

1180-1600MHz/100Watt/Module

Model Number: OC-PA1.18-1.6K100W

The Power Amplifier OC-PA1.18-1.6K100W is suitable for cellular GSM repeaters. This amplifier utilizes linear GaN power devices that provide excellent linearity and low distortions, high gain, and wide dynamic range. Exceptional performance, long term reliability, and high efficiency are achieved by employing advanced matching networks and combining techniques, EMI/RFI filters, machined housing, and qualified components. Our ISO9001 Quality Assurance Program assures consistent performance and the highest reliability

FEATURES:

- Broadband & High power
- High Efficiency
- Great Linearity
- Extraordinary Harmonic Control
- Smaller Size and Lighter Weight
- Low Distortion

ELECTRICAL SPECIFICATIONS @ +30.0VDC, 25°C, 50Ω

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	1180		1600	MHz
RF Output Power @ Pin=30dBm	Pout	70	100		Watt
Small Signal Gain	Gss		21		dB
Power Gain Flatness	Δ Gss		±1.5		dB
Input Return Loss	S11			-10	dB
Harmonics @70W	H		-15	-10	dBc
Spurious Signals	Spur		-60	-55	dBc
In/Output Impedance			50		Ω
Operating Voltage	VDC	28	30	32	Volt
DC Current @70W	IDD		7		Amp
Switching Time @1kHz TTL	Ton/off		2	5	μs

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	150x90x25 [5.9x3.54x0.98]	mm [inch]	Maximum
Weight	1.2 [2.6]	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	+35 dBm (Max)
Load VSWR @ POUT =70W	∞ @ all load phase & amplitude for duration of 1 minutes; 3:1 @ all load phase & amplitude continuous
Over Temperature	85°C @ heatsink [restored @ 60°C]

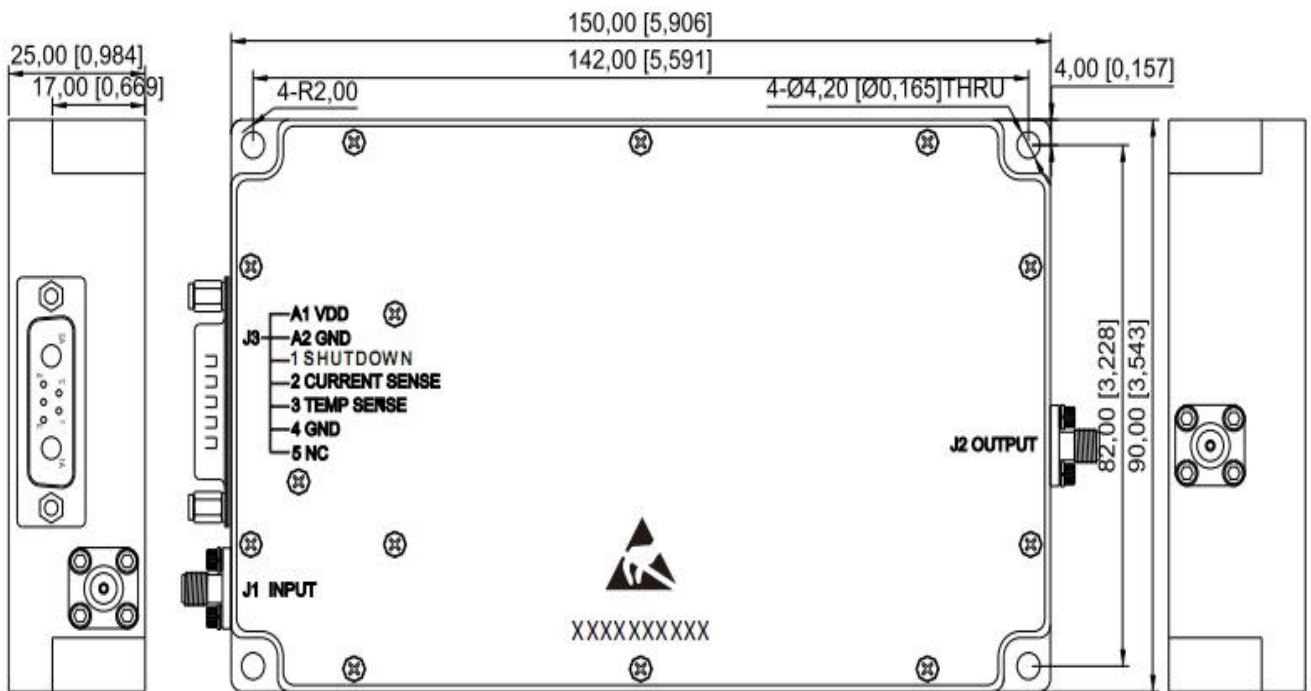
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DC INTERFACE CONNECTOR

