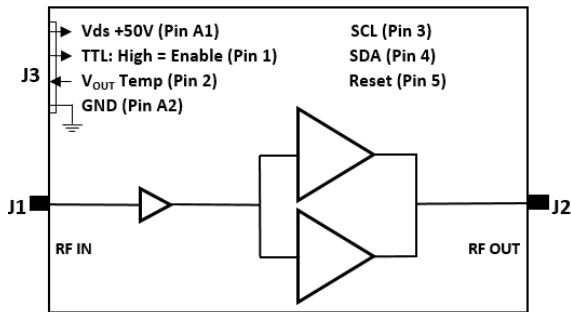


300 Watt X-Band Amplifier

FEATURES

- Frequency Range 8.7 – 9.7 GHz
- Power Gain 55 dB
- PAE 30 %
- GaN Technology

Block Diagram

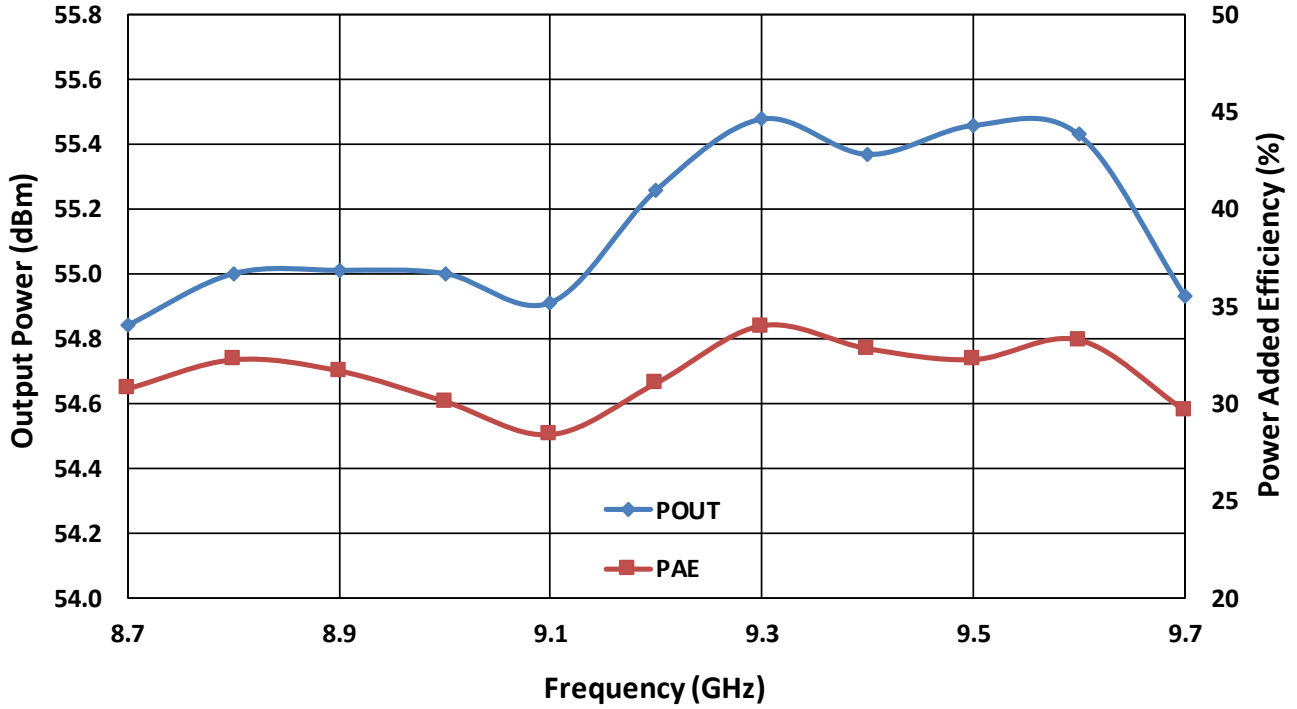


Electrical Characteristics and Mechanical Specifications

RF Characteristics ¹				
Parameter	Min.	Typ.	Max.	Units
Output Power	54.8	55		dBm
Power Gain	53.5	55.5		dB
Small Signal Gain		56		dB
Small Signal Gain Flatness			± 1.5	dB
PAE	27	30		%
DC Current			30	A
Drop		0.3		dB
Rise Time		60	100	ns
Fall time		60	100	ns
Enabled Response time			500	ns
Harmonic (2 nd)			-30	dBc
Spurious			-60	dBc
Input Return Loss		-14		dB
Output Return Loss		-14		dB
Absolute Maximum Ratings ¹				
Parameter	Rating			Units
Input Power	+30			dBm
DC Voltage	+48 to +55			V
DC Current	30			A
Operating Temperature (Base Plate)	-40 to +85			°C
Storage Temperature	-55 to +150			°C
Humidity	95			%
Mechanical Specifications				
Dimension	7.36 IN. L x 4.50 IN. W x 0.96 IN. H			
RF Input Connector (J1)	Super SMA (Replaceable)			
RF Output Connector (J2)	Super SMA (Replaceable)			
DC Connector (J3)	D-sub, Combo			
Pin A1	Supply Voltage = +50V			
Pin A2	Return (Ground)			
Pin 1	TTL Input: High = Enable			
Pin 2	V _{OUT} Temperature ²			
Pin 3	SCL (Serial Clock)			
Pin 4	SDA (Serial Data Link)			
Pin 5	Reset			
1. Test Conditions: P _{IN} ≈ 0 dBm, Pulse Width = 50 us, Duty Cycle = 5%, V _{ds} = +50 V (Typ.), Temperature = +25°C.				
2. V _{OUT} = (10mV/°C x Temp °C) + 500mV; V _{OUT} = 750mV at +25°C.				

Typical Performance

Output Power & PAE vs. Frequency ($P_{IN} = 0 \text{ dBm}$)



Outline Drawing (Dimensions are in Inches)

