

Narrowband High Power Amplifier Module (SSPA)

3.5-3.6GHz/200Watt/Module

Model Number: OC-NPA3.5-3.6K200W

The model OC-NPA3.5-3.6K200W is a narrowband high power amplifier operating between 3.5GHz and 3.6GHz and offering a wide dynamic Range with 200Watts typical saturated power. The employment of advanced high power devices in manufacturing ensures this module exceptional power performance, long term reliability and high efficiency.

FEATURES:

- Narrowband & High power;
- High Efficiency;
- Great Linearity;
- Small Size & Light Weight;
- Low Distortion

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

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	3.5		3.6	GHz
RF Output Power @Psat	Psat	150	200		Watt
Power Gain	Gp		53		dB
Power Gain Flatness	Δ Gp		±1.5		dB
Input Return Loss	S ₁₁			-10	dB
Harmonics @100W	H		-15		dBc
Spurious Signals	Spur		-55		dBc
Switch On/Off@10-90% Time	TON/OFF		2		μS
In/Output Impedance	Impedance		50		Ω
Operating Voltage	VDC	24	28	32	Volt
DC Current @200W	IDD		26		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	250x200x30[9.84x7.87x1.18]	mm [inch]	Maximum
Weight	3 [6.6]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	Type-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
Operating Temperature	-20		60	°C	
Non-operating Temperature	-25		65	°C	Storage
Relative Humidity (non-condensing)			95	%	

ABSOLUTE MAXIMUM RATING

Input RF drive level without damage	+5 dBm (Max)
Load VSWR @ POUT =100W	∞ @ 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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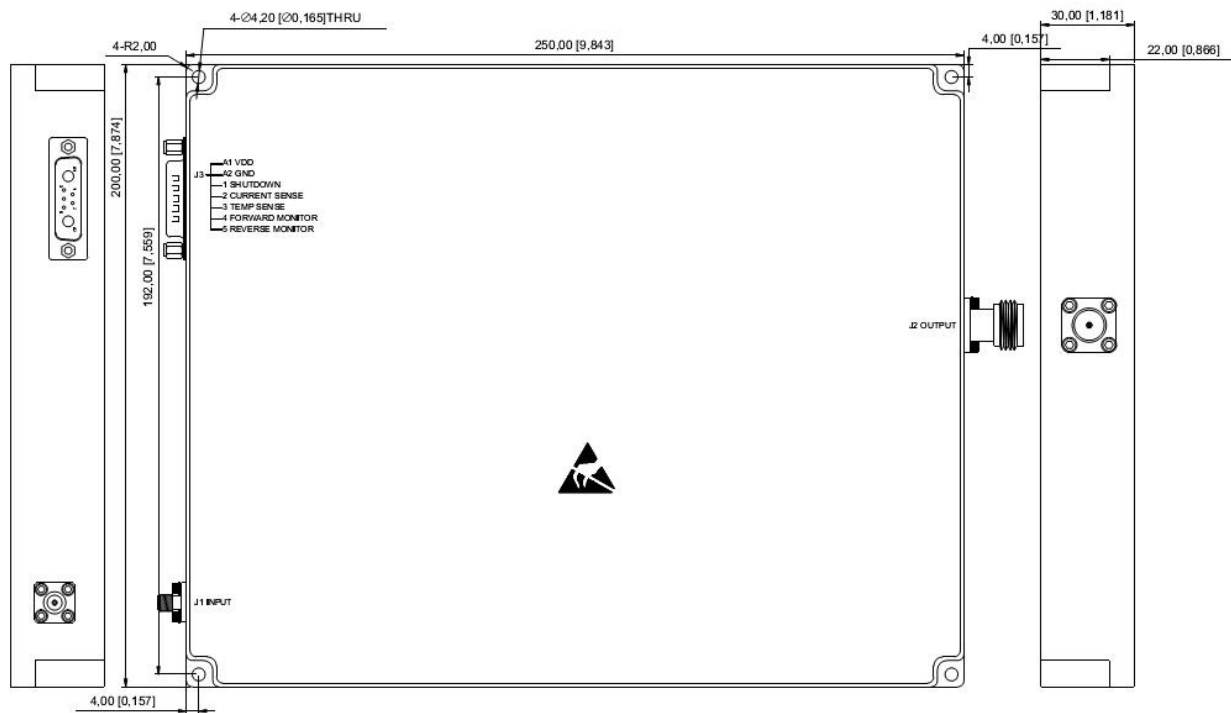
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DC INTERFACE CONNECTOR

