

GN01032N

GaAs IC

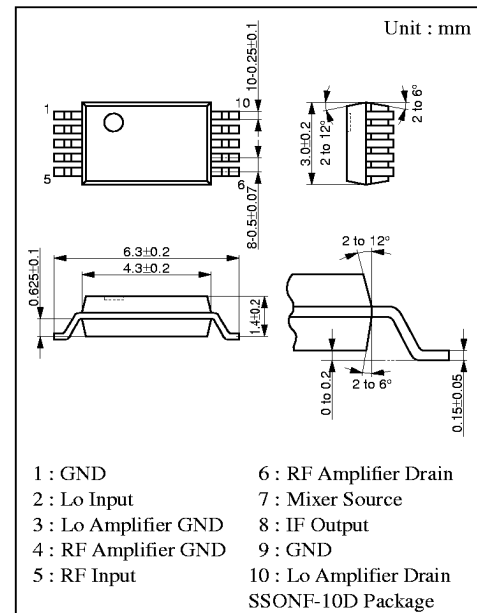
For PHS receiving front-end amplifier

■ Features

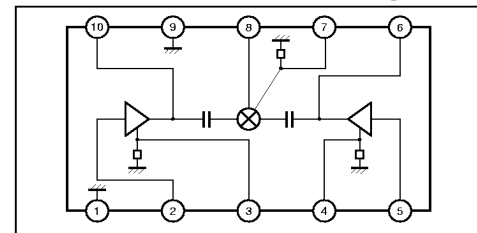
- Low-voltage, positive power supply operation
- Low current operation
- Low noise

■ Absolute Maximum Ratings (Ta= 25°C)

Parameter	Symbol	Rating	Unit
Power supply voltage	V _{DD}	5	V
Circuit current	I _{DD}	10	mA
Max input power	P _{in}	10	dBm
Allowable power dissipation	P _D	50	mW
Operating temperature	T _{opr}	− 30 to + 90	°C
Storage temperature	T _{stg}	− 30 to + 90	°C



■ Circuit-function Block Diagram

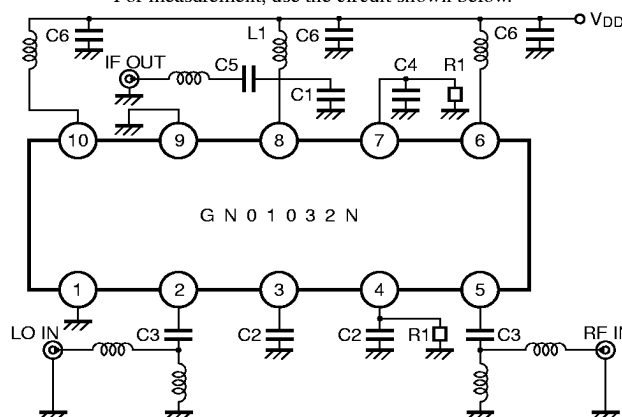


■ Electrical Characteristics (V_{DD}= 3V, Ta = 25 ± 2°C)

Parameter	Symbol	Test method	Condition	Min	Typ	Max	Unit
Circuit current	I _{DD}			3.5	5.5	7	mA
Conversion gain	CG	(1)	f _{LO} =1.66GHz, P _{LO} = −15dBm f _{RF} =1.90GHz, P _{RF} = − 35dBm	15	17		dB
Noise figure	NF	(1)	f _{LO} =1.66GHz, P _{LO} = −15dBm f _{RF} =1.90GHz, P _{RF} = − 35dBm f _{IF} = 0.24GHz		4	6	dB

