

GN01039B

GaAs IC

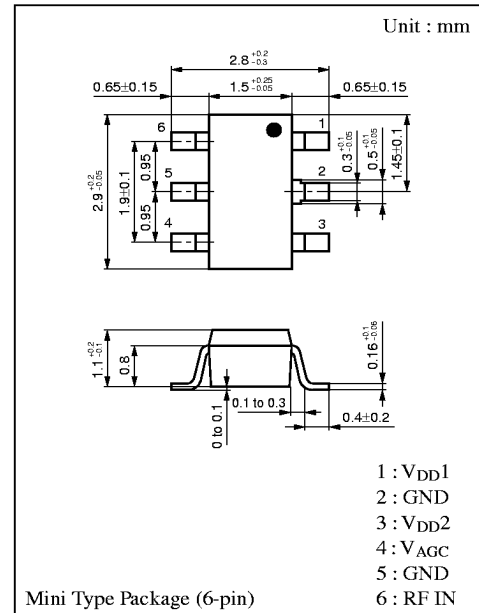
For transmitting preamplifier of cellular phone

■ Features

- Low-noise amplifier with AGC
- Single, positive power supply

■ Absolute Maximum Ratings (Ta= 25°C)

Parameter	Symbol	Rating	Unit
Power supply voltage	V _{DD}	8	V
Gate control voltage	V _{AGC}	0 to 2	V
Circuit current	I _{DD}	80	mA
Max input power	P _{in}	-5	dBm
Allowable power dissipation	P _D	0.2	W
Operating temperature	T _{opr}	-30 to +90	°C
Storage temperature	T _{stg}	-40 to +120	°C



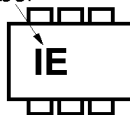
■ Electrical Characteristics (Ta = 25 ± 3°C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Circuit current	I _{DD}	V _{DD} = 3V, V _{AGC} =1.5V			45	mA
Power gain 1	PG1* 1	V _{DD} = 3V, V _{AGC} =1.5V, P _{in} = -20dBm, f=1441MHz	18.5	19.5		dB
Power gain 2	PG2* 1	V _{DD} = 3V, V _{AGC} = 0V, P _{in} = -20dBm, f=1441MHz		-12.5	-8.5	dB
Dynamic range	DR	PG1 - PG2	27	32		dB
Modulation distortion 1	DM1* 1, 2	V _{DD} = 3V, P _{in} = -15dBm, P _{out} = -2dBm, f=1441MHz ±50kHz detuning, 21kHz bandwidth		-70	-60	dBc
Modulation distortion 2	DM2* 1, 2	V _{DD} = 3V, P _{in} = -15dBm, P _{out} = -2dBm, f=1441MHz ±100kHz detuning, 21kHz bandwidth		-70	-65	dBc

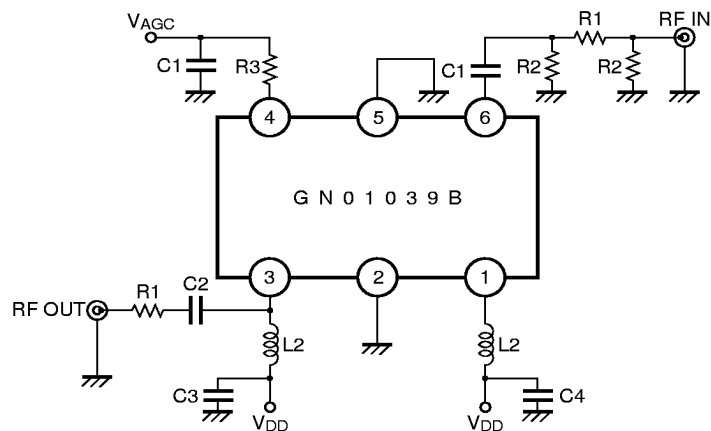
* 1 Refer to the measurement circuit. * 2 Design-guaranteed items

■ Marking

Part Number



■ Measurement Circuit



- (Value of each part)
- R1=33Ω L1=1.5nH C1=100pF
 - R2=330Ω L2=18nH C2= 33pF
 - R3=4.7kΩ C3=100pF, 0.01μF
 - C4=100pF, 1000pF

$P_{out, DM} - V_{AGC}$

