

GN01010 (GN1010)

GaAs N-Channel MES IC

For high-output high-gain amplification

■ Features

- General-use wide-band amplifier
- Low noise
- With bandwidth control pin

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

Parameter	Symbol	Rating	Unit
Power supply voltage	V_{DS}	6	V
	V_{GS}	-4	V
Drain current	I_D	45	mA
Gate current	I_G	3	mA
Allowable power dissipation	P_D	200	mW
Channel temperature	T_{ch}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

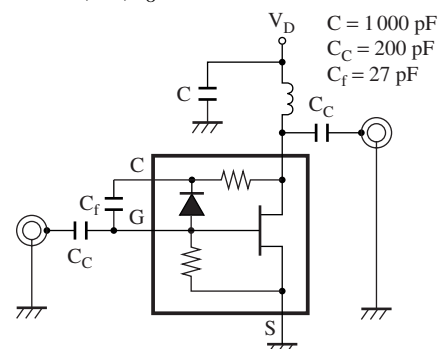
■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain current *1	I_{DD}	$V_{DS} = 3\text{ V}$	5	30	45	mA
Noise figure *2	NF	$V_{DS} = 3\text{ V}, f = 0.5\text{ GHz}$		2	3	dB
		$V_{DS} = 3\text{ V}, f = 1.8\text{ GHz}$				
Power gain *2	PG	$V_{DS} = 3\text{ V}, f = 0.5\text{ GHz}$	5	10		dB
		$V_{DS} = 3\text{ V}, f = 1.8\text{ GHz}$		9		
I_{dB} compression output *2	P_O	$V_{DS} = 3\text{ V}, f = 0.5\text{ GHz}$	8	15		dB
		$V_{DS} = 3\text{ V}, f = 1.8\text{ GHz}$				

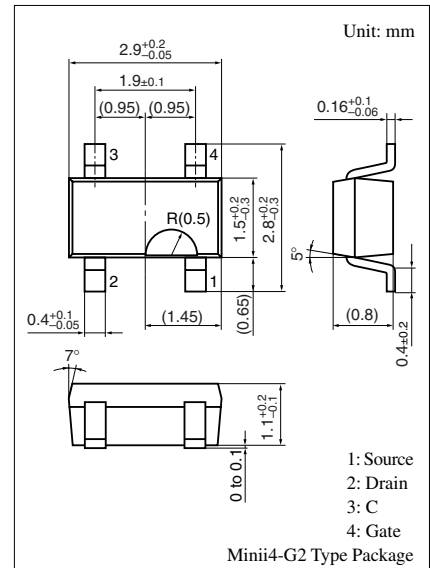
Note) *1: I_{DD} rank classification

Rank	P	Q	R
I_{DD} (mA)	5 to 20	15 to 30	25 to 45

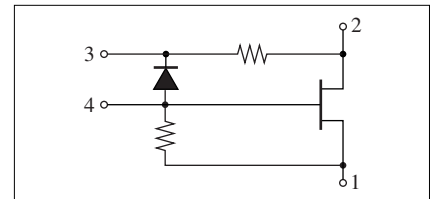
*2: NF, PG, P_O test circuit

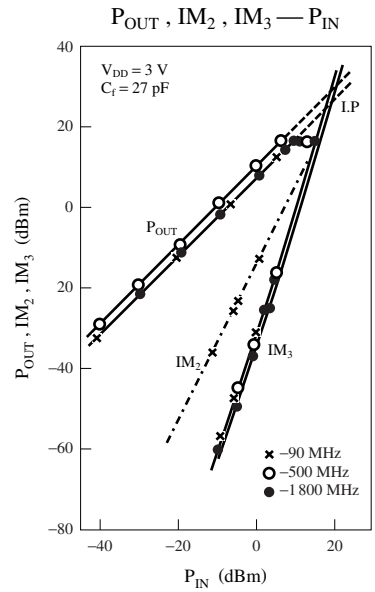
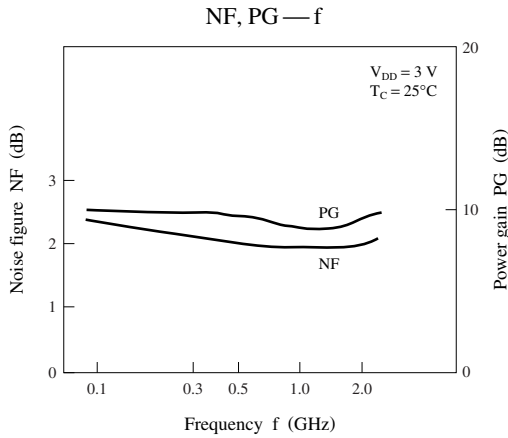
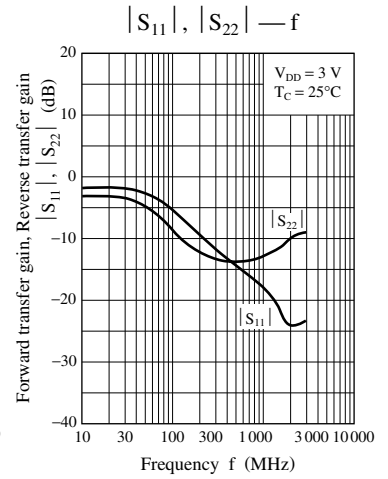
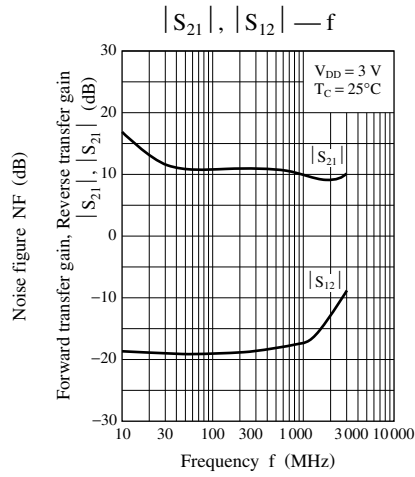
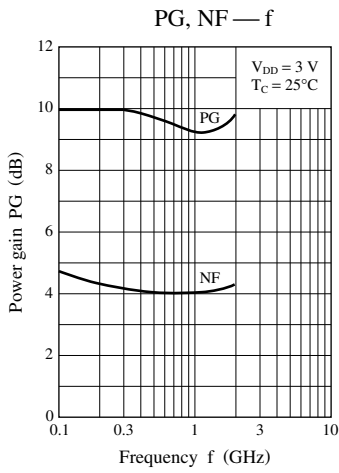


Note) The part number in the parenthesis shows conventional part number.



Equivalent Circuit





Caution for Safety

 **DANGER**

Gallium arsenide material (GaAs) is used in this product.

Therefore, do not burn, destroy, cut, crush, or chemically decompose the product, since gallium arsenide material in powder or vapor form is harmful to human health.

Observe the relevant laws and regulations when disposing of the products. Do not mix them with ordinary industrial waste or household refuse when disposing of GaAs-containing products.

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