

Power Amplifier 1.5 MHz to 18 GHz, Split Bands Now with smart digital monitoring and control options 19" Rack Mount Family Data Sheet

General Description:

These are wideband CW / Pulse Power Amplifiers, designed for pulse operation, and general-purpose, amplification. Using an advanced high power density LDMOS and GaN semiconductor processes, these high performance amplifiers achieve high efficiency, flat gain, and large instantaneous bandwidth in a single amplifier design.

Typical Applications

- Solid State GaAs/GaN Design
- Instantaneous full Bandwidth
- Unconditional stability

Protections

- Over Voltage protection
- Over Power protection
- Reverse Power protection
- Over temperature protection and Alarm
- Over VSWR Protection
- Internally Fused
- Reverse protection standard on all D.C. Models

Smart Front Touch Panel monitoring (opt)

- Front touch panel Control
- P opt: Forward/Reverse Power Read out
- G opt: Gain Setting & Gain Control
- E opt: Remote Ethernet Control
- Additional opt: I opt IEEE488, Ropt: RS-232

Features

- Control line for remote operation
- Rack mount unit: 19" x 15" x 3.5"
- 100-240 VAC Power Supply



Options G/P shown

Front touch panel allows complete control of all amplifier functions

"5 Years Warranty"

Order Examples: RAMP-R-3.0-3.5-47d/220V-Nf-100W Psat-opt G,P-L21

Description: Solid State Linear RF Amplifier Rack Mount, 3.0-3.5GHz, 47 dB Gain, 220V_{AC}, 100Watts Psat) inc Opts Gain Control, P power

New Smart Options:

G: Gain Control option includes electronic attenuator with 30 dB range and 0.25 dB steps, Temp Fault, Voltage, Current and Temp

P: Power monitor option includes Forward power, Reverse power, VSWR fault*, Temp fault, High power fault, Voltage, Current and Temp. (set frequency to mid band for measurement accuracy) [typically 10:1 with auto shutdown]

E: Remote Ethernet Control: monitor on PC or cellphone RJ45 connector, (software inc)

Additional Options to support older Equipment: I: IEEE488 opt for HPIB, R: RS-232 opt

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Typical Specifications (example)

Parameter	Symbol	Spec	Unit
Frequency Range	BW	3000-3500	MHz
Output Power CW	Psat	51.76dBm (150W)	dBm (Watts)
Output Power at 1 dB Compression	P1dB	50dBm (100W)	dBm (Watts)
Small Signal Gain	Gp	50	dB
Gain Flatness at Psat	Delta Gp 1	+/- 1	dB
Input VSWR	S11	2:1	dB
Output VSWR	S22	2:1	dB
Small Signal Gain Flatness	Delta Gp 2	+/- 2	dB
Harmonics at 50 Watt	H	-15	dBc
Spurious Signals	Spur	-60	dBc
Operating Voltage (1 phase)	VAC	100 - 240	VAC
AC Input Power @ 100 watts	AC input	400	Watts
Class of Operation		AB	Class
Noise Figure	NF	<9	dB

Environmental Characteristics

Parameter	Symbol	Typ	Unit
Operating Case Temperature	Tc	0-50	Deg C
Storage Temperature	Tstg	-40 to 85	Deg C
Relative Humidity (non-condensing)	RH	95 (non-condensing)	%
Altitude	ALT	30,000 (Mil-STD-810F Method 500.4)	Feet
Vibration/Shock	VI /SH	Normal Truck Transport (std) Airborne (MIL-STD-810F Method 514.5) opt	

Mechanical Characteristics

Dimensions	Symbol	Typ	Unit
Dimensions (rack mount)	Dim	19 x 15 x 3.5	Inches
Weight	Wt.	30	lbs.
Connectors	RF Conn	SMAf / Nf	-
Cooling	Fans	Forced Air	-

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Full Range of Standard Product follows

Product Range

Class A: Ultra Linear **Class B: Linear**

Note: A detailed data sheet will be provided with every quote.

