

FEATURES

- GaAs active devices
- Power gain @22dB
- Low distortion
- Excellent linear gain
- Low noise figure
- High reliability
- Low cost

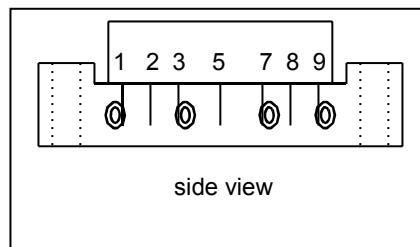
DESCRIPTION

The SMG8222M1 is a GaAs module.

The part employs GaAs dies and is operated from 50MHz to 870MHz 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	22	23.5	dB
G _p	Power Gain	f=860 MHz	24.8	--	dB
I _{tot}	Total current consumption(DC)	V _B =24V	100	130	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	-	50	dBmV
T_{stg}	Storage temperature	-40	+100	°C
T_{mb}	Operating mounting base temperature	-20	+90	°C

CHARACTERISTICS

(Bandwidth 50 to 870MHz; $T_{mb}=25^{\circ}\text{C}$, $V_B=24\text{V}$, $Z_S=Z_L=75\ \Omega$)

SYMBOL	PARAMETER	UNIT	MIN.	TYP.	MAX.	CONDITIONS
G_p	Power Gain	dB	22	-	23.5	f=50MHz
G_p	Power Gain	dB	24.8	-	-	f=860MHz
SL	Slope cable equivalent	dB	2.0	-	3.5	f=50 to 870 MHz
FL	Flatness of frequency response	dB	-	-	± 0.5	f=50 to 870 MHz
S_{11}	Input Return Loss	dB	-	-	-16	f=50 to 870 MHz
S_{22}	Output Return Loss	dB	-	-	-16	f=50 to 870 MHz
CTB	Composite Triple Beat	dB	-	-	-60	PAL60 channels flat; $V_o=44\text{dBmV}$;
CSO	Composite Second Order distortion	dB	-	-	-60	CTB measured at 543.25 MHz;
X_{mod}	Cross Modulation	dB	-	-	-55	CSO measured at 544.5 MHz;
V_o	Output Voltage	dBmV	58	-	-	$d_{im}=-60\text{dB}$
F	Noise Figure	dB	-	-	7.5	f=860 MHz
I_{tot}	Total Current Consumption	mA	100	130		$V_B=+24\text{V}$

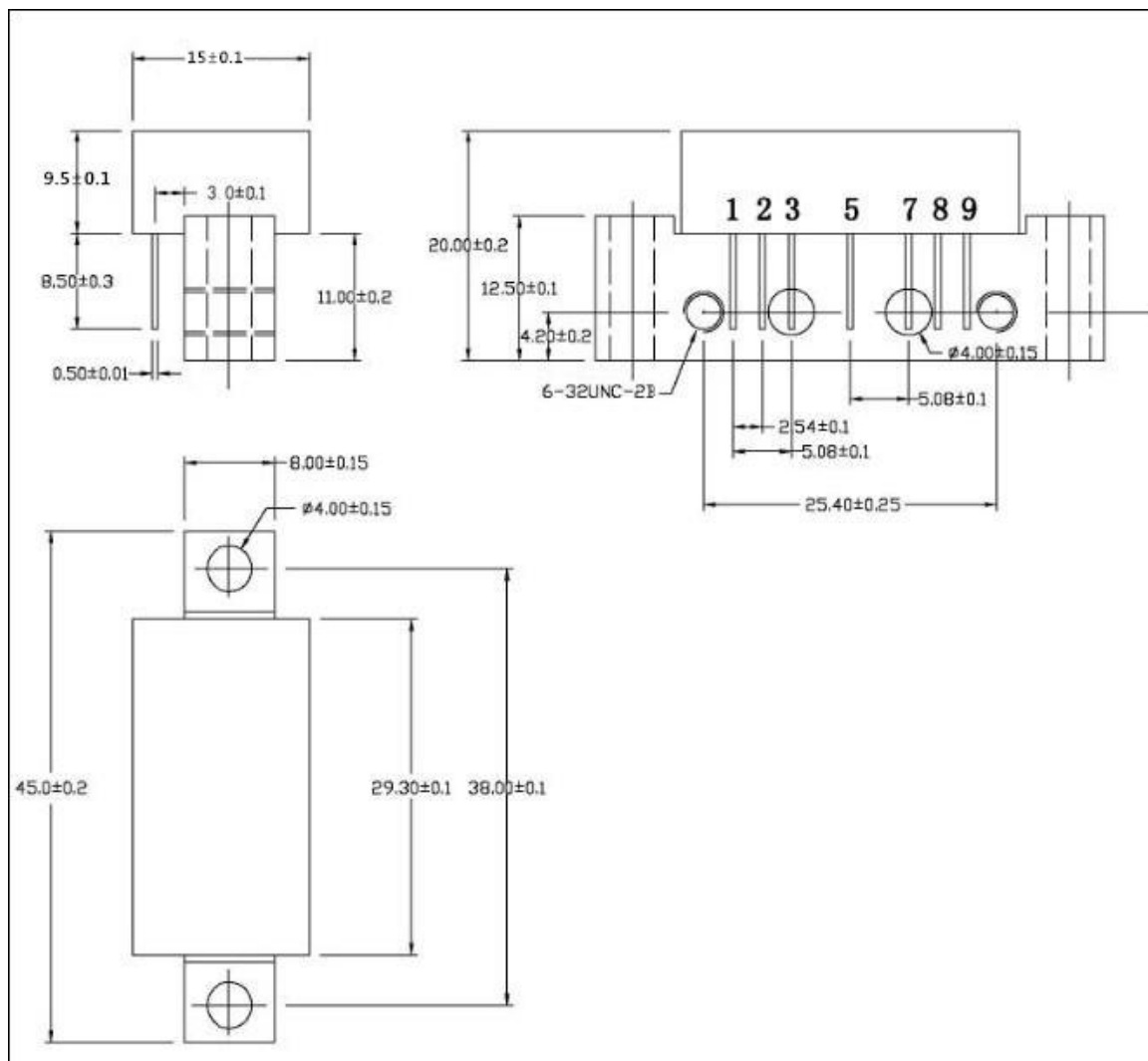
The module normally operates at $V_B=24\text{ V}(\pm 0.5)$,

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MODULE DIMENSIONS



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