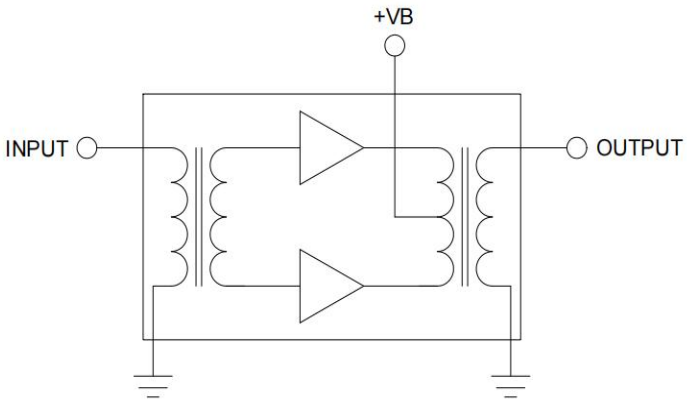
The SMG1225 is a Hybrid Push Pull amplifier module.The part employs GaAs dies and is operated from 47MHz to 1218MHz with supply voltage +24V(DC). It provides excellent linearity and superior return loss performance with low noise and optimal reliability.

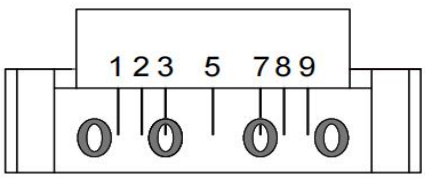
FEATURES

- Excellent Linearity
- Superior Return Loss Performance
- Extremely Low Distortion
- Optimal Reliability
- Low Noise
- Unconditionally Stable Under All Terminations
- Power gain @25dB
- 290mA 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	24.5	26	dB
I_{tot}	Total current consumption(DC)	V_B=24V	260	290	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 47 to 1218MHZ ; Tmb =25℃, VB =24V, ZS =ZL =75Ω)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNIT	CONDITIONS
G_P	power gain	24.5	25	26	dB	f =47MHz
G_P	power gain	-	27.5	-	dB	f =870MHz
G_P	power gain	27	27.5	28.5	dB	f =1218MHz
SL	slope cable equivalent	0.5	1.0	2.0	dB	f =47 to 1218 MHz
FL	flatness of frequency response	-	-	0.8	dB	f =47 to 1218 MHz
S_{11}&S_{22}	Input&output return loss	-	-	-20	dB	f =47 to 320 MHz
S_{11}&S_{22}	Input&output return loss	-	-	-19	dB	f =320 to 640 MHz
S_{11}&S_{22}	Input&output return loss	-	-	-17	dB	f =640 to 870 MHz
S_{11}&S_{22}	Input&output return loss	-	-	-16	dB	f =870 to 1000 MHz
S_{11}&S_{22}	Input&output return loss	-	-	-15	dB	f =1000 to 1218 MHz
CTB	composite triple beat	-	-68	-63	dB	Vo=44dBmV at 862MHz,flat,98 Analog channels
CSO	composite second order distortion	-	-66	-61	dB	
XMOD	X modulation	-	-67	-	dB	
CTB	composite triple beat	-	-68	-	dB	VO=44dBmV, 79 analog channels plus 75 digital channels (-6dB offset)
CSO	composite second order distortion	-	-75	-	dB	
XMOD	X modulation	-	-64	-	dB	
CIN		-	-65	-	dB	
F	noise figure	-	4.5	5.0	dB	f=47 to 1218 MHz
I_{tot}	total current consumption(DC)	260	270	290	mA	VB=+24V

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

MODULE DIMENSIONS