

GN01096B

GaAs IC (with built-in ferroelectric)

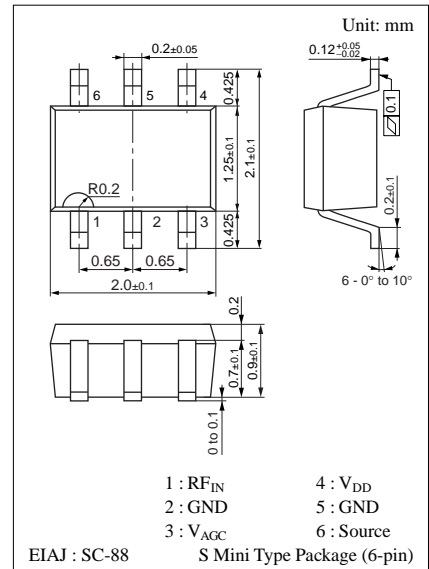
For low noise amplifier of cellular phone
Other communication equipment

■ 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