Pin #	Description	Specifications
A1	VDD	30VDC
A2	GND	Ground
1	SHUTDOWN	Amplifier Enable: TTL Logic High (3.3V) (Internally Pulled-Low)
2	CURRENT SENSE	Analog voltage relative to IDD @ 100mV per Ampere
3	TEMP SENSE	Analog voltage relative to Module's Temperature @ 10 mV/°C
4	GND	Ground
5	NC	No electrical connection

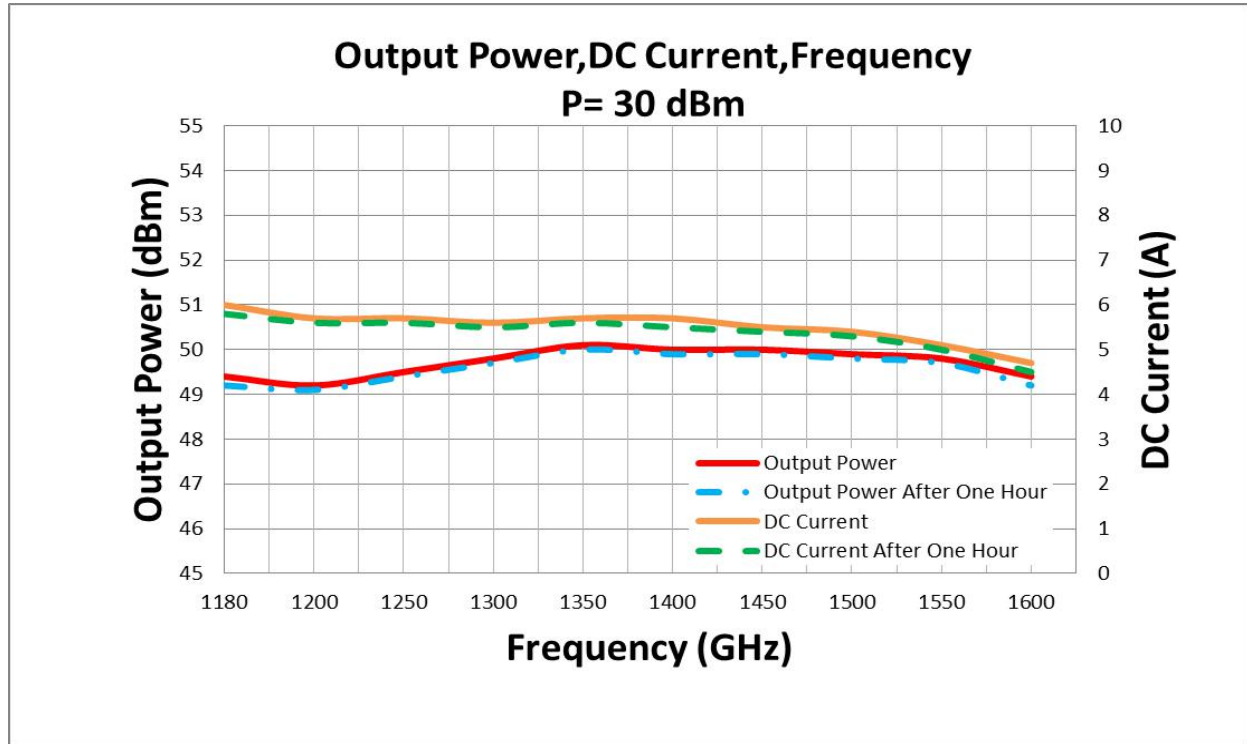
OUTLINE DRAWING (All dimensions in mm)



