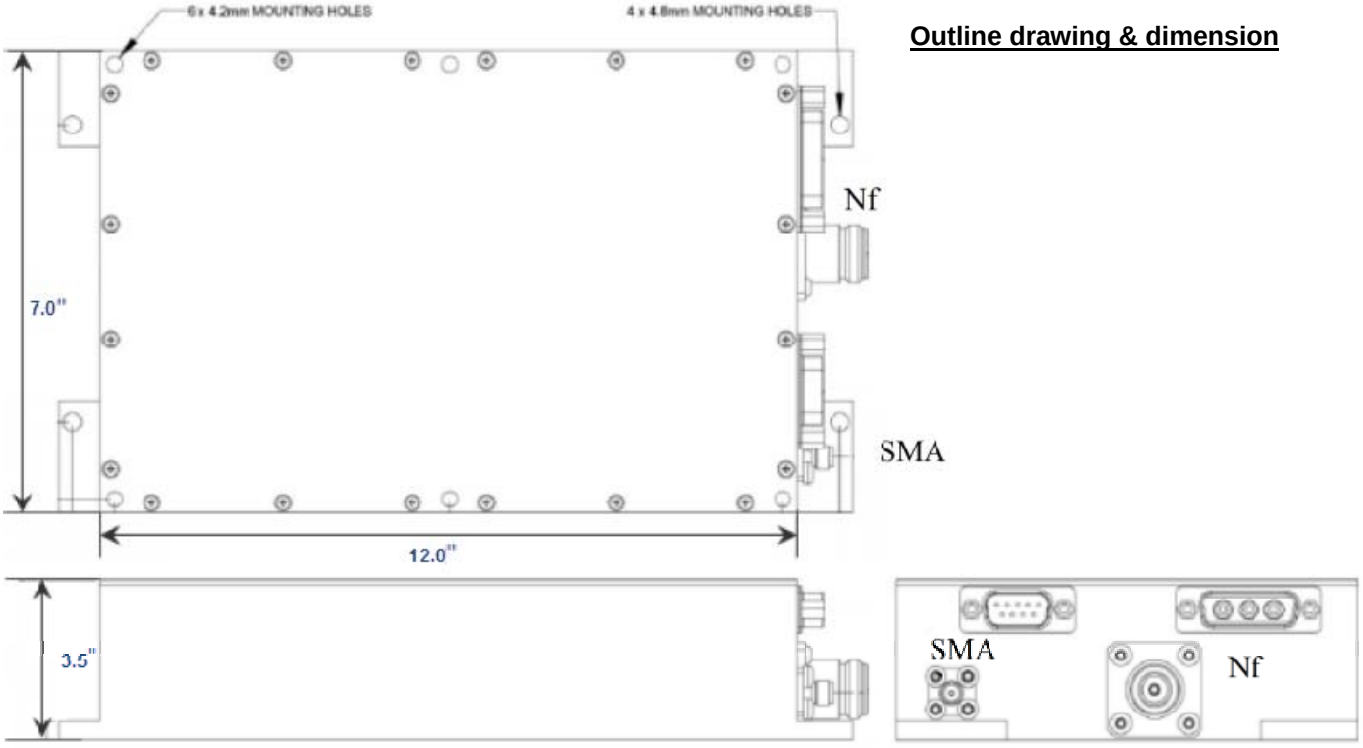
WORLD HQ: 1702L Meridian Ave. Suite 127, San Jose, Ca 95125, U.S.A.
Tel: (408) 266-7404 FAX: (408) 266-4483
WEB: www.raditek.com E-mail: sales@raditek.com

Solid State Power Amplifier Module 1.0-2.0GHz

SMA to N female Connector, 80 Watts Pulse Power (@100% duty cycle)

Mechanical Specifications		**Units**
Transient Protection	EMI/RFI Filter, Suitable surge protection to be provided	
Type of Package	Module 12" x 7" x 3.5"	Inches
Mounting arrangement	Horizontal	
Cooling	Conduction	
Weight	<14 Lbs max	Lbs
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	Alodine	
General notes	1) Power and Signal connectors 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



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