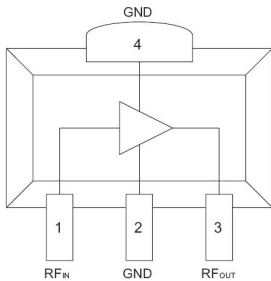


DESCRIPTION

Sanland's SG101 is intended for use in applications requiring high linearity, such as CATV Fiber Receiver and Distribution Amplifiers, and CATV Drop Amplifiers. SG101 is RoHS compliant and offered in SOT89 leadfree package.

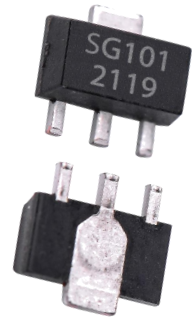
Major Applications

- CATV Network
- FTTB Network
- FTTH Network
- PON ONU



KEY FEATURES

- High linearity:+43dBm OIP3
- Wide Bandwidth:45-1218MHz
- P1dB:26dBm
- Low Noise:2.0dB
- Input Output 75 ohm Match
- Single Power Supply:+8V



Caution: ESD Sensitive
Appropriate precaution in handling, packaging
And testing devices must be observed.

PIN DEFINITION

Pin	Name	Function
1	RFIn	RF Input
2	GND	Ground
3	RFout	RF Output/Bias
4	GND	Ground

TYPICAL PARAMETERS

($T_A=+25^{\circ}\text{C}$, $V_{DD}=+8\text{VDC}$, 75Ω system)

Parameter	Units	Typical		
Frequency	MHz	50	860	1218
Noise Figure	dB	2.0	2.0	2.3
Gain	dB	16.5	16.2	16.1
S11	dB	-19.4	-14	-12
S22	dB	-19	-17.5	-16.4
Output P1dB	dBm	26	26	25
Output IP3 ^①	dBm	43	43	40
Output IP2 ^②	dBm	54	58	54
CSO ^③	dBc	-	68	-
CTB ^③	dBc	-	70	-
Supply Current	mA	-	125	-
Supply Voltage	V	-	8	-
Thermal resistance	$^{\circ}\text{C/W}$	-	40	-

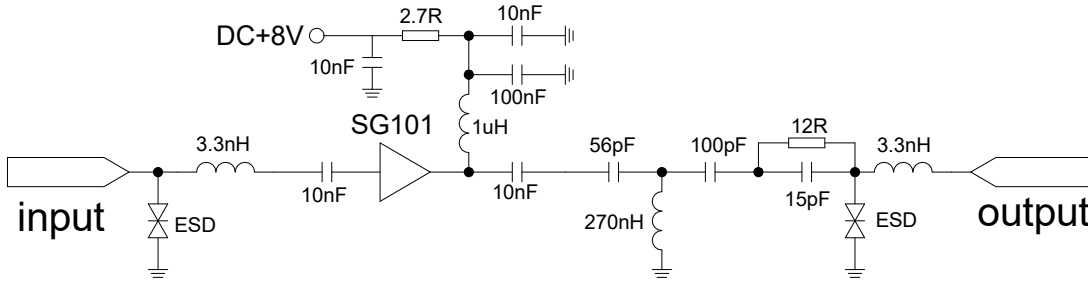
① Tone Spacing=6MHz, Pout per ton=9dBm ② OIP2 is measured at F1+F2 Frequency

③ 79Ch., Flat, +35dBmV

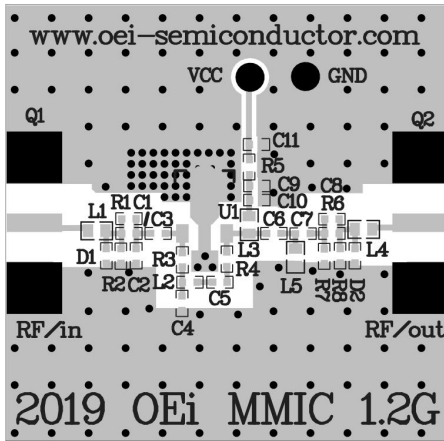
Important Note:

The information provided in this datasheet is deemed to be accurate and reliable only at present time. Sanland Technology Corp. reserves the right to make any changes to the specifications in this datasheet without prior notice.

TYPICAL APPLICATION CIRCUIT



Recommended PCB



Stresses in excess of the absolute ratings may cause permanent damage.