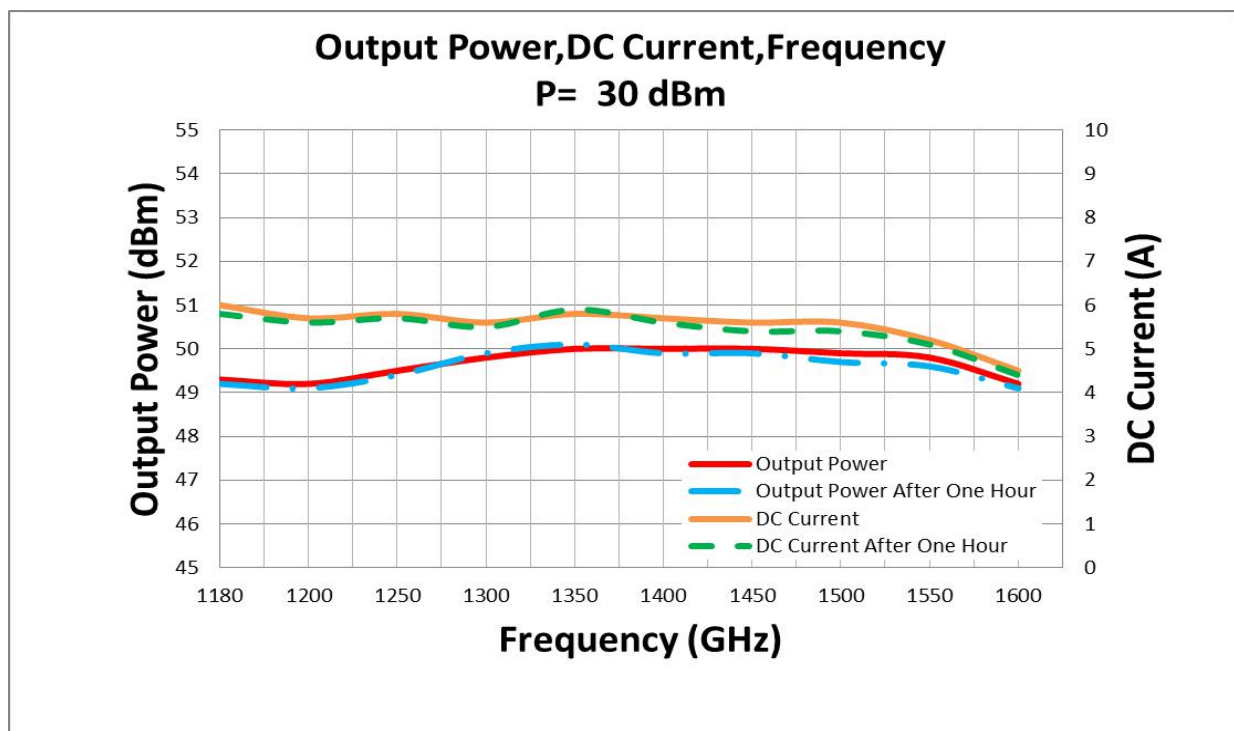
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Graph1: Output Power (Low temp. $-20\pm 3^{\circ}\text{C}$)