Pin #	Description	Specifications
A1	VDD	28V _{DC}
A2	GND	Ground
1	SHUTDOWN	Amplifier Disable: TTL Logic High (3.3V) (Internally Pulled-Low)
2	CURRENT SENSE	Analog voltage relative to I _{DD} @ 100mV per Ampere
3	TEMP SENSE	Analog voltage relative to Module's Temperature @ 10 mV/°C
4	FORWARD MONITOR	Analog voltage relative to forward power level
5	REVERSE MONITOR	Analog voltage relative to reflected power level

OUTLINE DRAWING (All dimensions in mm [inch])



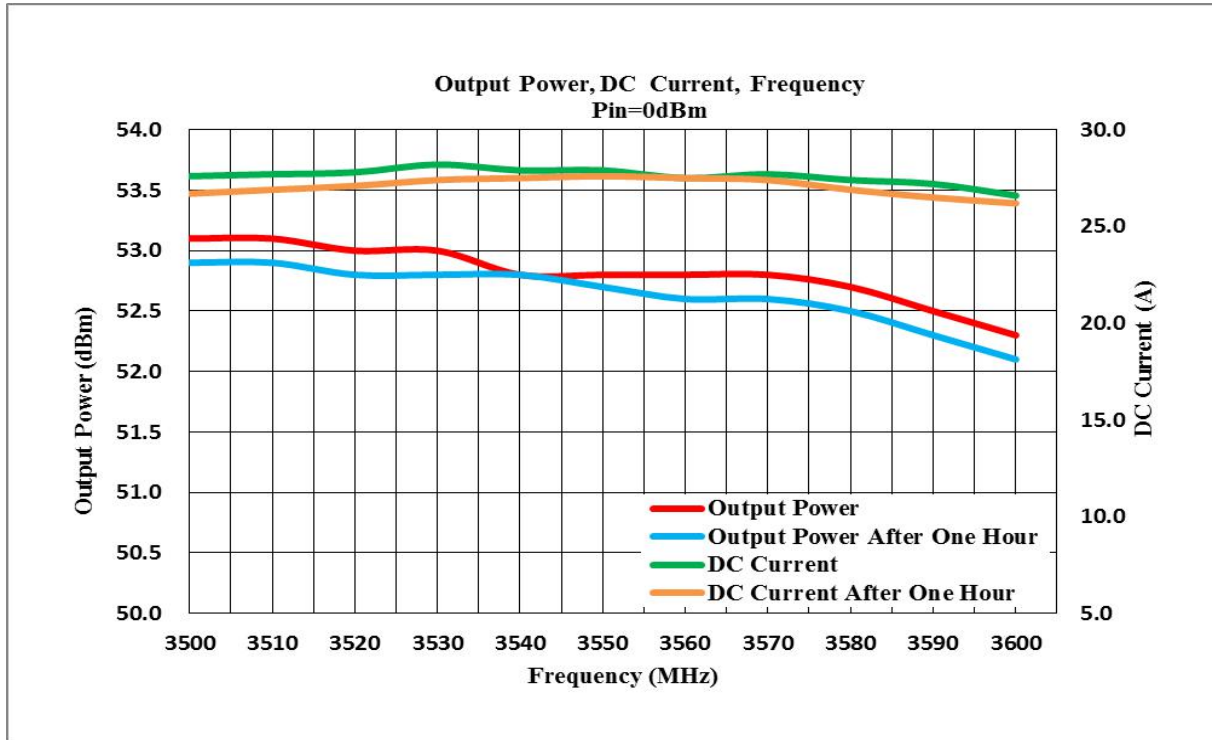
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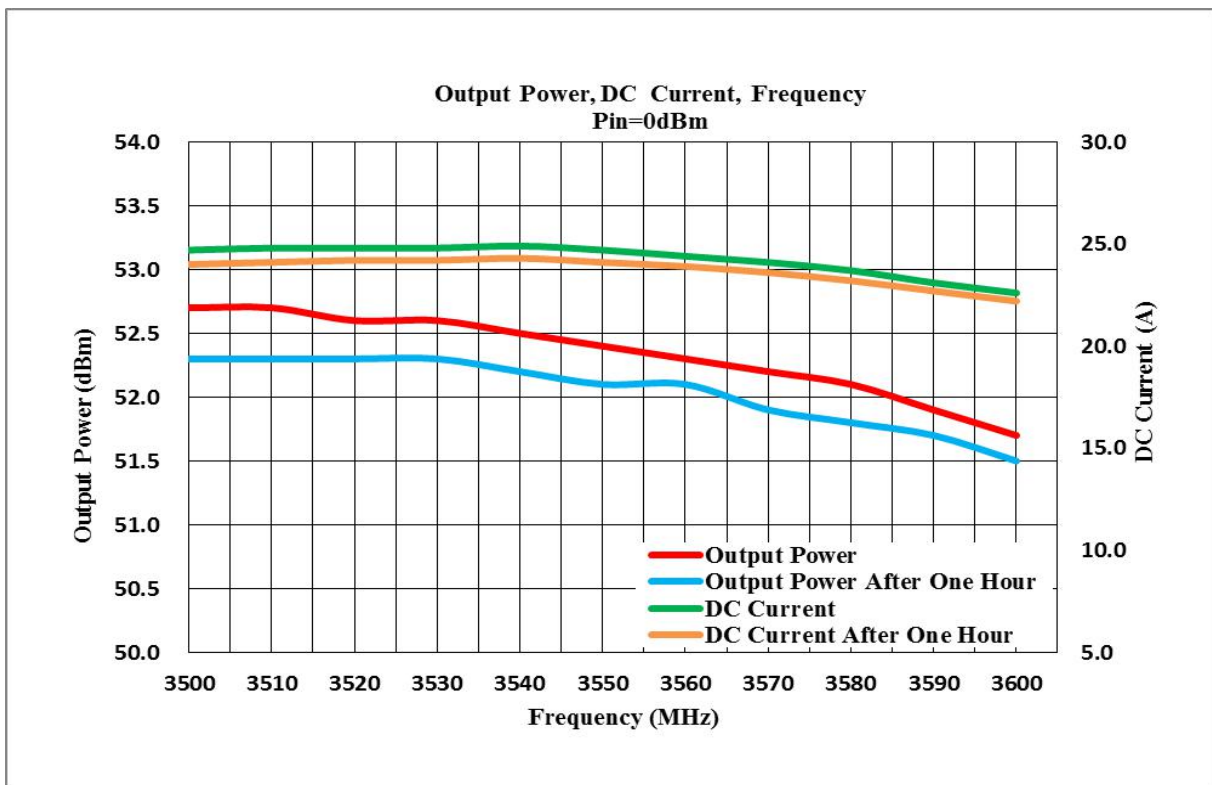
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TYPICAL PERFORMANCE PLOTS

