



# Broadband High Power Amplifier Module (SSPA)

Version.1.0\_2025.10.13

## 0.4-2.5GHz/120Watt/Module

Model Number: XF1200042G5

The model XF1200042G5 is a multi-octave high power amplifier operating between 0.4 GHz and 2.5GHz and offering a wide dynamic Range with 120 Watts typical saturated power. The employment of gallium nitride (GaN) and chip-and-wire technology in manufacturing ensures this module state-of-the-art power performance with excellent power-to-volume ratio. It is ideal for jamming, EMC, test and measurement applications.

### FEATURES:

- Small Size and light weight
- Instantaneous ultra-broadband
- 50 Ohms input and Output matched
- Built-in control and protection circuits

### ELECTRICAL SPECIFICATIONS @ +28.0VDC, 25°C, 50Ω

Parameter	Symbol	Minimum	Typical	Maximum	Units
Operating Frequency	BW	400		2500	MHz
RF Output Power(CW) 400~500MHz	P <sub>SAT</sub>	100	120		Watt
RF Output Power(CW) 500~2500MHz	P <sub>SAT</sub>	120			Watt
Power Gain	Gp	50			dB
Power Gain Flatness	Δ Gp		±2.0		dB
Input Return Loss	S <sub>11</sub>			-10	dB
Harmonics @100W	H		-10		dBc
Spurious Signals	Spur		-60		dBc
In/Output Impedance			50		Ω
Operating Voltage	V <sub>DC</sub>	26	28	32	Volt
DC Current @120W	I <sub>DD</sub>		18		Amp
Switching Time @1kHz TTL	T <sub>on/off</sub>		1		uS

### MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	200x110x25	mm	Maximum
Weight	2 [4.4]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	N, Female		
DC Interface Connector	Hybrid, D-Sub 7-Pin, Male		
Cooling	External Heatsink Required (Not Supplied)		

### ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Minimum	Typical	Maximum	Units	Notes
Ambient Temperature	-10		60	°C	
Non-operating Temperature	-45		85	°C	Storage
Relative Humidity (non-condensing)			95	%	

### ABSOLUTE MAXIMUM RATING

Input RF drive level without damage	+5 dBm (Max)
Load VSWR @ POUT =50W	∞ @ all load phase & amplitude for duration of 3 minutes; 3:1 @ all load phase & amplitude continuous
Over Temperature	100°C @ heatsink [restored @ 80°C]



**X-FORCE DESIGN SOLUTION**  
 Singapore office: 10Ubi Crescent #04-100 Ubi TechPark, Singapore 408564  
 Vietnam office: #8, Viwaseen building, To Huu, Dai Mo, Ha Noi, Vietnam 100000  
 Email: willy.tran@xforcecorp.com website: https://xforcecorp.com/

# Broadband High Power Amplifier Module (SSPA)

Version.1.0\_2025.10.13

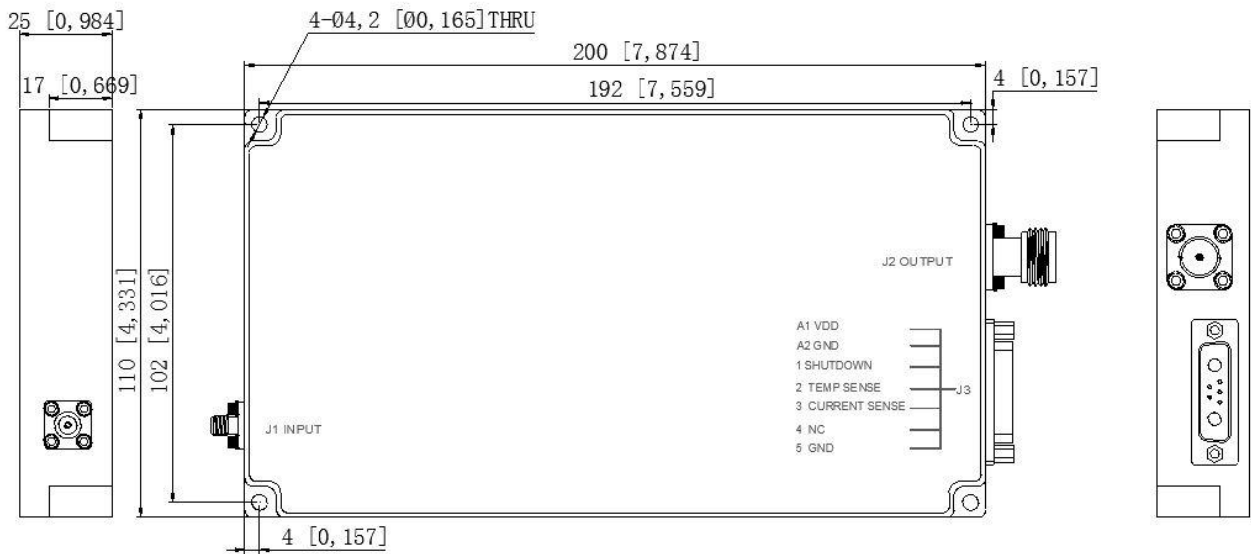
## 0.4-2.5GHz/100Watt/Module

Model Number: XF1200042G5

### DC INTERFACE CONNECTOR

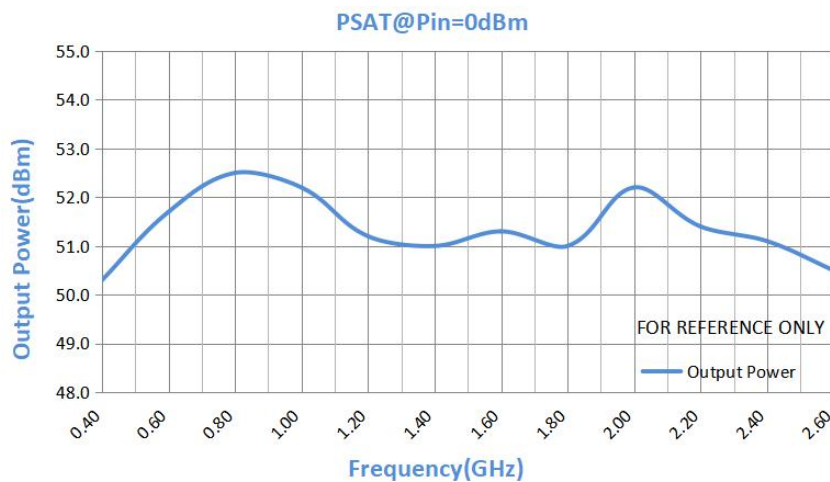
Pin #	Description	Specifications
A1	VDD	28V
A2	GND	Ground
1	SHUTDOWN	Amplifier Disable: TTL Logic High (3.3V-5V) (Internally Pulled-Low)
2	TEMP SENSE	Analog voltage relative to Module's Temperature @ 0.5V+10 mV/°C
3	CURRENT SENSE	Analog voltage relative to IDD @ 100mV per Ampere
4	NC	No electrical connection
5	GND	Ground

### OUTLINE DRAWING (All dimensions in mm [inch])



### TYPICAL PERFORMANCE PLOTS (FOR REFERENCE ONLY)(Please contact the sales for special requirements)

#### Output Power (Normal temp. +25±3°C)



**Note:** heatsink required.