

GN01037B

GaAs IC (with built-in ferroelectric)

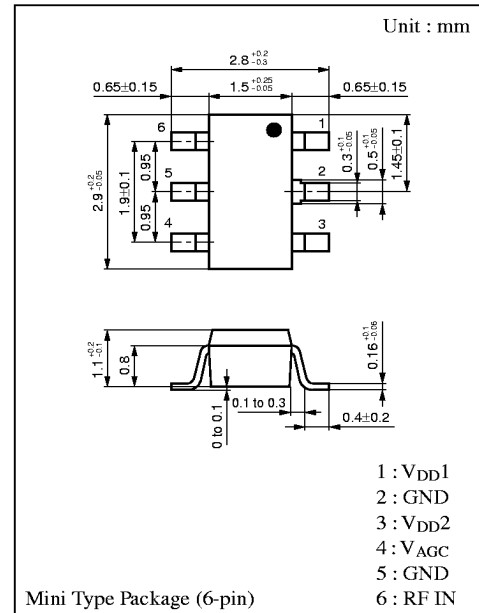
For transmitting preamplifier of cellular phone
Other communication equipment

■ Features

- Low-noise amplifier with AGC
- Single, positive power supply
- $f = 0.9\text{GHz}$

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

| 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 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -40 to +120 | $^\circ\text{C}$ |

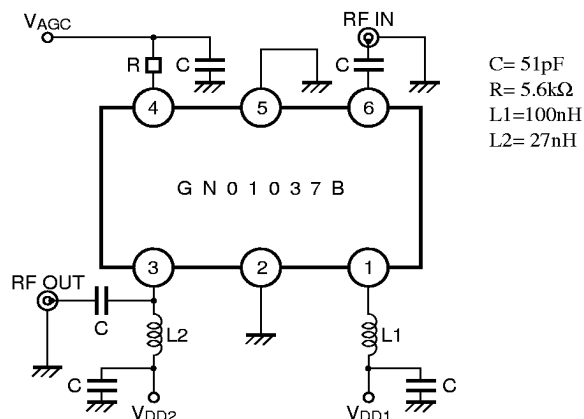


■ Electrical Characteristics ($V_{DD} = 3\text{V}$, $T_a = 25 \pm 2^\circ\text{C}$)

| Parameter | Symbol | Test method | Condition | Min | Typ | Max | Unit |
|-----------------------|----------|-------------|--|-----|-----|-----|------|
| Circuit current | I_{DD} | | $V_{AGC} = 1.5\text{V}$ | 25 | | 45 | mA |
| Conversion gain | Po1 | (1) | $V_{AGC} = 1.5\text{V}$, $P_{in} = -15\text{dBm}$, $f = 948\text{MHz}$ | 8 | 11 | | dBm |
| | Po2 | | $V_{AGC} = 0\text{V}$, $P_{in} = -15\text{dBm}$, $f = 948\text{MHz}$ | | -29 | -22 | dBm |
| Modulation distortion | DM | (1), (2) | $V_{AGC} = 1\text{V}$, $P_{in} = -15\text{dBm}$, $f = 948\text{MHz}$ $\pm 50\text{kHz}$ detuning, 21kHz bandwidth | -55 | -60 | | dBc |

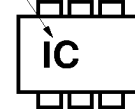
Test method (1) : For measurement, use the circuit shown below.
(2) : Design-guaranteed items

■ Measurement Circuit

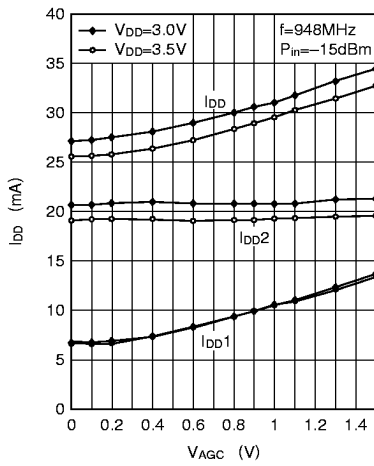


■ Marking

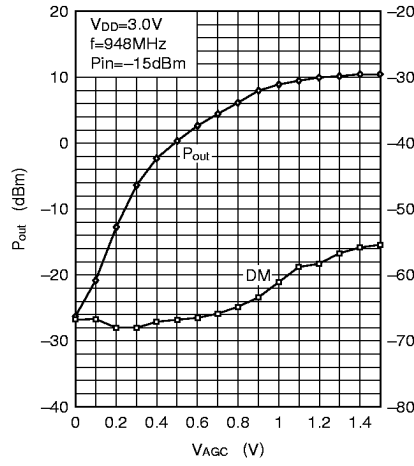
Part Number



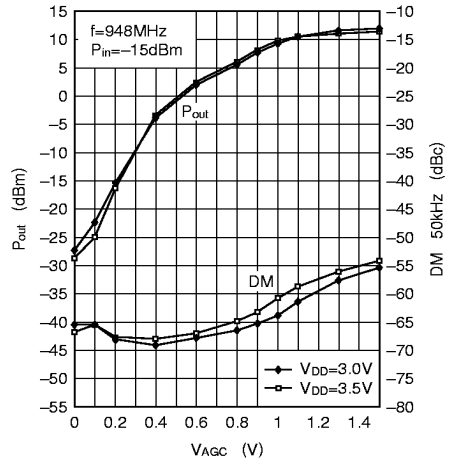
$I_{DD} - V_{AGC}, V_{DD}$



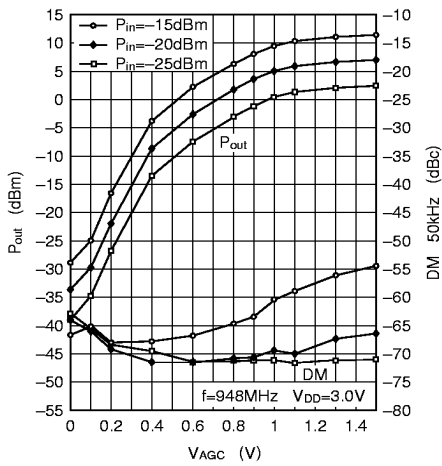
$P_{out}, DM - V_{AGC}$



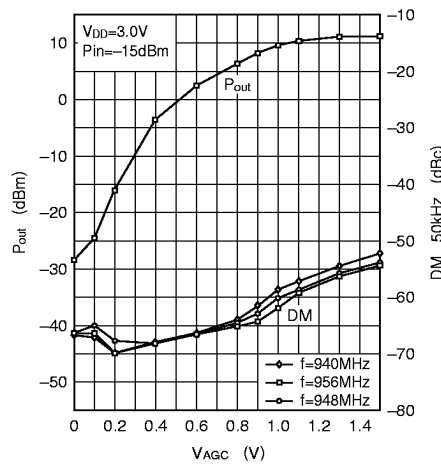
$P_{out}, DM - V_{AGC}, V_{DD}$



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



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



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

