

C-Band, Power Amplifier

SSPA- 50-200 Watts, 1+1 Redundancy



SSPA Advantages

- ❖ Available with integral AC power supply or separate DC power supply.
- ❖ NMS-friendly interfaces enable remote management of your earth station RF.
- ❖ Embedded web pages provide management for networks using any web browser.
- ❖ AGC or ALC circuits hold gain or output level constant.
- ❖ 20 dB User-adjustable gain in 0.1 dB steps preserves modem dynamic range.
- ❖ 1+1 switching logic and drivers built into the SSPA eliminate expensive external switching controller.
- ❖ Output sample port included with 100W - 200W units.

Advanced user interfaces:

- ❖ TCP/IP HTTP with embedded web pages.
- ❖ SNMP
- ❖ TELNET through TCP/IP
- ❖ RS232/485 serial port.
- ❖ Handheld terminal

Intelligent SSPA offers significant benefits:

- ❖ Low terminal cost
- ❖ Simple design and installation
- ❖ Superior RF performance
- ❖ Simplified 1+1 configuration

New interfaces connect you to the **Intelligent SSPA's** extensive M&C facilities for network management or local access. This powerful new M&C enables:

- ❖ **Trouble free commissioning** with easy, point-and-click installation/configuration
- ❖ Continuous **verification** of performance with time-stamped alarm history
- ❖ Simplified **troubleshooting** of terminal faults

Intelligent SSPA comes with a complete set of diagnostic tools including:

- ❖ Input voltage and current monitoring
- ❖ Transmit input level detector
- ❖ Transmit RF output level detector
- ❖ User configurable thresholds and alarms

Unique in the **Intelligent SSPA** are internal AGC and ALC functions to satisfy demanding applications with stringent specifications.

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code-t5

Specifications	
RF Input/Output	
Frequency range	
Band 1 Std C-Band	5850 to 6425 MHz
Band 2 Palapa/ST-1	6425 to 6725 MHz
Band 3 Insat	6725 to 7025 MHz
Band 4 Ext. C-Band	5850 to 6650 MHz
Band 5 Full C-Band	5850 to 6725 MHz
Output Power (P1dB)	
50 W	+47 dBm min
60 W	+47.8 dBm min
80 W	+49 dBm min
100 W	+50 dBm min
125 W	+51 dBm min
150 W	+51.8 dBm min
175 W	+52.4 dBm min
200 W	+53 dBm min
output power in bands 4 & 5 is reduced by 0.5 dB.	
Gain, Linear, @ minimum attenuation	
50 W	68-73 dB
60 W	69-74 dB
80 W	70-75 dB
100 W	71-76 dB
125 W	72-77 dB
150 W	73-78 dB
175 W	73-78 dB
200 W	74-79 dB
Gain Flatness	
Full band	3 dB p-p max
Gain Slope	
	+ 0.5 dB max, 40 MHz
Gain Stability, over temperature	
Open Loop	3 dB p-p max
AGC Mode	1 dB p-p max
Output Level Stability, over temperature	
ALC Mode	1 dB p-p max
Gain Control	
	Typ 20 dB, 0.1 dB steps
Input VSWR	
	1.3:1 max
Output VSWR	
	1.3:1 max
Noise Figure	
	10 dB typ. @ max gain
Max input power w/o damage	
	+ 10 dBm
Input Power Detector Range	
	-25 dBm to -5 dBm
Output Power Detector Range	
	Rated power to -20 dB
Output Power Sample	
	(100 W to 200 W only) -40 dBc
Spurious	
	-65 dBc max @ rated P1dB
Harmonics	
	-50 dBc max @ rated P1dB

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Specifications		
Noise Output	TX Band	RX Band
	-85 dBm/Hz	-145 dBm/Hz
Two Tone	Intermodulation -27 dBc max@3 dB total BO	
AM to PM Conversion	3.0 deg/dB @ rated P1dB	
Group Delay/40 MHz		
Linear	+ 0.03 ns/MHz	
Parabolic	+ 0.003 ns/MHz ²	
Ripple	1.0 ns p-p	
Power Requirements	DC	AC
Voltage	+48 VDC	100 to 240 VAC
Power Consumption		
50 W	360 W	400 VA
60 W	432 W	490 VA
80 W	552 W	600 VA
100 W	700 W	800 VA
125 W	800 W	900 VA
150 W	1056 W	1200 VA
175 W	1100 W	1250 VA
200 W	1150 W	1300 VA
Monitor and Control		
FSK (multiplexed on TX IFL), RS232/485		
Hand-held Terminal, TCP / IP (HTTP, Telnet, SNMP)		
Interfaces		
RF input	Type N(f), 50 Ohms	
RF Output	CPR137G	
Output Sample	Type N(f), 50 Ohms	
M&C	MS3112E-14-19S	
AC	Amphenol C016 20C003 100 12	
DC	Amphenol ACS02E14S-6P	
Environmental		
Operating temperature	-40oC to +55oC	
Relative humidity	100% condensing	
Altitude	10,000 ft., (3,000m) ASL	
Mechanical	DC powered	AC powered
50 W	12.2x7.2x6.2 in. 18 lbs	12.2x7.2x6.5 in. 19 lbs
60 W - 80 W	12.2x7.2x6.7 in. 18.5 lbs	12.2x7.2x7.0 in. 19.5 lbs
100 W - 200 W	19.5x10.0x7.8 in. 32 lbs	19.5x10.0x7.8 in. 33 lbs