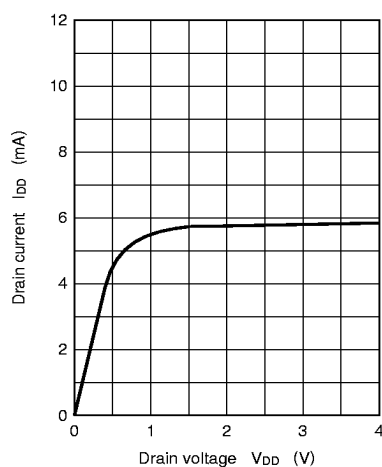
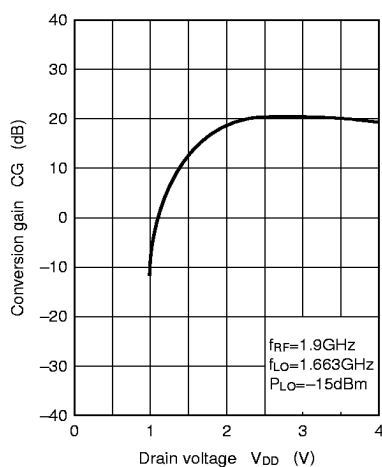
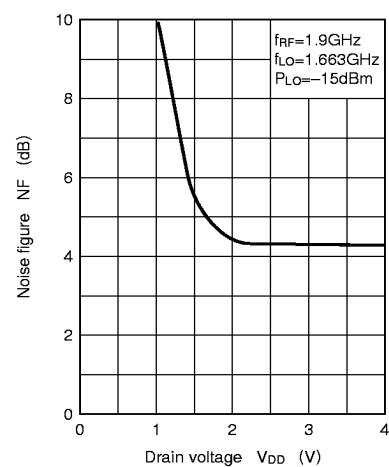
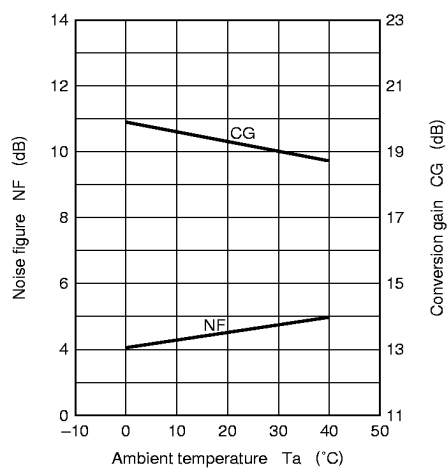
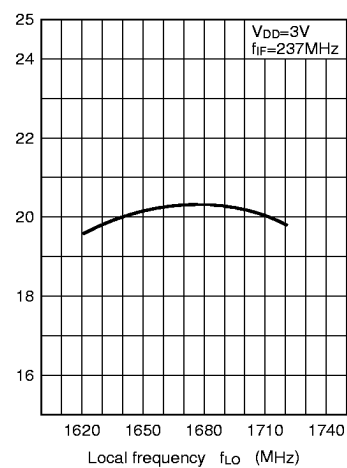
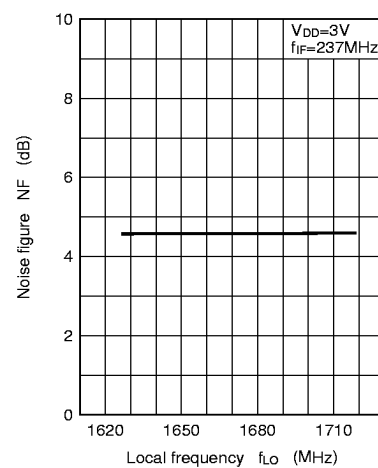
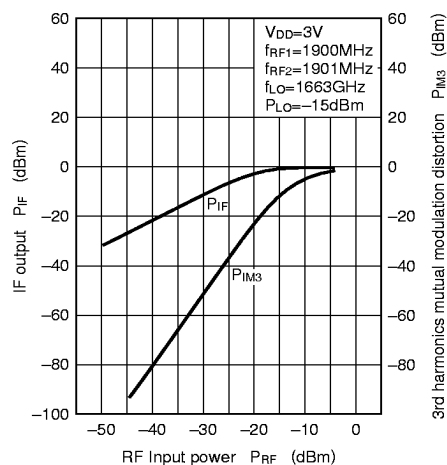
Test method (1) : Design-guaranteed value

For measurement, use the circuit shown below.



(Value of each part)

R1=1.5kΩ C1= 2.5pF
C2=10pF
L1= 270nH C3= 51pF
C4=100pF
C5=1000pF
C6=100pF, 1000pF

$I_{DD} - V_{DD}$  $CG - V_{DD}$  $NF - V_{DD}$  $CG, NF - T_a$  $CG - f_{LO}$  $NF - f_{LO}$  $P_{IF}, P_{IM3} - P_{RF}$  $P_{IF}, P_{IR} - P_{LO}$ 