

### FEATURES

- GaAs active devices
- Power gain @27dB
- Low distortion
- Excellent linear gain
- Low noise figure
- High reliability
- Low cost

### DESCRIPTION

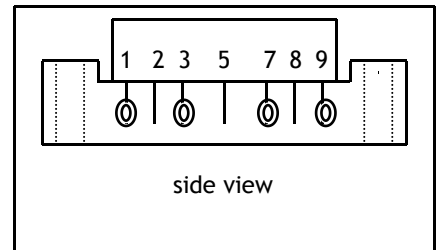
The SMG1227D is a GaAs hybrid power double amplifier module.

The part employs GaAs dies and is operated from 50MHz to

1218MHz with supply voltage +24V( DC)

### OUTLINE

PIN CONFIGURATION



### Pin Description

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	26.5	27.5	dB
I <sub>tot</sub>	Total current consumption(DC)	V <sub>B</sub> =24V	420	450	mA

### SANLAND TECHNOLOGY

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### LIMITING VALUES

In accordance with the Absolute Maximum Rating System

SYMBOL	PARAMETER	MIN.	MAX.	UNITS
$V_i$	RF input voltage	-	70	dBmV
$V_o$	DC Supply over-voltage(5minutes)	-	30	V
$T_{stg}$	Storage temperature	-40	+100	°C
$T_{mb}$	Operating mounting base temperature	-30	+100	°C

### CHARACTERISTICS

(Bandwidth 50 to 1218MHz;  $T_{mb}=25^{\circ}\text{C}$ ,  $V_B=24\text{V}$ ,  $Z_S=Z_L=75\Omega$ )

SYMBOL	PARAMETER	UNIT	MIN.	TYP.	MAX.	CONDITIONS
$G_p$	Power Gain	dB	26.5	27	27.5	$f=50\text{MHz}$
$G_p$	Power Gain	dB	-	27	-	$f=870\text{MHz}$
$G_p$	Power Gain	dB	27.0	27.0	28.0	$f=1218\text{MHz}$
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
$S_{11}$ & $S_{22}$	Input & Output Return Loss	dB	-	-	-20	$f=50$ to 320 MHz
$S_{11}$ & $S_{22}$	Input & Output Return Loss	dB	-	-	-19	$f=321$ to 640 MHz
$S_{11}$ & $S_{22}$	Input & Output Return Loss	dB	-	-	-17	$f=641$ to 870 MHz
$S_{11}$ & $S_{22}$	Input & Output Return Loss	dB	-	-	-16	$f=871$ to 1000 MHz
$S_{11}$ & $S_{22}$	Input & Output Return Loss	dB	-	-	-15	$f=1001$ to 1218 MHz
CTB	Composite Triple Beat	dB	-	-66	-62	PAL99 channels flat; $V_o=46\text{dBmV}$ ;
CSO	Composite Second Order distortion	dB	-	-65	-62	CTB measured at 543.25 MHz;
$X_{mod}$	Cross Modulation	dB	-	-68	-	CSO measured at 544.5 MHz;
CTB	composite triple beat	dB	-	-75	-	$V_o=56.4\text{dBmV}$ at 1218MHz,
CSO	composite second order distortion	dB	-	-79	-	13.4dB extrapolated tilt
XMOD	X modulation	dB	-	-70	-	79 analog channels plus
CIN		dB	-	-66	-	75 digital channels (-6dB offset)
F	Noise Figure	dB	-	5.0	5.5	$f=50$ to 1218 MHz
$I_{tot}$	Total Current Consumption	mA	420	440	450	$V_B=+24\text{V}$

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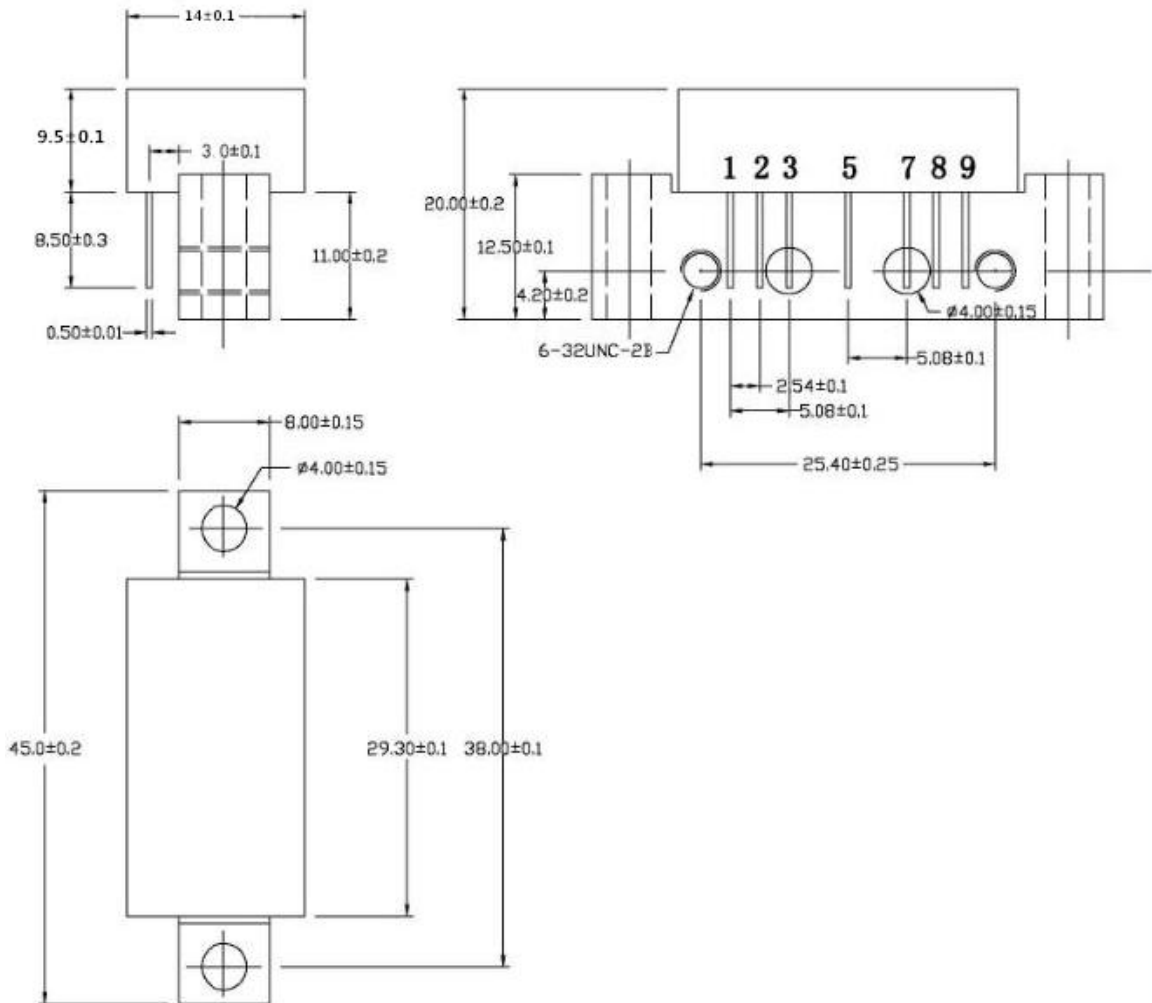
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## GaAs/GaN Power Double Module SMG1227D/CATV

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

### MODULE DIMENSIONS



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