

GN01019B(Tentative)

GaAs IC (with built-in ferroelectric)

For cellular phone

Other communication equipment

■ Features

- UHF band amplifier with AGC
- High gain, low current consumption (PG : 18dB, I_D : 7mA)
- Small surface-mounting mini-type 6-pin package

■ Absolute Maximum Ratings ($T_a = 25 \pm 3^\circ\text{C}$)

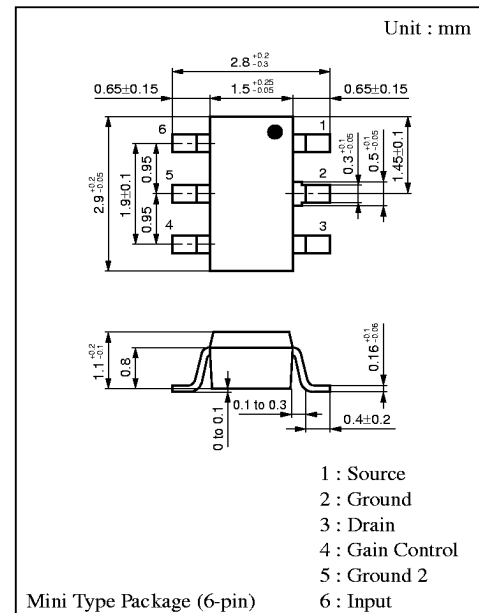
Parameter	Symbol	Rating	Unit
Power supply voltage	V_{DD}	6	V
Gain control voltage	V_{AGC}	0 to 1.2	V
Drain current	I_{DD}	20	mA
Allowable power dissipation	P_D	200	mW
Operating temperature	T_{opr}	- 30 to + 90	$^\circ\text{C}$
Storage temperature	T_{stg}	- 40 to +120	$^\circ\text{C}$

■ Electrical Characteristics ($T_a = 25 \pm 3^\circ\text{C}$)

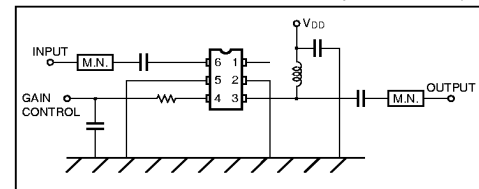
Parameter	Symbol	Test method	Condition	Min	Typ	Max	Unit
Current consumption	I_D		$V_{DD} = 3\text{V}$, $V_{AGC} = 1\text{V}$	3	7	10	mA
Power gain 1	PG1	(1), (2)	$V_{DD} = 3\text{V}$, $V_{AGC} = 1\text{V}$, $f = 900\text{MHz}$	15	18		dB
Power gain 2	PG2	(1), (2)	$V_{DD} = 3\text{V}$, $V_{AGC} = 0\text{V}$, $f = 900\text{MHz}$		- 30	- 20	dB
Noise figure	NF	(1), (2)	$V_{DD} = 3\text{V}$, $V_{AGC} = 1\text{V}$, $f = 900\text{MHz}$		2.2	3.5	dB

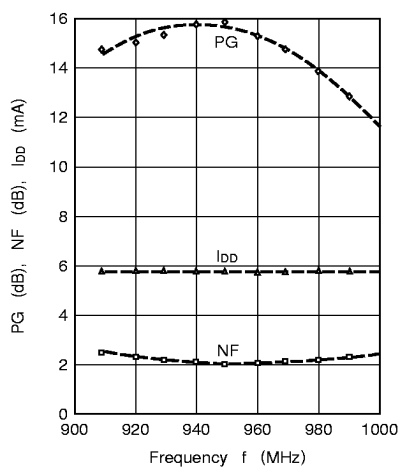
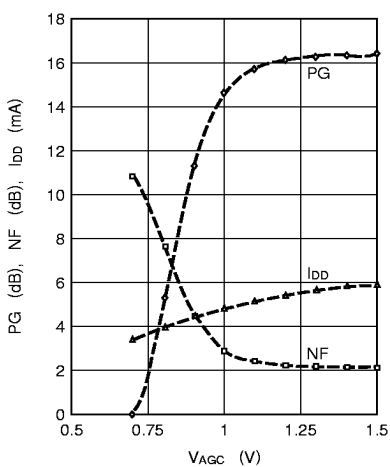
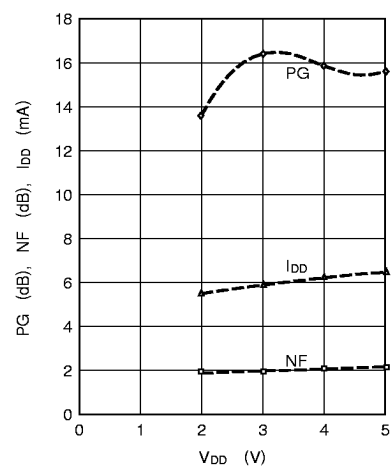
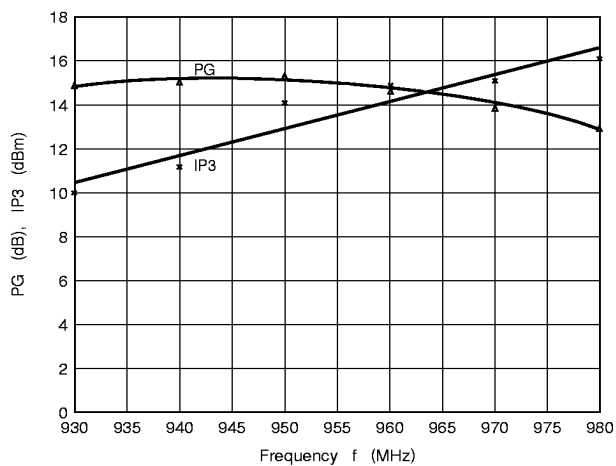
Test method (1) : Sampling guarantee (AQL= 0.65%)
 (2) : Test the PG/NF measurement with the specified circuit shown in the separate sheet.
 (Measured value with stab tuner: NF: 1.5dB, PG: 15dB)

Note : This is the tentative development specification and may be changed without notice.
 Refer to the update product specification when final design is to be established.



■ Measurement Circuit (tentative)



PG, NF, $I_{DD} - f$ PG, NF, $I_{DD} - V_{AGC}$ PG, NF, $I_{DD} - V_{DD}$ PG, IP₃ – FrequencyPG, IP₃, $I_{DD} - V_{AGC}$ 