Graph1: Output Power (Low temp. $-20\pm 3^{\circ}\text{C}$)



Graph2: Output Power (High temp. $+60\pm 3^{\circ}\text{C}$)

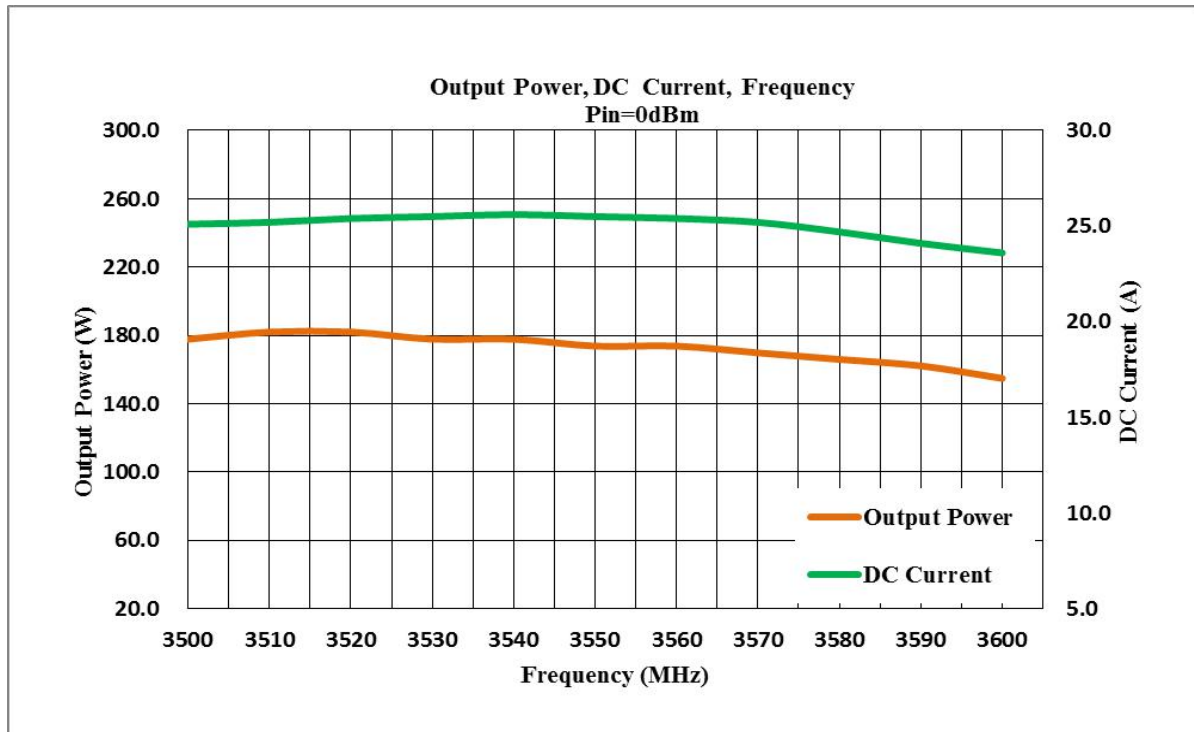


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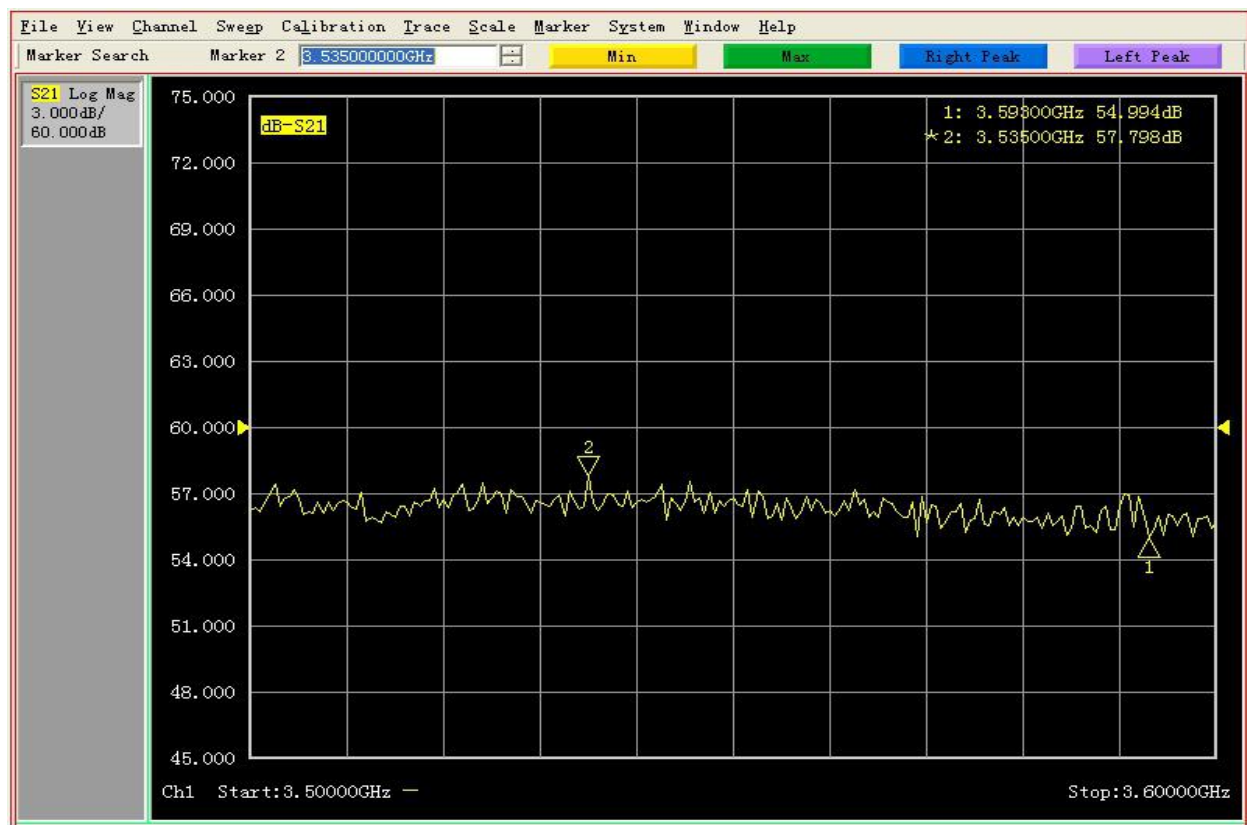
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Graph3: Output Power (Normal temp. $+25\pm 3^{\circ}\text{C}$)



