

Intelligent SSPA Advantages

NMS-friendly interfaces enable remote management of your earth station RF.

Embedded web pages provide management for small networks using any web browser.

AGC or ALC circuits hold gain or output level constant.

20dB User-adjustable gain in 0.1 dB steps preserves modem dynamic range.

Advanced customer interfaces:

- TCP/IP HTTP with embedded web pages.
- SNMP
- TELNET through TCP/IP
- FSK through TX IFL cable.
- RS232/485 serial port.
- Handheld terminal

1+1 switching logic and drivers built into the SSPA eliminate expensive external switching controller.

Output sample port included as standard on selected units.



The revolutionary **Terrasat Intelligent SSPA** has advanced features to take your network to new heights.

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 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
- Alarm history

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

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C-Band Intelligent SSPA Specifications

RF Input/Output	Frequency range		Spurious	-65 dBc max @ rated P1dB
Band 1 Std	5.850 to 6.425 GHz		Harmonics	-50 dBc max @ rated P1dB
Band 2 Palapa	6.425 to 6.725 GHz		Noise Output	TX Band RX Band
Band 3 Insat	6.725 to 7.025 GHz			-80 dBW/4kHz -150 dBW/4kHz
Band 4 Ext C	5.850 to 6.650 GHz		Two Tone Intermodulation	-25 dBc max@3dB total BO
Band 5 Full C	5.850 to 6.725 GHz		AM to PM Conversion	3.0 deg/dB @ rated P1dB
Output Power (P1dB)	Bands 1-4	Band 5	Group Delay/40MHz	
50W	47 dBm min	46.5dBm min	Linear	± 0.03 ns/MHz
60W	47.8 dBm min	47.3dBm min	Parabolic	± 0.003 ns/MHz ²
80W	49 dBm min	48.5dBm min	Ripple	1.0 ns p-p
100W	50 dBm min	49.5 dBm min	Power Requirements	40 to 60 VDC, Input
125W	51dBm min	50.5 dBm min	Output Power	Consumption
150W	51.8dBm min	51.3 dBm min	50W	350W
175W	52.4dBm min	51.9 dBm min	60W	425W
200W	53dBm min	52.5 dBm min	80W	520W
Saturated output power, nominal	0.5 dB above P1dB		100W	650W
Gain, Linear, @ minimum attenuation			125W	800W
50W	68-73 dB		150W	980W
60W	69-74 dB		175W	1050W
80W	70-75 dB		200W	1100W
100W	71-76 dB			
125W	72-77 dB			
150W	73-78 dB			
175W	73-78 dB			
200W	74-79 dB			
Gain Flatness	Bands 1-3	Bands 4-5	* AC power optional with external power supplies	
Full band	2dB p-p max	3dB p-p max	Monitor and Control	
Gain Slope	± 0.5 dB max, 40 MHz		FSK (multiplexed on TX IFL)	
Gain Stability, over temperature			RS232/485	
Open Loop	3 dB p-p max		Handheld Terminal	
AGC Mode	1 dB p-p max		TCP / IP, UDP	Telnet, HTTP, SNMP
Output Level Stability, over temperature			Interfaces	
ALC Mode	1 dB p-p max		RF input	Type N(f), 50 Ohms
Gain Control	Typ 20 dB, 0.1 dB steps		RF output	Waveguide, WR137G
Input VSWR	1.3:1 max		Output Sample	Type N(f), 50 Ohms
Output VSWR	1.3:1 max		M&C	MS3112E-14-19S
Noise Figure	10 dB typ. @ max gain		Environmental	
Max input power w/o damage	+ 10 dBm		Operating temperature	-40°C to +55°C
Input Power Detector Range	-25dBm to -5dBm		Storage temperature	-50°C to +85°C
Output Power Detector Range	Rated power to -20 dB		Relative humidity	100% condensing
Output Power Sample	-40 dBc (N/A on small package)		Altitude	10,000 ft., (3,000m) ASL
			Mechanical	
			Std Package	18"(L)x10"(W)x7.5"(H) 30 lbs
			(100-200W)	460mm x 254mm x 190mm, 14kg.
			Compact Package	12.2"(L)x7.2"(W)x7"(H) 17 lbs
			(50W-80W)	310mm x 183mm x 176mm, 7.7kg.

Specifications are subject to change without notice



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