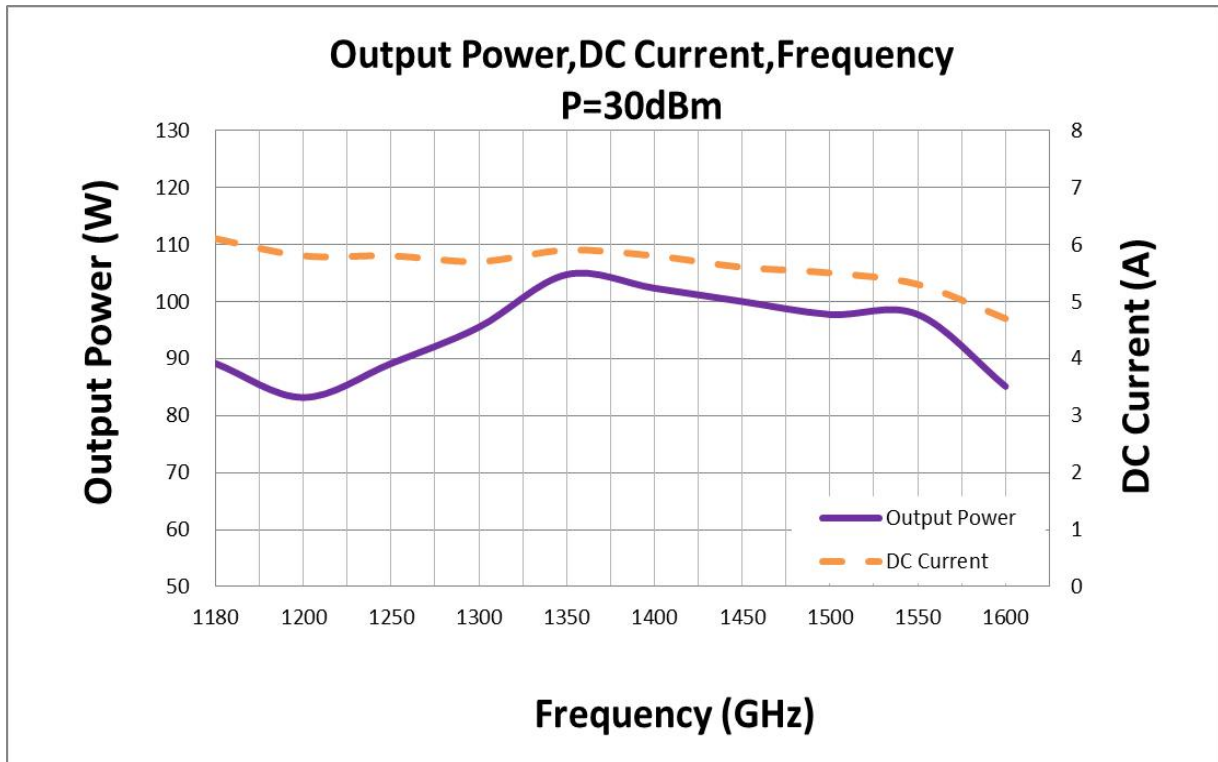
Graph2: Output Power (High temp. $+60\pm 3^{\circ}\text{C}$)