Graph4: Power Gain:

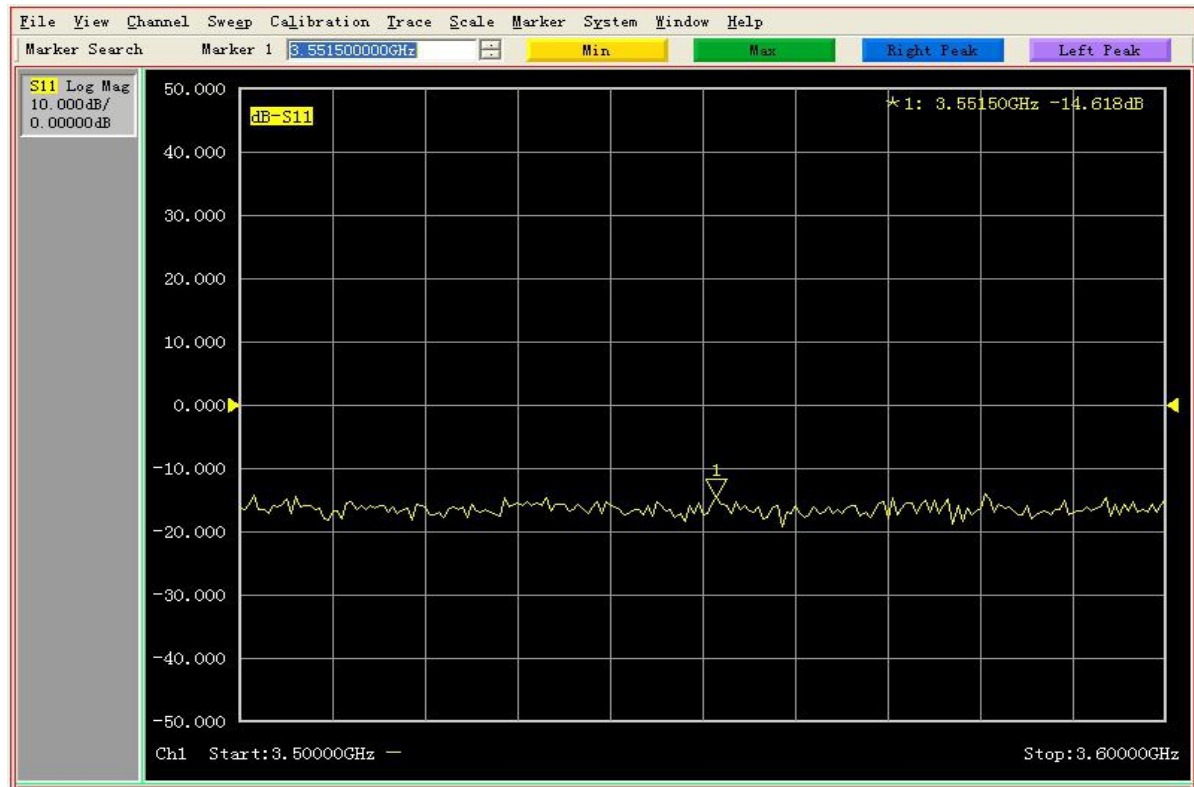


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Graph5:Input Return Loss:



Note: Adequate heatsink required.