Parameters	MIN	MAX	UNIT
Voltage	0	+12	V
Input Power	-	+10	dBm
Storage Temperature	-65	+150	°C

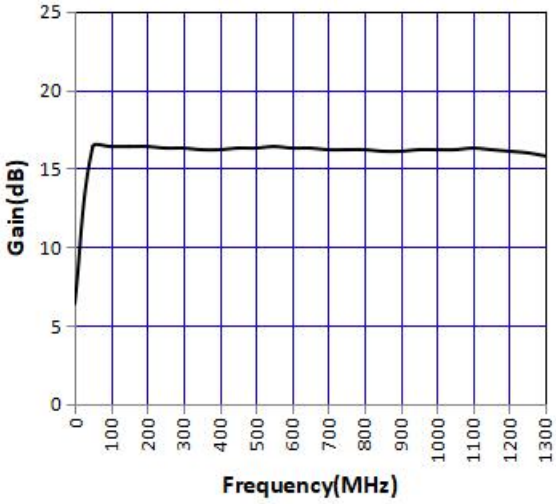
Absolute Minimum Range and Maximum Application Conditions

Parameters	MIN	TYP	MAX	UNIT
Frequency	50	-	1218	MHz
Operating Voltage	5	8	10	V
Application Temperature	-40	-	+85	°C
Operating Junction temperature		150		°C

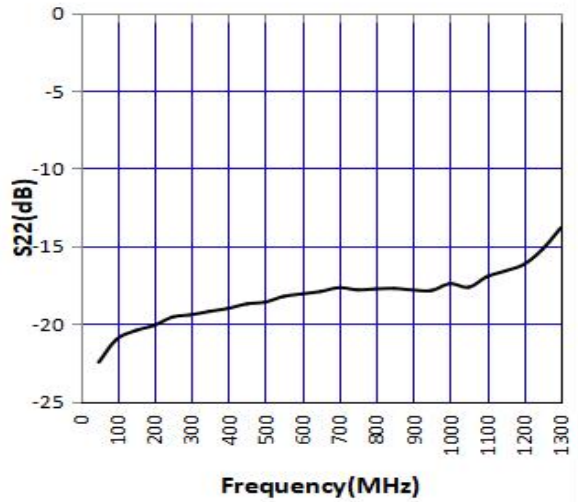
PERFORMANCES CHART

($T_A=+25^{\circ}\text{C}$, $V_{DD}=+8\text{ v}$, 75Ω ssystem)

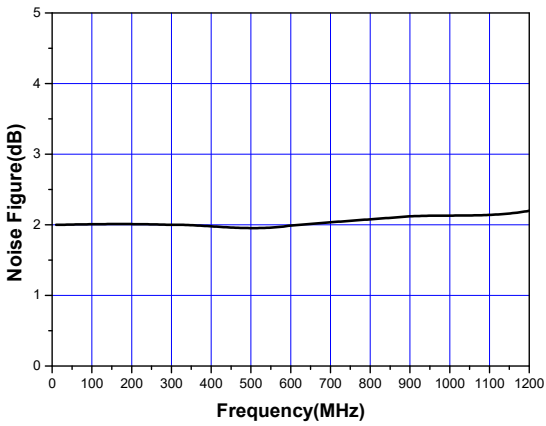
Gain VS Frequency



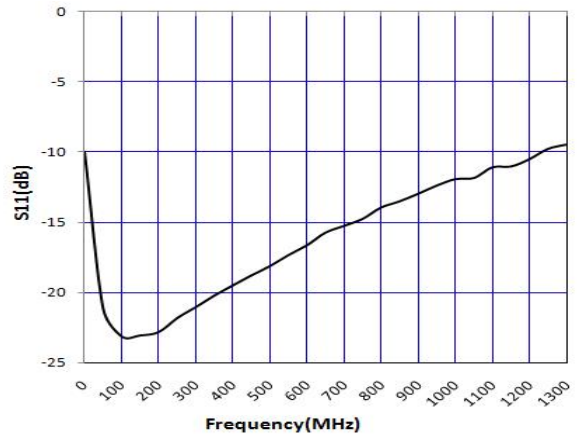
S22 VS Frequency



Noise Figure VS Frequency

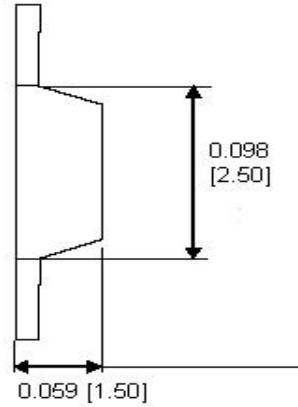
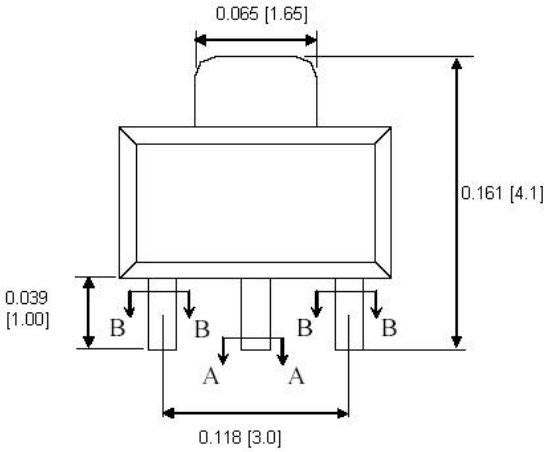


S11 VS Frequency



SOT89 PACKAGE AND PCB PAD LAYOUT

Units: inch [millimeter]



Symbol	inch	mm
A	0.016	0.42
B	0.019	0.5

