



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)

2000-6000MHz/100Watt/Module

Model Number: XF1000206G

The model XF1000206G is a multi-octave high power amplifier operating between 2000 MHz and 6000 MHz and offering a wide dynamic Range with 100 Watts typical saturated power. The employment of advanced high power devices in manufacturing ensures this module exceptional power performance, long term reliability and high efficiency. It is ideal for multi octave broadband high power S/C Band applications.

FEATURES:

- Broadband & High power
- High Efficiency
- Small Size & Light Weight
- Built-in Control and Protection Circuits

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

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	2000		6000	MHz
RF Output Power@P _{IN} =-6dBm	P _{SAT}	80	100		Watt
Power Gain	G _p	55			dB
Power Gain Flatness	Δ G _p		±3		dB
Input Return Loss	S ₁₁			-10	dB
Harmonics @80W	H		-6		dBc
Spurious Signals @80W	Spur		-55		dBc
Switch On/Off@10-90% Time	TON/ OFF		2	5	μS
In/ Output Impedance	Impedance		50		Ω
Operating Voltage	VDC	26	28	30	Volt
DC Current @100 W	IDD		15		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	180x110x25	mm [inch]	Maximum
Weight	1.5	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	N, Female		
DC Interface Connector	D-Sub J30J-25ZKP, Male		
Cooling	External Heat sink Required (Not Supplied)		

ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Minimum	Typical	Maximum	Units	Notes
Operating 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	+10 dBm (Max)
Load VSWR @ P _{OUT} =50W	∞ @ all load phase & amplitude for duration of 1 minutes; 3:1 @ all load phase & amplitude continuous
Over Temperature	85°C @ heatsink [restored @ 60°C]



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DC INTERFACE CONNECTOR

Pin #	Description	Specifications
1-9	VDD	28VDC
10-19	GND	Ground
20	ENABLE	Amplifier Enable: TTL Logic High (3.3V) (Internally Pulled-Low)
21	CURRENT SENSE	Analog voltage relative to IDD @ 100mV per Ampere
23	TEMP SENSE	Analog voltage relative to Module's Temperature @ 10mV/°C
22\24\25	NC	No electrical connection

OUTLINE DRAWING (All dimensions in mm [inch])