Freq Min	Freq Max	Power	Gain	Class	Raditek Part #	comment
(MHz)	(MHz)	(Watts)	(dB)			
1.5	30	100	40	A	RAMP-R-1.5-30M-40d-120/240V-100W-A-L21	
1.5	30	100	40	AB	RAMP-R-1.5-30M-40d-120/240V-100W-AB-L21	
10	1000	1	30	A	RAMP-R-10-1000M-30d-120/240V-1W-A-L21	
20	1000	5	45	A	RAMP-R-20-1000M-45d-120/240V-5W-A-L21	
20	1000	5	45	AB	RAMP-R-20-1000M-45d-120/240V-5W-AB-L21	
25	1000	10	40	AB	RAMP-R-25-1000M-40d-115/230V-Sf-10W-AB-L21	
29.7	50	100	1	S opt	RAMP-R-29.7-50M-1d-120/240V-100W-S opt-L21	
29.7	50	100	5	S opt	RAMP-R-29.7-50M-5d-120/240V-100W-S opt-L21	
29.7	50	100	10	S opt	RAMP-R-29.7-50M-10d-120/240V-100W-S opt-L21	
30	512	25	30	A	RAMP-R-30-512M-30d-120/240V-25W-A-L21	
30	512	50	40	A	RAMP-R-30-512M-40d-120/240V-50W-A-L21	
30	512	100	30	AB	RAMP-R-30-512M-30d-120/240V-100W-AB-L21	
30	512	150	40	AB	RAMP-R-30-512M-40d-120/240V-150W-AB-L21	
88	108	100	30	A	RAMP-R-88-108M-30d-120/240V-100W-A-L21	
88	108	300	30	AB	RAMP-R-88-108M-30d-120/240V-300W-AB-L21	
100	1000	50	30	A	RAMP-R-100-1000M-30d-120/240V-50W-A-L21	
100	1000	50	50	A	RAMP-R-100-1000M-50d-120/240V-50W-A-L21	
100	1000	80	30	A	RAMP-R-100-1000M-30d-120/240V-80W-A-L21	
100	1000	80	30	AB	RAMP-R-100-1000M-30d-120/240V-80W-AB-L21	
100	1000	80	50	A	RAMP-R-100-1000M-50d-120/240V-80W-A-L21	
100	1000	80	50	AB	RAMP-R-100-1000M-50d-120/240V-80W-AB-L21	
100	1000	150	30	AB	RAMP-R-100-1000M-30d-120/240V-150W-AB-L21	
100	1000	150	50	AB	RAMP-R-100-1000M-50d-120/240V-150W-AB-L21	
100	18000	1	33	A	RAMP-R-100-18000M-33d-120/240V-1W-A-L21	
136	174	125	1	S opt	RAMP-R-136-174M-1d-120/240V-125W-S opt-L21	
136	174	250	5	S opt	RAMP-R-136-174M-5d-120/240V-250W-S opt-L21	
136	174	500	10	S opt	RAMP-R-136-174M-10d-120/240V-500W-S opt-L21	
200	2200	25	30	A	RAMP-R-200-2200M-30d-120/240V-25W-A-L21	
200	2200	25	50	A	RAMP-R-200-2200M-50d-120/240V-25W-A-L21	
200	2200	50	30	A	RAMP-R-200-2200M-30d-120/240V-50W-A-L21	
200	2200	50	50	A	RAMP-R-200-2200M-50d-120/240V-50W-A-L21	

RAMP-R-1.5MHz-18GHz-Split Bands Family-L21

Specifications may be subject to change

10/25/17

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(MHz)	(MHz)	(Watts)	(dB)			
200	2200	60	30	AB	RAMP-R-200-2200M-30d-120/240V-60W-AB-L21	
200	2200	60	50	AB	RAMP-R-200-2200M-50d-120/240V-60W-AB-L21	
200	2200	100	30	AB	RAMP-R-200-2200M-30d-120/240V-100W-AB-L21	
200	2200	100	50	AB	RAMP-R-200-2200M-50d-120/240V-100W-AB-L21	
200	18000	1	33	A	RAMP-R-200-18000M-33d-120/240V-Sf-1W-A-L21	
200	18000	1.122	37	A	RAMP-R-200-18000M-37d-120/240V-Sf-30.5dBm-A-L21	
250	1000	10	45	AB	RAMP-R-250-1000M-45d-120/240V-Sf-10W-AB-L21	
300	18000	1.122	37	A	RAMP-R-300-18000M-37d-120/240V-Sf-30.5dBm-A-L21	
380	512	110	1	S opt	RAMP-R-380-512M-1d-120/240V-110W-S opt-L21	
380	512	110	5	S opt	RAMP-R-380-512M-5d-120/240V-110W-S opt-L21	
380	512	300	10	S opt	RAMP-R-380-512M-10d-120/240V-110W-S opt-L21	
400	1000	120	50	AB	RAMP-R-400-1000M-50d-120V-120W-AB-L21	
450	470	75	10	AB	RAMP-R-450-470M-10d-120V-Nf-75W-A-L21	
470	860	25	40	A	RAMP-R-470-860M-40d-120/240V-25W-A-L21	
470	860	25	40	AB	RAMP-R-470-860M-40d-120/240V-25W-AB-L21	
500	2000	100	45	AB	RAMP-R-500-2000M-45d-120/240V-Sf-Nf-100W-AB-L21	
699	960	350	50	AB	RAMP-R-699-960M-50d-120V-Nf-350W-AB-L21	
700	2700	50	45	AB	RAMP-R-700-2700M-45d-120/240V-Nf-50W-AB-L21	
806	960	80	1	S opt	RAMP-R-806-960M-1d-120/240V-80W-S opt-L21	
806	960	80	5	S opt	RAMP-R-806-960M-5d-120/240V-80W-S opt-L21	
806	960	80	10	S opt	RAMP-R-806-960M-10d-120/240V-80W-S opt-L21	
806	960	125	1	S opt	RAMP-R-806-960M-1d-120/240V-125W-S opt-L21	
806	960	125	5	S opt	RAMP-R-806-960M-5d-120/240V-125W-S opt-L21	
806	960	125	10	S opt	RAMP-R-806-960M-10d-120/240V-125W-S opt-L21	
806	960	250	1	S opt	RAMP-R-806-960M-1d-120/240V-250W-S opt-L21	
806	960	250	10	S opt	RAMP-R-806-960M-10d-120/240V-250W-S opt-L21	
850	2150	100	45	AB	RAMP-R-850-2150M-45d-120/240V-Nf-100W-AB-L21	
850	2150	200	50	AB	RAMP-R-850-2150M-50d-120/240V-Nf-200W-AB-L21	
900	1100	100	50	AB	RAMP-R-900-1100M-50d-120/240VV-Sf-100W-AB-L21	
1000	2000	35	45	AB	RAMP-R-1000-2000M-45d-120/240V-Sf-35W-AB-L21	
1000	2600	10	40	A	RAMP-R-1000-2600M-40d-120/240V-10W-A-L21	
1000	2600	30	40	AB	RAMP-R-1000-2600M-40d-120/240V-30W-AB-L21	
1000	6000	200	50	AB	RAMP-R-1000-6000M-50d-120/240V-Nf-200W-AB-L21	
1290	1310	500	57	AB	RAMP-R-1290-1310M-57d-120/240V-Nf-200W-AB-L21	
1500	3000	200	53	AB	RAMP-R-1500-3000M-53d-120/240V-Nf-200W-AB-L21	

