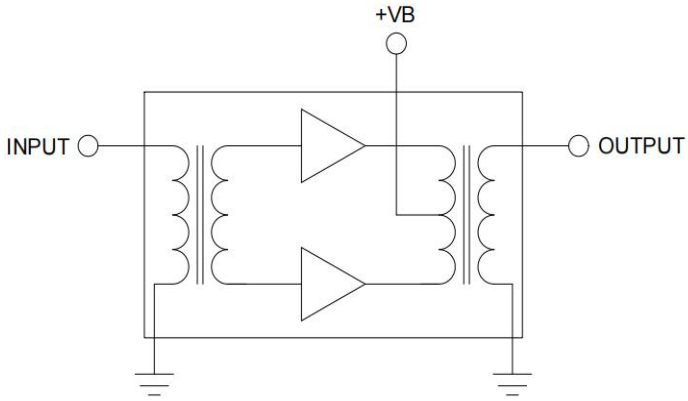
GaAs/GaN Push-Pull Module SMG1227

The SMG1227 is a Hybrid Push Pull amplifier module.The part employs GaAs dies and is operated from 50MHz to 1218MHz with supply voltage +24V(DC). It provides excellent linearity and superior return loss performance with low noise and optimal reliability.

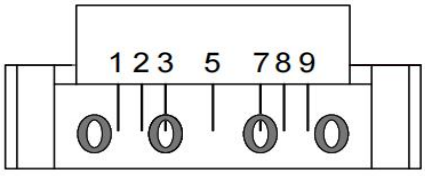
FEATURES

- Excellent Linearity
- Superior Return Loss Performance
- Extremely Low Distortion
- Optimal Reliability
- Low Noise
- Unconditionally Stable Under All Terminations
- Power gain @27dB
- 300mA Max. at 24VDC



OUTLINE

PIN CONFIGURATION



side view

Pin	Description
1	Input
5	$+V_B$
9	Output
2、3、7、8	GND

QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNITS
G_p	Power Gain	f=50 MHz	26	27.5	dB
I_{tot}	Total current consumption(DC)	V_B=24V	260	300	mA

LIMITING VALUES

In accordance with the Absolute Maximum Rating System

SYMBOL	PARAMETER	MIN	MAX	UNITS
V_i	RF input voltage	-	70	dBmV
T_{stg}	Storage temperature	-40	+100	℃
T_{mb}	Operating mounting base temperature	-30	+100	℃

CHARACTERISTICS

(Bandwidth 50 to 1218MHZ; Tmb =25℃, VB =24V, ZS =ZL =75Ω)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNIT	CONDITIONS
G_p	Power Gain	26	27	27.5	dB	f=50MHz
G_p	Power Gain	-	28	-	dB	f=870MHz
G_p	Power Gain	27.5	28.0	29.0	dB	f=1218MHz
SL	Slope cable equivalent	1.0	2.0	3.0	dB	f=50 to 1218 MHz
FL	Flatness of frequency response	-	-	±1.0	dB	f=50 to 1218 MHz
S_{11}&S_{22}	Input &Output Return Loss	-	-	-20	dB	f=50 to 320 MHz
S_{11}&S_{22}	Input&Output Return Loss	-	-	-19	dB	f=321 to 640 MHz
S_{11}&S_{22}	Input&Output Return Loss	-	-	-17	dB	f=641 to 1000 MHz
S_{11}&S_{22}	Input&Output Return Loss	-	-	-16	dB	f=1000 to 1218 MHz
CTB	Composite Triple Beat	-	-68	-63	dB	PAL99 channelsflat; Vo=43dBmV; CTB measured at 543.25 MHz; CSO measured at 544.5 MHz;
CSO	Composite Second Order distortion	-	-66	-61	dB	
Xmod	Cross Modulation	-	-67	-	dB	
V_o	Output Voltage	60	-	-	dBmV	d_{im}=-60dB
F	Noise Figure	-	4.5	5.0	dB	f=50 to 1218 MHz
Itot	Total Current Consumption	260	280	300	mA	V_B=+24V

The module normally operates at V_B=24 V(±0.5

MODULE DIMENSIONS