

FEATURES

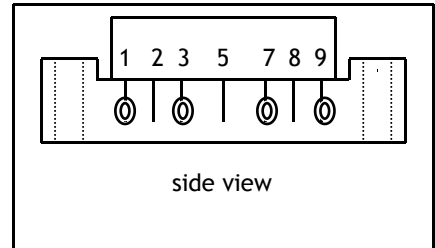
- GaAs active devices
- Power gain @24dB
- Low distortion
- Excellent linear gain
- Low noise figure
- High reliability
- Low cost

DESCRIPTION

The SMG1224 is a GaAs hybrid push pull 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 _B
9	Output
2、3、7、8	GND

QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNITS
G _p	Power Gain	f=50 MHz	23.5	24.5	dB
I _{tot}	Total current consumption(DC)	V _B =24V	250	290	mA

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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
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	24.5	-	26.5	$f=50\text{MHz}$
G_p	Power Gain	dB	-	24.8	-	$f=870\text{MHz}$
G_p	Power Gain	dB	24.5	25	26	$f=1218\text{MHz}$
SL	Slope cable equivalent	dB	0.5	-	2.0	$f=50$ to 1218 MHz
FL	Flatness of frequency response	dB	-	-	± 0.5	$f=50$ 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	-	-68	-63	PAL99 channels flat; $V_o=46\text{dBmV}$;
CSO	Composite Second Order distortion	dB	-	-66	-61	CTB measured at 543.25 MHz;
X_{mod}	Cross Modulation	dB	-	-67	-	CSO measured at 544.5 MHz;
V_o	Output Voltage	dBmV	60	-	-	$d_{im}=-60\text{dB}$
F	Noise Figure	dB	-	4.5	5.0	$f=50$ to 1218 MHz
I_{tot}	Total Current Consumption	mA	250	270	290	$V_B=+24\text{V}$

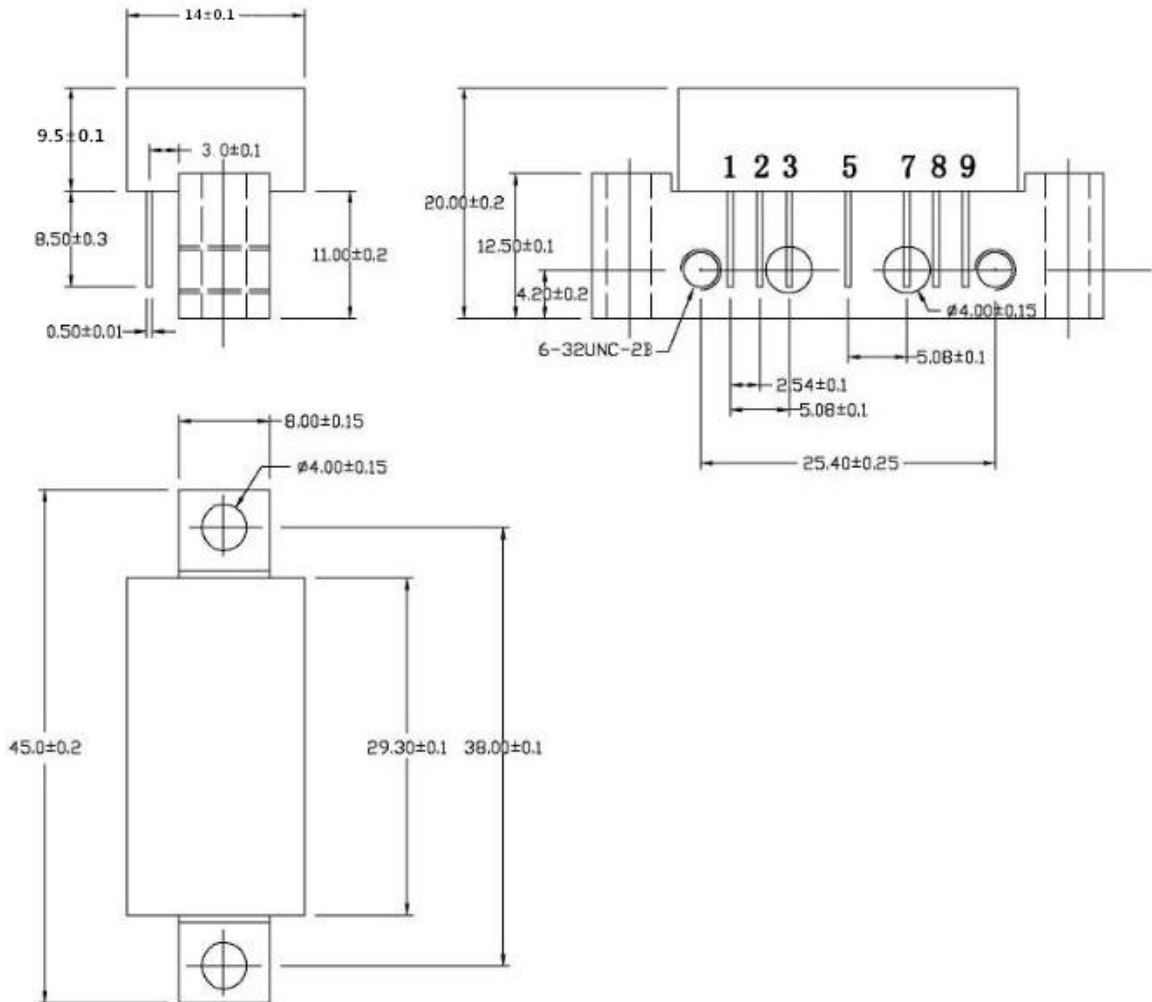
The module normally operates at $V_B=24$ V(± 0.5),

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MODULE DIMENSIONS



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