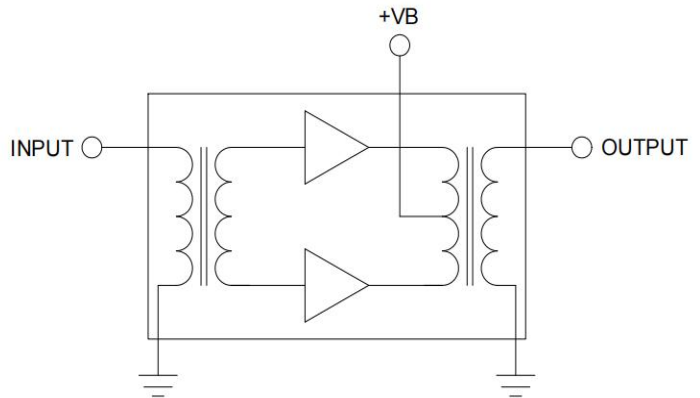




The SMG1227DG is a Hybrid amplifier module. The part employs GaAs dies and is operated from 40MHz to 1218MHz with supply voltage +24V(DC). It provides excellent linearity and superior return loss performance with low noise and optimal reliability.

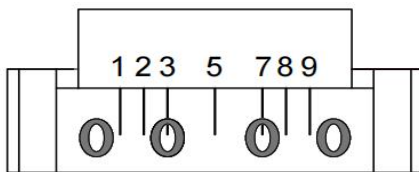
FEATURES

- Excellent Linearity
- Superior Return Loss Performance
- Extremely Low Distortion
- Optimal Reliability
- Low Noise
- Unconditionally Stable Under All Terminations
- Power gain @27dB
- 450mA 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	26.5	27.5	dB
I _{tot}	Total current consumption(DC)	V _B =24V	420	450	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	°C
T _{mb}	Operating mounting base temperature	-30	+100	°C

CHARACTERISTICS

(Bandwidth 40 to 1218MHz ; T_{mb} =25°C, V_B =24V, Z_S =Z_L =75Ω)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNIT	CONDITIONS
GP	power gain	26.5	27	27.5	dB	f =50MHz
GP	power gain	-	28	-	dB	f =870MHz
GP	power gain	27.0	28.5	30.0	dB	f =1218MHz
SL	slope cable equivalent	0.5	1.5	3.0	dB	f =40 to 1218MHz
FL	flatness of frequency response	-	-	0.8	dB	f =40 to 1218MHz
S11 & S22	Input & output return loss	-	-	-20	dB	f =47 to 320 MHz
S11 & S22	Input & output return loss	-	-	-19	dB	f =320 to 640 MHz
S11 & S22	Input & output return loss	-	-	-18	dB	f =640 to 870 MHz
S11 & S22	Input & output return loss	-	-	-17	dB	f =870 to 1218 MHz
CTB	composite triple beat	-	-66	-62	dB	Vo=48dBmV at 862MHz, flat, 98 Analog channels
CSO	composite second order distortion	-	-65	-62	dB	
XMOD	X modulation	-	-68	-	dB	
CTB	composite triple beat	-	-75	-	dB	VO=56.4dBmV at 1218MHz, 13.4dB extrapolated tilt 79 analog channels plus 75 digital channels (-6dB offset)
CSO	composite second order distortion	-	-79	-	dB	
XMOD	X modulation	-	-70	-	dB	
CIN		-	-66	-	dB	
F	noise figure	-	5.0	5.5	dB	f=50 to 1218 MHz
I _{tot}	total current consumption(DC)	420	440	450	mA	V _B =+24V

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

MODULE DIMENSIONS

