

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

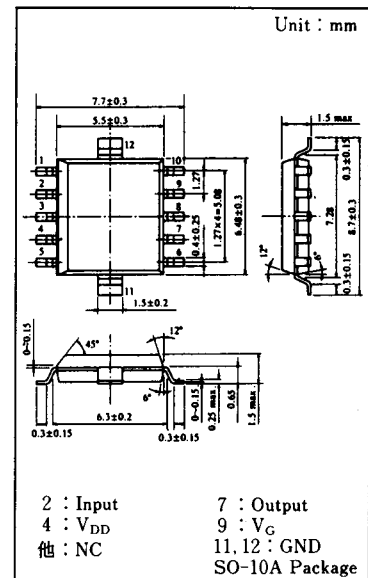
■ Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

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	T_{ch}	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$

■ Electrical Characteristics ($T_a=25^\circ\text{C}$)

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

■ Package Dimensions



(Equivalent Circuit)

