

GN01096B

GaAs IC (with built-in ferroelectric)

For low noise amplifier of cellular phone

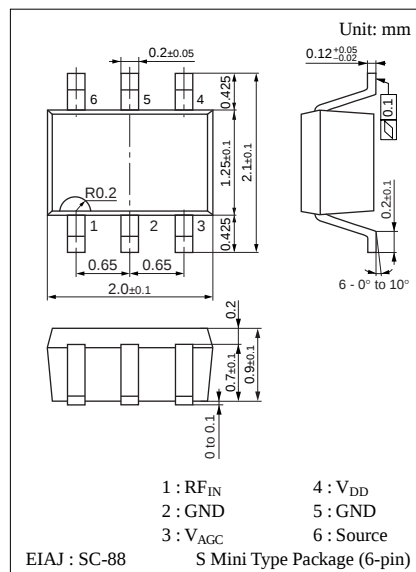
Other communication equipment

■ Features

- Super miniature S-Mini 6-pin package (2125 size)
- Receiver amplifier : Low distortion with built-in gain control function

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

Parameter	Symbol	Ratings	Unit
Power supply voltage	V_{DD}	8	V
Circuit current	I_{DD}	20	mA
Gate control voltage	V_{AGC}	0 to 4	V
Max input power	P_{IN}	-5	dBm
Allowable power dissipation	P_D	150	mW
Operating ambient temperature	T_{opr}	-30 to +90	$^{\circ}\text{C}$
Storage temperature	T_{stg}	-40 to +120	$^{\circ}\text{C}$



Marking Symbol : KW

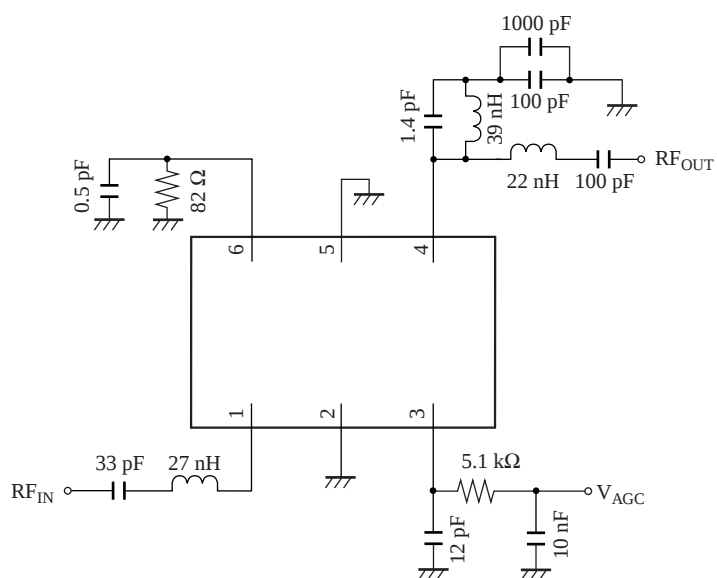
■ Electrical Characteristics $V_{DD}=2.9\text{ V}$, $P_{IN}=-25\text{ dBm}$, $T_a=25\text{ }^{\circ}\text{C}\pm 3\text{ }^{\circ}\text{C}$

Parameter	Symbol	Conditions	min	typ	max	Unit
Circuit current *1	I_{DD}	$V_{AGC}=1.5\text{ V}$, $f=850\text{ MHz}$		6.5	10	mA
Power gain 1 *1	PG1	$V_{AGC}=1.5\text{ V}$, $f=850\text{ MHz}$	12.5	15.0	17.5	dB
Power gain 2 *1	PG2	$V_{AGC}=0.1\text{ V}$, $f=850\text{ MHz}$	-10.0	-6.5	-3.0	dB
Noise figure 1 *1, 2	NF1	$V_{AGC}=1.5\text{ V}$, $f=832\text{ MHz}$ $f=850\text{ MHz}$, $f=870\text{ MHz}$		1.4	2.0	dB
Noise figure 2 *1, 2	NF2	$V_{AGC}=0.1\text{ V}$, $f=832\text{ MHz}$ $f=850\text{ MHz}$, $f=870\text{ MHz}$		17	22	dB
Dynamic range *1	DR	$V_{AGC}=1.5\text{ V to }0.1\text{ V}$, $f=850\text{ MHz}$	18	22	27	dB
Input return loss *1, 2	S11	$V_{AGC}=1.5\text{ V}$, $f=850\text{ MHz}$		-10	-6	dB
Output return loss *1, 2	S22	$V_{AGC}=1.5\text{ V}$, $f=850\text{ MHz}$		-10	-6	dB
Third input intercept point *1, 2	IIP3	$V_{AGC}=1.5\text{ V}$, $f=850\text{ MHz}/850.9\text{ MHz}$	4.0	5.8		dBm
Third output intercept point *1, 2	OIP3	$V_{AGC}=1.5\text{ V}$, $f=850\text{ MHz}/850.9\text{ MHz}$	16.5	21.0		dBm

Note) *1 : Refer to measurement circuit.

*2 : Design-guaranteed items.

■ Measurement 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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