

C-BAND RACK MOUNT SOLID STATE POWER AMPLIFIER



SATELLITE COMMUNICATIONS

STACK UP ON LINEAR POWER

Mitec, a global provider of RF components and systems to telecom and satcom markets, is cranking up the power.

Choose one of our high power c-band rack-mount and you'll receive a value priced solution, when you need it, where you need it, with everything you need. The fact is Mitec has been building and supporting carrier-grade solutions since 1973. Fast delivery, full documentation, immediate product support, engineered solutions—that's Mitec.

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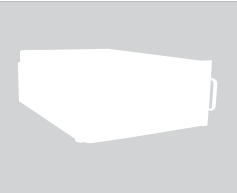


HIGH POWER C-BAND RACK-MOUNT SSPAS

C BAND R-M SSPA

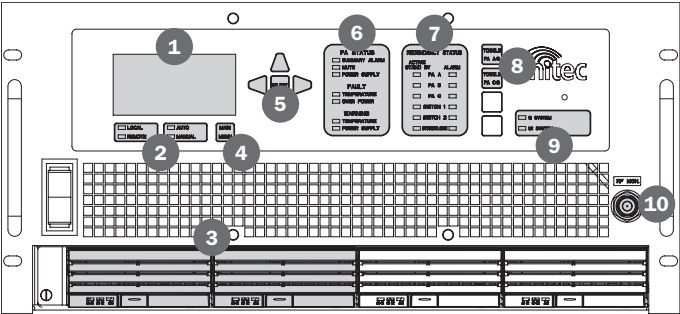
Mitec's products have more than a quarter century of proven field experience, demonstrating their unmatched dependability and reliability day after day. This level of dependability can be found in our line of rack-mount solid-state power amplifiers (SSPAs). Uniquely designed to be a high quality, but cost-effective solution for the satellite communications market, this line of high power rack-mount SSPAs sets the standard for the satellite industry.

The Mitec series of high power Rack-mount SSPAs is designed for use primarily in satellite communications applications.

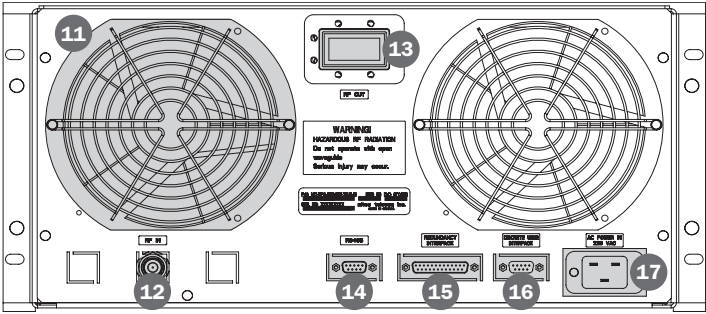


C BAND R-M SSPA

The standard operating frequency band is 5.850 to 6.425 GHz, and other frequency ranges (6.400 – 6.700 GHz, 6.700 – 7.000GHz and 5.850 – 6.725 GHz) are also available as options.



(Front Panel)



(Rear Panel)

ITEM	DESCRIPTION
1	VFD Display Screen
2	Mode selection push button and LED display
3	Power Supply Modules
4	MAIN MENU push button control
5	Menu navigation and select push buttons
6	PA status LED display
7	Redundancy Status LED display
8	PA Toggle push button controls
9	System configuration LED display
10	RF Monitor Port

ITEM	DESCRIPTION
11	Cooling Fan
12	RF IN
13	CPRG137 RF OUT
14	9-pin male RS-485 D-subminiature connector
15	25-pin female Redundancy Interface D-subminiature connector
16	9-pin female Discrete User Interface D-subminiature connector
17	IEC 60320 type C20 220VAC Power IN Connector

