

# GN02035B

## GaAs IC (with built-in ferroelectric)

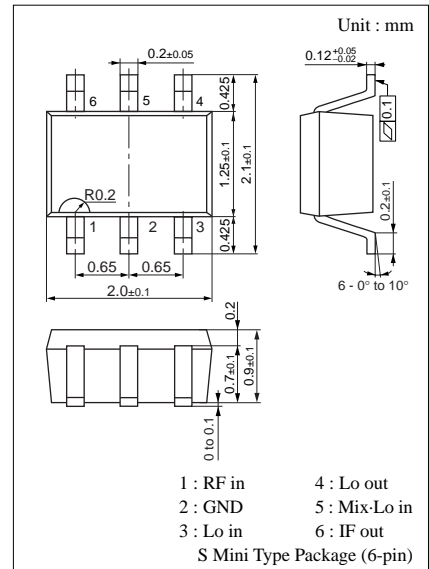
For mixer with built-in local amplifier of cellular phone  
Other communication equipment

### ■ Features

- Super miniature S-Mini 6-pin package (2 125 size)
- Receiver mixer : Low distortion with local amplifier

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

	Parameter	Symbol	Ratings	Unit
RF section	Input voltage	$V_{IN}$	-3	V
	Input current	$I_{IN}$	1	mA
	Max input power	$P_{IN}$	10	dBm
Lo input section	Input voltage	$V_{IN}$	-3	V
	Input current	$I_{IN}$	1	mA
	Max input power	$P_{IN}$	10	dBm
Lo output section	Output voltage	$V_{OUT}$	5	V
	Output current	$I_{OUT}$	10	mA
Mix-Lo section	Input voltage	$V_{IN}$	-3	V
	Input current	$I_{IN}$	1	mA
IF section	Output voltage	$V_{OUT}$	5	V
	Output current	$I_{OUT}$	10	mA
Overall	Allowable power dissipation	$P_D$	100	mW
	Channel temperature	$T_{ch}$	150	$^\circ\text{C}$
	Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$



Marking Symbol : KD

### ■ Electrical Characteristics $T_a=25^\circ\text{C}\pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	min	typ	max	Unit
Mixer current *1	$I_{MIX}$	$V_{IFOUT}=3\text{ V}$ , $f_{RF}=850\text{ MHz}$ $f_{Lo}=740\text{ MHz}$		4.3		mA
Local amplifier current *1	$I_{Lo}$	$V_{LoOUT}=3\text{ V}$ , $f_{RF}=850\text{ MHz}$ $f_{Lo}=740\text{ MHz}$		3.2		mA
Conversion gain *1	CG	$V_{IFOUT}=V_{LoOUT}=3\text{ V}$ $f_{RF}=850\text{ MHz}$ , $f_{Lo}=740\text{ MHz}$		11		dB
Output third harmonics mutual modulation distortion *1	OIP3	$V_{IFOUT}=V_{LoOUT}=3\text{ V}$ , $f_{RF}=850.1\text{ MHz}$ $f_{Lo}=740.0\text{ MHz}$ , $f_{IF}=110.0\text{ MHz}$ or 110.1 MHz, $f_{M3}=109.9\text{ MHz}$ or 110.2 MHz		7.0		dBm
Noise figure *1, 2	NF	$V_{IFOUT}=V_{LoOUT}=3\text{ V}$ , $f_{Lo}=740\text{ MHz}$ $f_{IF}=110\text{ MHz}$		6.2		dB

Note) \*1 :  $P_{RF}=-27\text{ dBm}$ ,  $P_{Lo}=-7\text{ dBm}$

\*2 : Design-guaranteed items.