

GN01100B

GaAs IC (with built-in ferroelectric)

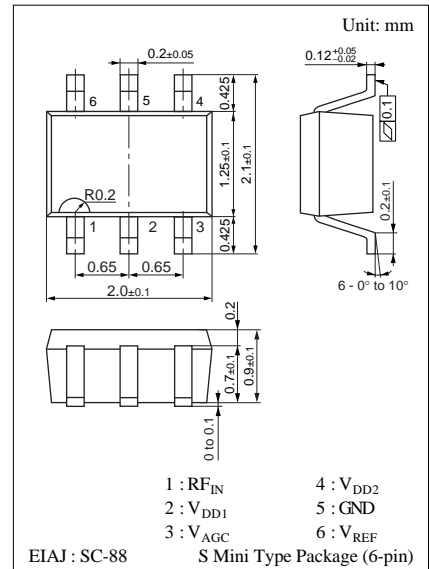
For the preamplifier of the transmitting section in a cellular phone
Other communication equipment

■ Features

- Super miniature S-Mini 6-pin package (2125 size)
- Transmitter amplifier : Wide dynamic range on low operation current
: Gain control function built-in

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

Parameter	Symbol	Ratings	Unit
Power supply voltage	V_{DD}	5	V
Circuit current	I_{DD}	80	mA
Gate control voltage	V_{AGC}	0 to 3	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 : HU

■ Electrical Characteristics $V_{DD1}=V_{DD2}=3.0\text{ V}$, $f=906\text{ MHz}$, $T_a=25\text{ }^\circ\text{C}\pm 3\text{ }^\circ\text{C}$

Parameter	Symbol	Conditions	min	typ	max	Unit
Circuit current *1	I_{DD}	$V_{AGC}=2.0\text{ V}$, $P_{IN}=-20\text{ dBm}$		37	45	mA
Power gain 1 *1	PG1	$V_{AGC}=2.0\text{ V}$, $P_{IN}=-20\text{ dBm}$	20	23		dB
Power gain 2 *1	PG2	$V_{AGC}=0.5\text{ V}$, $P_{IN}=-20\text{ dBm}$		-10	-5	dB
Dynamic range	DR	PG1-PG2	30	34		dB
Gain control sensitivity *1, 2	GS	$P_{in}=-20\text{ dBm}$	25	49	90	dB/V
Adjacent channel leakage power (ACP) 1 *1, 3	ACP1	$V_{AGC}=2.0\text{ V}$, $P_{OUT}=5\text{ dBm}$ IS-95 modulation, 900 kHz Detuning 30 kHz Bandwidth		-54	-50	dBc
Adjacent channel leakage power (ACP) 2 *1, 3	ACP2	$V_{AGC}=2.0\text{ V}$, $P_{out}=5\text{ dBm}$ IS-95 modulation, 1.98 MHz Detuning 30 kHz Bandwidth		-74	-65	dBc

Note) *1 : Refer to measurement circuit.

*2 : $\{PG(V_{AGC}=1.6\text{ V})[\text{dB}]-PG(V_{AGC}=1.2\text{ V})[\text{dB}]/0.4[\text{V}]\}$

*3 : Design-guaranteed items.

■ Measurement Circuit