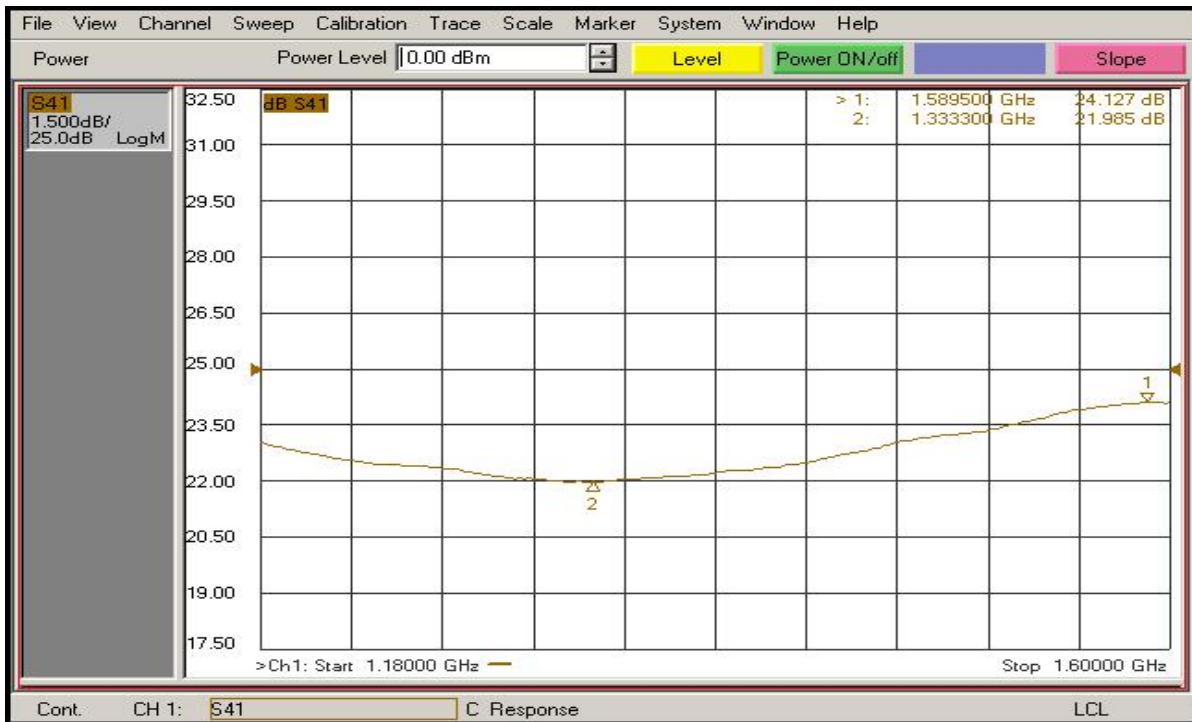
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Graph3: Output Power (Normal temp. +25±3°C)



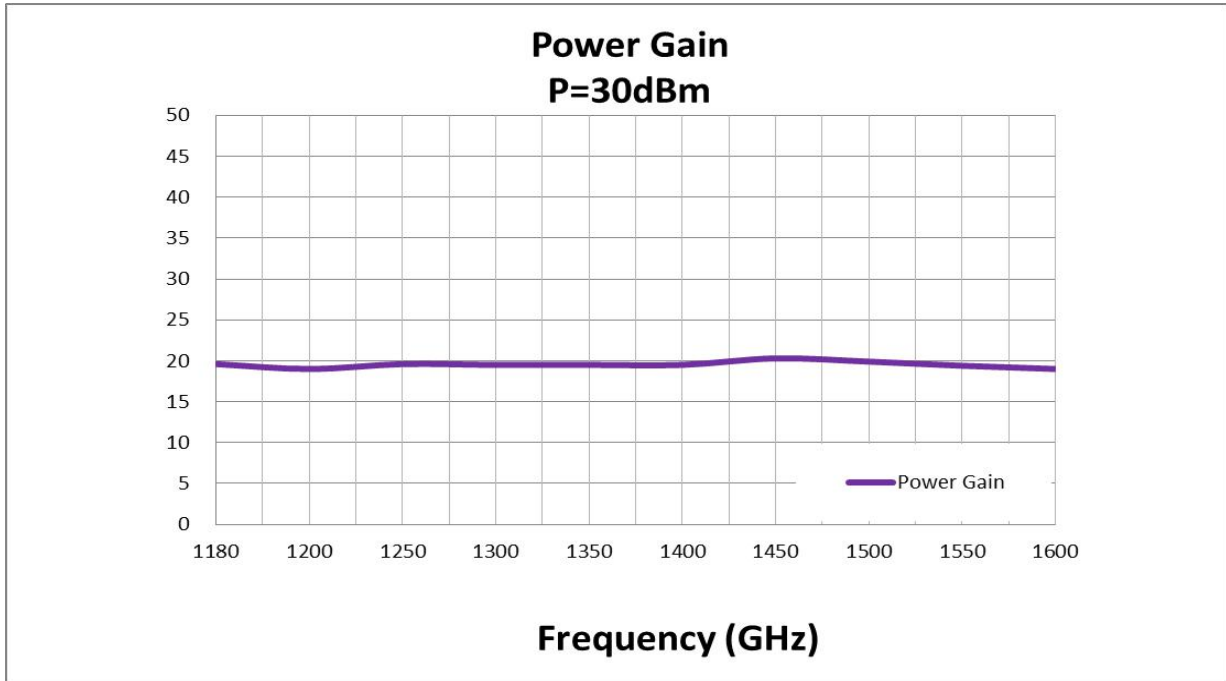
Small Signal Power Gain:



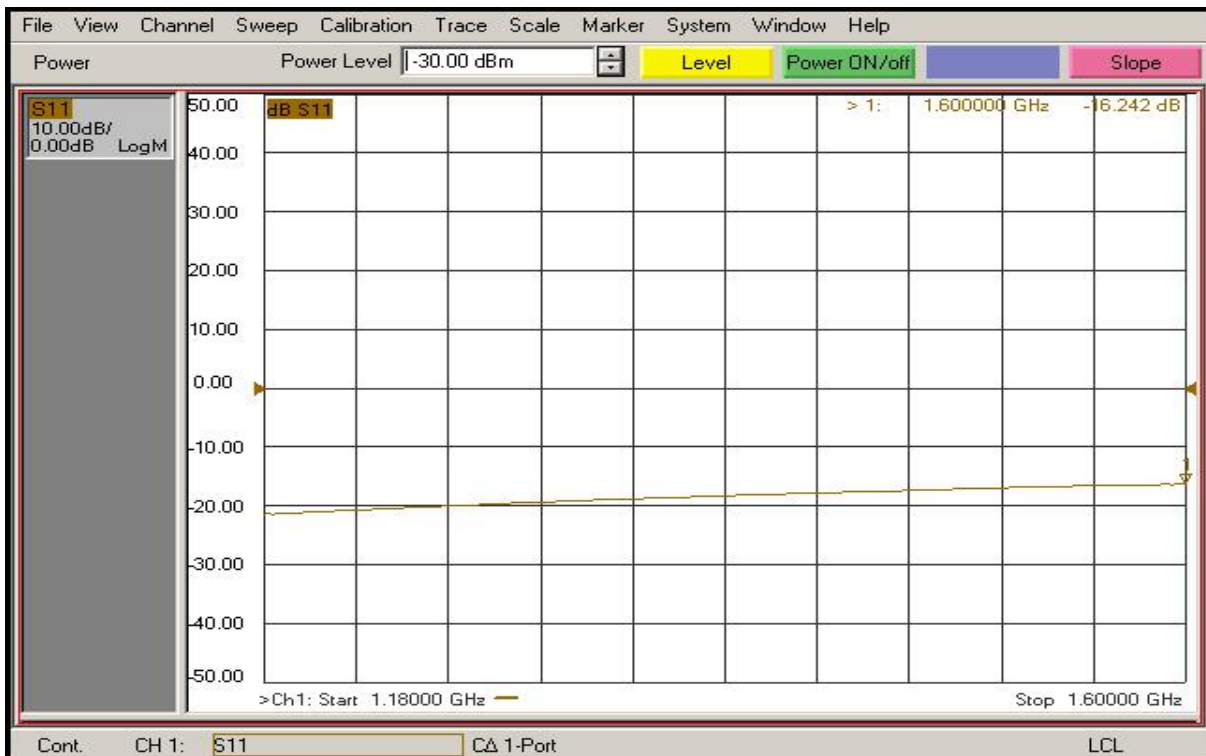
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Power Gain:



Input Return Loss:



Note: Adequate heatsink required.