

# GN01094B

## GaAs IC (with built-in ferroelectric)

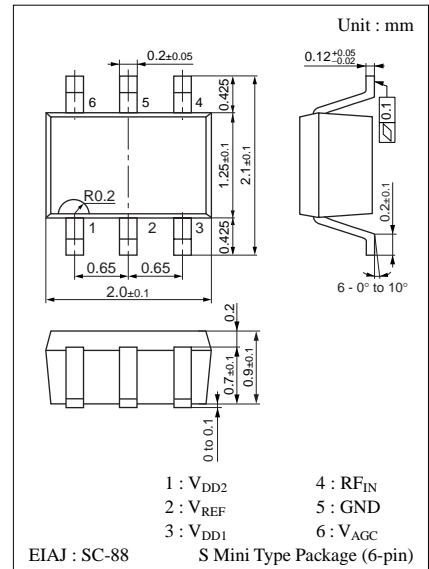
For the preamplifier of the transmitting section in a cellular phone  
Other communication equipment

### ■ 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	$V_{DD}$	8	V
Circuit current	$I_{DD}$	80	mA
Gate control voltage	$V_{AGC}$	0 to 3	V
Reference voltage	$V_{REF}$	5	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 : KV

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

Parameter	Symbol	Conditions	min	typ	max	Unit
Circuit current <sup>*1</sup>	$I_{DD}$	$V_{AGC}=2.0\text{ V}$ , $P_{IN}=-20\text{ dBm}$		32	40	mA
Power gain 1 <sup>*1</sup>	PG1	$V_{AGC}=2.0\text{ V}$ , $P_{IN}=-20\text{ dBm}$	27	31		dB
Power gain 2 <sup>*1</sup>	PG2	$V_{AGC}=0.5\text{ V}$ , $P_{IN}=-20\text{ dBm}$		-14	-8	dB
Dynamic range	DR	PG1-PG2	35	45		dB
Adjacent channel leakage power (ACP) <sup>*1, 2</sup>	ACP	$P_{IN}=-15\text{ dBm}$ , $P_{OUT}=5\text{ dBm}$ $\pm 900\text{ kHz Detuning}$ , 30 kHz Bandwidth		-54	-49	dBc

Note) \*1 : Refer to measurement circuit.

\*2 : Design-guaranteed items.

### ■ Measurement Circuit