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(MHz)	(MHz)	(Watts)	(dB)			
1700	2700	250	50	AB	RAMP-R-1700-2700M-50d-120/240V-Nf-250W-AB-L21	
2000	1800	1	33	AB	RAMP-R-2.0-18.0G-33d-120/240V-Sf-1W-AB-L21	
2000	4000	50	40	A	RAMP-R-2.0-4.0-40d-120-240V-Sf-50W-A-L21	
2000	4000	50	40	AB	RAMP-R-2.0-4.0-40d-120-240V-Sf-50W-AB-L21	
2000	4000	50	47	AB	RAMP-R-2.0-4.0-47d-120/240V-Sf-50W-AB-L21	
2000	6000	2	40	A	RAMP-R-2.0-6.0-40d-120/240V-2W-A-L21	
2000	6000	5	40	AB	RAMP-R-2.0-6.0-40d-120/240V-5W-AB-L21	
2000	6000	35	46	AB	RAMP-R-2.0-6.0-46d-120/240V-Sf-35W-AB-L21	
2300	2500	50	48	AB	RAMP-R-2.3-2.5-48d-120/240V-Sf-50W-AB-L21	
2700	3100	100	50	AB	RAMP-R-2.7-3.1-50d-48V-Nf-100W-AB-L21	48v
2900	3300	120	50	AB	RAMP-R-2.9-3.3-50d-AC-Nf-120W-1.2KW-Pk-AB-L21	3RU
3000	3500	100	50	AB	RAMP-R-3.0-3.5-50d-120/240V-Nf-100W-AB-L21	
5400	5900	400	56	AB	RAMP-R-5.4-5.9-56d-120/240V-Nf-400W-AB-L21	
6000	8000	200	50	AB	RAMP-R-6.0-8.0-50d-120/240V-Nf-200W-AB-L21	
6000	18000	20	45	AB	RAMP-R-6.0-18.0-45d-120/240V-Sf-20W-AB-L21	
7000	10000	5	50	AB	RAMP-R-7.0-10.0-50d-120/240V-Nf-5W-AB-L21	
9100	9600	400	56	AB	RAMP-R-9.1-9.6-56d-120/240V-Nf-400W-AB-L21	3RU
10000	18000	10	40	AB	RAMP-R-10.0-18.0-40d-120/240V-Nf-10W-AB-L21	
10500	12750	200	53	AB	RAMP-R-10.5-12.75-53d-120/240V-Nf-200W-AB-L21	
13750	14500	100	50	AB	RAMP-R-13.75-14.5-50d-120/240V-Nf-100W-AB-L21	
14400	14660	100	50	AB	RAMP-R-14.40-14.66-50d-120/240V-Nf-100W-AB-L21	
14660	14830	100	50	AB	RAMP-R-14.66-14.83-50d-120/240V-Nf-100W-AB-L21	