GN1021

GaAs N Channel MES Type IC

For SHF band IF amplification and UHF band general-purpose amplification

■ Features

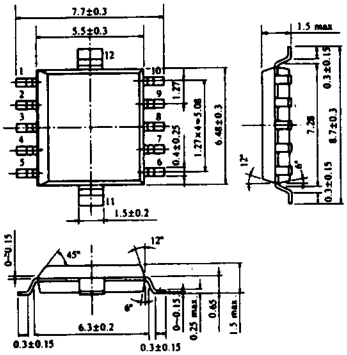
- •Bias resistor built-in
- •Low noise
- •High gain

■ Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Value	Unit
Power Supply Voltage	V_{DD}	15	V
Circuit Current	I_{DD}	80	mA
Power Dissipation	P_D	500	mW
Channel Temperature	Tch	150	℃
Storage Temperature	T_{stg}	−55～+150	℃

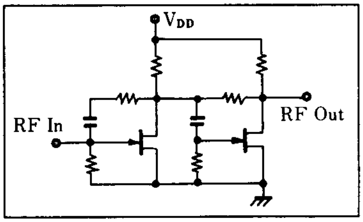
■ Package Dimensions

Unit : mm



2 : Input 7 : Output
4 : V_{DD} 11, 12 : GND
他 : NC SO-10A Package

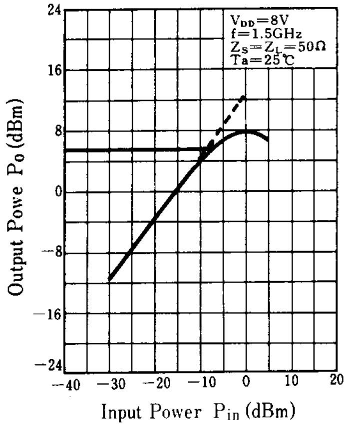
(Equivalent Circuit)



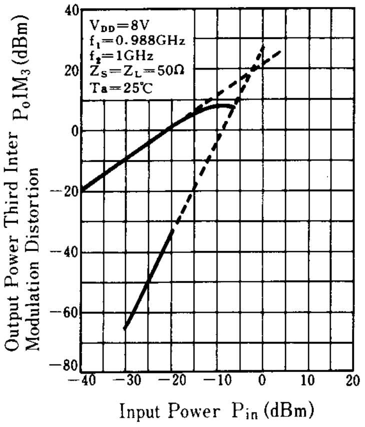
■ Electrical Characteristics (Ta=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Circuit Current	I_{DD}	V_{DD}=8V, $Z_S=Z_L=50\Omega$	20	40	70	mA
Power Gain	PG	V_{DD}=8V, f=1.5GHz, $Z_S=Z_L=50\Omega$	16	19	22	dB
Noise Figure	NF	V_{DD}=8V, f=1.5GHz, $Z_S=Z_L=50\Omega$		3	4	dB
Isolation	I_{SO}	V_{DD}=8V, f=1.5GHz, $Z_S=Z_L=50\Omega$	24	35		dB
I_{dB}Compression Output Level	P_O	V_{DD}=8V, f=1.5GHz, $Z_S=Z_L=50\Omega$		10		dBm
Input V_{SWR}	V_{SWRI}	V_{DD}=8V, f=0.9~1.5GHz, $Z_S=Z_L=50\Omega$		2.5	3.5	
Output V_{SWR}	V_{SWRO}	V_{DD}=8V, f=0.9~1.5GHz, $Z_S=Z_L=50\Omega$		2	3	
Tertiary Distortion	IM_3	V_{DD}=8V, $Z_S=Z_L=50\Omega$, f_1=0.988GHz, f_2=1GHz Intercept point		18		dBm

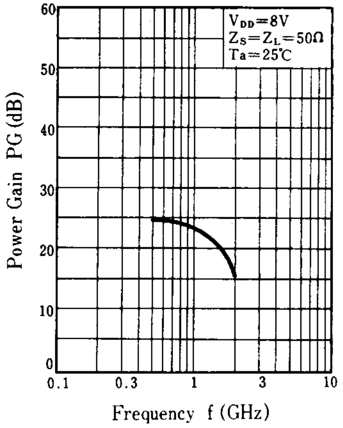
$P_O - P_{in}$



Intersept Point



PG − f



NF − f