

### FEATURES

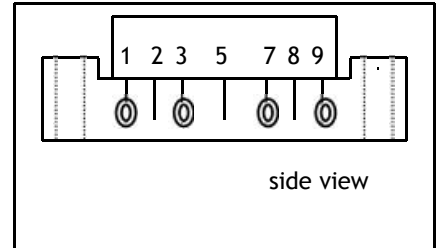
- GaAs active devices
- Power gain @25dB
- Low distortion
- Excellent linear gain
- Low noise figure
- High reliability
- Low cost

### DESCRIPTION

The SMG1225D is a GaAs hybrid power double amplifier module. The part employs GaAs dies and is operated from 50MHz to 1218MHz with supply voltage +24V( DC)

### OUTLINE

PIN CONFIGURATION



### Pin Description

Pin	Description
1	Input
5	+V <sub>B</sub>
9	Output
2、3、7、8	GND

### QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNITS
G <sub>p</sub>	Power Gain	f=50 MHz	24.5	26.5	dB
I <sub>tot</sub>	Total current consumption(DC)	V <sub>B</sub> =24V	420	460	mA

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### LIMITING VALUES

In accordance with the Absolute Maximum Rating System

SYMBOL	PARAMETER	MIN.	MAX.	UNITS
V <sub>i</sub>	RF input voltage	-	70	dBmV
V <sub>o</sub>	DC Supply over-voltage(5minutes)	-	30	V
T <sub>stg</sub>	Storage temperature	-40	+100	°C
T <sub>mb</sub>	Operating mounting base temperature	-30	+100	°C

### CHARACTERISTICS

(Bandwidth 50 to 1218MHz; T<sub>mb</sub>=25°C, V<sub>B</sub>=24V, Z<sub>S</sub>=Z<sub>L</sub>=75Ω)

SYMBOL	PARAMETER	UNIT	MIN.	TYP.	MAX	CONDITIONS
G <sub>p</sub>	Power Gain	dB	24.5	25	26.5	f=50MHZ
G <sub>p</sub>	Power Gain	dB	-	26	-	f=870MHZ
G <sub>p</sub>	Power Gain	dB	25.5	26.5	26.8	f=1218MHZ
SL	Slope cable equivalent	dB	0.5	1.0	2.0	f=50 to 1218 MHZ
FL	Flatness of frequency response	dB	-	-	0.8	f=50 to 1218 MHZ
S11 & S22	Input & Output Return Loss	dB	-	-	-20	f=50 to 320 MHZ
S11 & S22	Input & Output Return Loss	dB	-	-	-19	f=321 to 640 MHZ
S11 & S22	Input & Output Return Loss	dB	-	-	-17	f=641 to 870 MHZ
S11 & S22	Input & Output Return Loss	dB	-	-	-16	f=871 to 1000 MHZ
S11 & S22	Input & Output Return Loss	dB	-	-	-15	f=1001 to 1218 MHZ
CTB	Composite Triple Beat	dB	-	-66	-62	V <sub>o</sub> =48dBmV at 862MHz, flat, 98 Analog channels
CSO	Composite Second Order distortion	dB	-	-65	-62	
Xmod	Cross Modulation	dB	-	-68	-	
CTB	composite triple beat	dB	-	-75	-	V <sub>o</sub> =56.4dBmV at 1218MHz, 13.4dB extrapolated tilt 79 analog channels plus 75 digital channels (-6dB offset)
CSO	composite second order distortion	dB	-	-79	-	
XMOD	X modulation	dB	-	-70	-	
CIN		dB	-	-66	-	
F	Noise Figure	dB	-	5.0	5.5	f=50 to 1218 MHZ
I <sub>tot</sub>	Total Current Consumption	mA	420	440	460	V <sub>B</sub> =+24V

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The module normally operates at  $V_B=24\text{ V}(\pm 0.5)$ ,

### MODULE DIMENSIONS

