GN1022

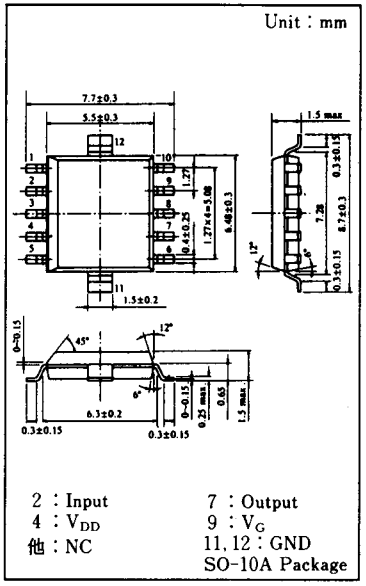
GaAs N Channel MES Type IC

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

■ Features

- Bias resistor built-in
- With gain control terminal
- Low noise
- High gain

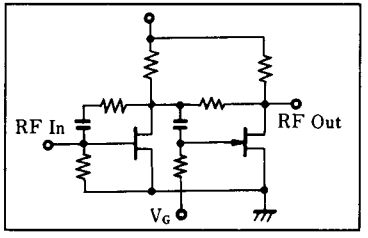
■ Package Dimensions



■ 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	℃

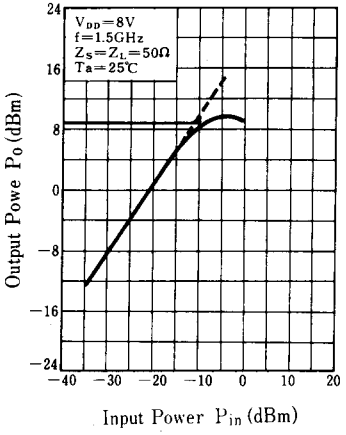
(Equivalent Circuit)



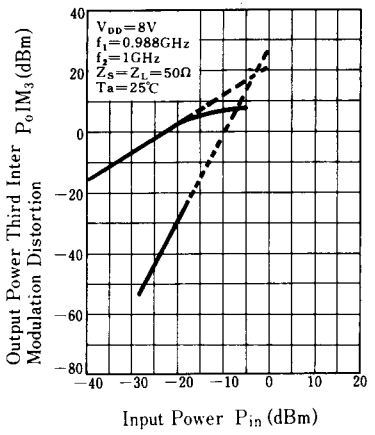
■ Electrical Characteristics (Ta=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Circuit Current	I_{DD}	V_{DD}=8V, Z_S=Z_L=50Ω, V_G= 0 V	20	40	70	mA
Power Gain	P_G	V_{DD}=8V, Z_S=Z_L=50Ω, V_G= 0 V, f=1.5GHz	16	19	22	dB
Noise Figure	N_F	V_{DD}=8V, Z_S=Z_L=50Ω, V_G= 0 V, f=1.5GHz		3	4	dB
Isolation	I_{SO}	V_{DD}=8V, Z_S=Z_L=50Ω, V_G= 0 V, f=1.5GHz	24	35		dB
I_{dB} Compression Output Level	P_O	V_{DD}=8V, Z_S=Z_L=50Ω, V_G= 0 V, f=1.5GHz		10		dBm
Input V_{SWR}	V_{SWRI}	V_{DD}=8V, Z_S=Z_L=50Ω, V_G= 0 V, f=0.9~1.5GHz		2.5	3.5	
Output V_{SWR}	V_{SWRO}	V_{DD}=8V, Z_S=Z_L=50Ω, V_G= 0 V, f=0.9~1.5GHz		2	3	
Tertiary Distortion	IM_3	V_{DD}=8V, Z_S=Z_L=50Ω, V_G= 0 V f_1=0.988GHz, f_2=1GHz, Intercept point		18		dBm
Gain-Loss Amount	G_R	V_{DD}=8V, Z_S=Z_L=50Ω f=1.5GHz, V_G=0～−3V		20		dB

$P_O - P_{in}$



Intersept Point



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