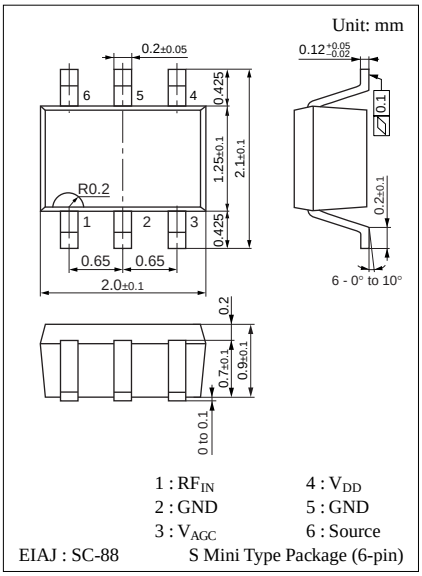
GN01096B

GaAs IC (with built-in ferroelectric)

For low noise amplifier of cellular phone
Other communication equipment



Marking Symbol : KW

■ 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 °C

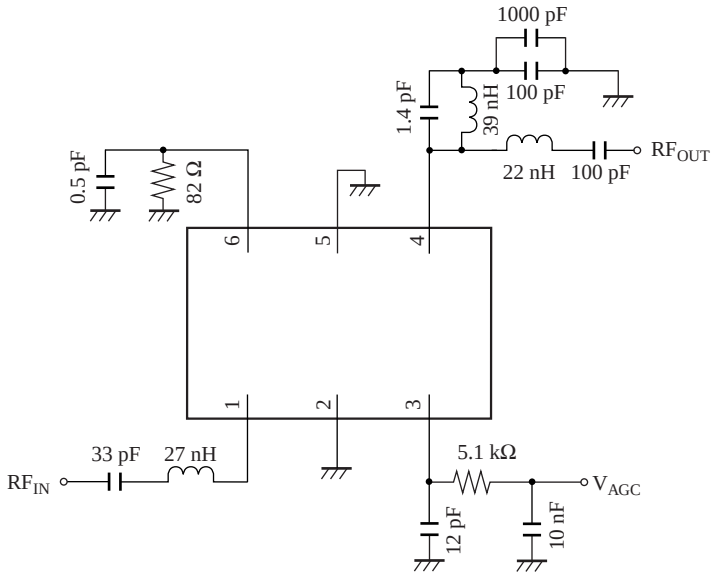
Parameter	Symbol	Ratings	Unit
Power supply voltage	V_{DD}	8	V
Circuit current	I_{DD}	20	mA
Gate control voltage	V_{AGC}	0 to 4	V
Max input power	P_{IN}	−5	dBm
Allowable power dissipation	P_D	150	mW
Operating ambient temperature	T_{opr}	−30 to +90	°C
Storage temperature	T_{stg}	−40 to +120	°C

■ Electrical Characteristics V_{DD}=2.9 V, P_{IN}=−25 dBm, T_a=25 °C±3 °C

Parameter	Symbol	Conditions	min	typ	max	Unit
Circuit current *1	I_{DD}	V_{AGC}=1.5 V, f=850 MHz		6.5	10	mA
Power gain 1 *1	PG1	V_{AGC}=1.5 V, f=850 MHz	12.5	15.0	17.5	dB
Power gain 2 *1	PG2	V_{AGC}=0.1 V, f=850 MHz	−10.0	−6.5	−3.0	dB
Noise figure 1 *1, 2	NF1	V_{AGC}=1.5 V, f=832 MHz f=850 MHz, f=870 MHz		1.4	2.0	dB
Noise figure 2 *1, 2	NF2	V_{AGC}=0.1 V, f=832 MHz f=850 MHz, f=870 MHz		17	22	dB
Dynamic range *1	DR	V_{AGC}=1.5 V to 0.1 V, f=850 MHz	18	22	27	dB
Input return loss *1, 2	S11	V_{AGC}=1.5 V, f=850 MHz		−10	−6	dB
Output return loss *1, 2	S22	V_{AGC}=1.5 V, f=850 MHz		−10	−6	dB
Third input intersept point *1, 2	IIP3	V_{AGC}=1.5 V, f=850 MHz/850.9 MHz	4.0	5.8		dBm
Third output intersept point *1, 2	OIP3	V_{AGC}=1.5 V, f=850 MHz/850.9 MHz	16.5	21.0		dBm

Note) *1 : Refer to measurement circuit.
*2 : Design-guaranteed items.

■ Measurement Circuit



⚠ Caution for Safety

⚠ DANGER

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