KEY FEATURES



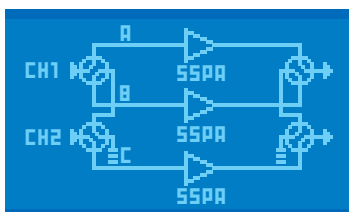
- Light weight and compact
- 1:1 and 1:2 Built-in Redundant Operations.
No additional controller needed for 1:1 and 1:2 redundant systems
- Flexible system configuration, various RF power levels and up-converters (optional) available in the same package size
- Extensive user-settable system control available from the front panel display including redundancy telemetry, alarm log, gain and power alarm threshold setting
- RF Sample Port
- Full compliment of monitor and control functions
- Remote control available through Analog and Serial Interface ports
- High thermal dissipation efficiency resulting in "Best in Class" MTBF
- Over temperature shutdown
- System reverts to last state after power on
- Field hot-swappable modular power supply solution (Optional redundant P/S configuration)
- User configurable RF overdrive alarm
- Monitoring of RF forward power

OPTIONS

- RF operating frequency
- RF Monitor for input power
- Monitoring of RF reflected power
- 48 VDC input power options (for 60 W, 100 W and 125 W SSPAs)
- Command-line or Windows™-based serial control
- Extended Warranty

C BAND R-M SSPA DISPLAY INFORMATION

SCHEMATIC



SSPA MONITOR

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SSPA MONITOR
TEMP:      37.1 C
POWER:     36.0 DBM
GAIN:      74.0 DB
MUTE:      UNMUTED
PUSH SELECT TO TOGGLE MUTE
    
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SYSTEM ALARM

```

SYSTEM ALARM
SSPA:  A      B      C
POWER: 0%     0%     0%
SW1 COHH: 0%   0%   0%
SW1 COHH: 0%   0%   0%
PUSH SELECT TO TOGGLE MUTE
    
```

C BAND R-M SSPA SPECIFICATIONS

TECHNICAL SPECIFICATIONS

Frequency range	5.850 - 6.425 GHz (other options available)
Gain at rated power	75 dB nominal
Max. input power without damage	0 dBm
Gain flatness over full band	+/- 1 dB max
Gain slope	+/- 0.3 dB /40 MHz
Gain variation over temperature	+/- 1 dB
Gain adjustment range /Step size	20 dB / 0.2 dB
Input return loss	-18 dB max
Output return loss	-18 dB max.
Noise Figure	10 dB at maximum gain setup
Spurious at P1dB	-65 dBc max.
Harmonics at P1dB	-55 dBc max
AM/PM conversion	2.0 deg./dB max. @P1dB
Third order IMD (two equal tones 5Mhz apart)	-26 dBc max @ 3 dB total back-off from P1dB
Group delay:	Linear
	Parabolic
	Ripple

POWER REQUIREMENTS

AC input voltage	90-260 VAC power factor corrected (other options available) 220 VAC only for 200W or higher
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MECHANICAL CHARACTERISTICS

Size*:	Enclosure	5U (H) x 19 in rack mount (W) x 28 in (D)
Interfaces:	RF input	N-type Female
	RF output	CPR 137
	RF output sample	N Female
	Discrete port	DB-9
	Series port (RS 232/RS 485)	DB-9
	Redundant port	DB-25

ENVIRONMENTAL CONDITIONS

Operating Temperature	0 - 50 °C
Storage	-40 - +85 °C
Humidity	95% non-condensing
Altitude	10,000 ft (3000m) max. (Derate 2 °C per 1000ft)

ORDERING INFORMATION

MODEL #	OUTPUT POWER @ PSAT NOM. (WATTS)	OUTPUT POWER @ P1dB min. (dBm)	SIZE*	POWER COMSUMPTION (WATTS)
WPA-596450-75-IS-10	125	50	5U	800
WPA-596451-75-IS-10	150	51	5U	900
WPA-596452-75-IS-10	200	52	5U	1000
WPA-596453-75-IS-10	250	53	5U	1100
WPA-596454-75-IS-10	300	54	5U	1800
WPA-596455-75-IS-10	400	55	5U	2000
WPA-596456-75-IS-10	500	56	5U	2200

*U = 1.75 Inches

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