

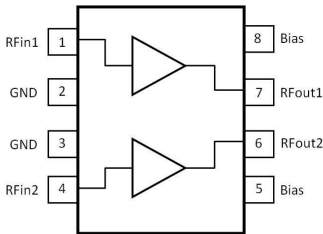
DESCRIPTION

The power amplifier (SG800) is designed for CATV output stage amplification.

GaAs MMIC is used and attached on a copper carrier of 8 pin air cavity package with dual supply voltage. SG800 is RoHS compliant and manufactured with green molding compounds that contain no antimony trioxide nor halogenated fire retardants.

Major Applications

- CATV Amplifier, MATV
- FTTH(G-PON,GE-PON)
- FTTB Node



KEY FEATURES

Product Features:

- Higher Linearity
- Low Distortion
- Low Noise Figure: 2.5dB
- 20dB Gain
- Single +8V Supply
- Wide Bandwidth: 50MHz to 1.218 GHz
- SOIC-8 Package Options



ESD Class 1C

Appropriate precautions in handling , packaging and testing devices must be observed !



Pin Assignment

Pin	Name	Function
1	RF in	RF1 Input
2	GND	Ground
3	GND	Ground
4	RFIn2	RF2 Input
5	Bias	Bias
6	RFout 1	RF1 output
7	RFout 2	RF2 output
8	Bias	Bias

TYPICAL PARAMETERS

(TA=+25°C,VDD=+8V/DC,75Ωsystem)

Parameter	Units	Typical		
		50	550	1218
Frequency	MHz	50	550	1218
Noise Figure	dB	-	2.5	-
Gain	dB	16	17.5	19
S11	dB	-14	-18	-13
S22	dB	-23	-18	-15
Output P1dB	dBm	27	27	27
Output IP3①	dBm	44	42	42
Output IP2②	dBm	80	68	68
CSO③	dBc	-	80	-
CTB③	dBc	-	78	-
Supply Current	mA	-	320	-
Supply Voltage	V	-	8	-

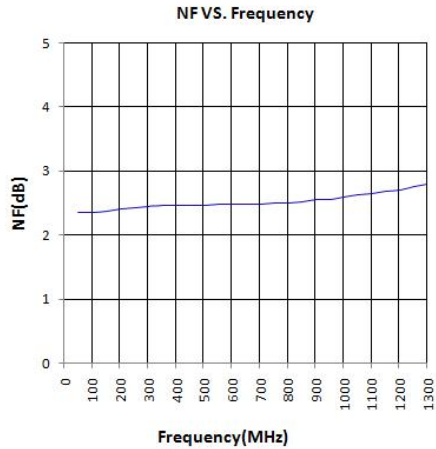
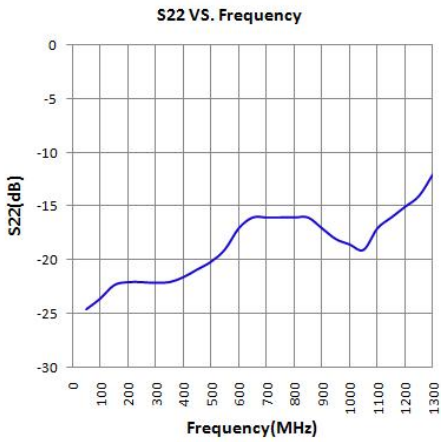
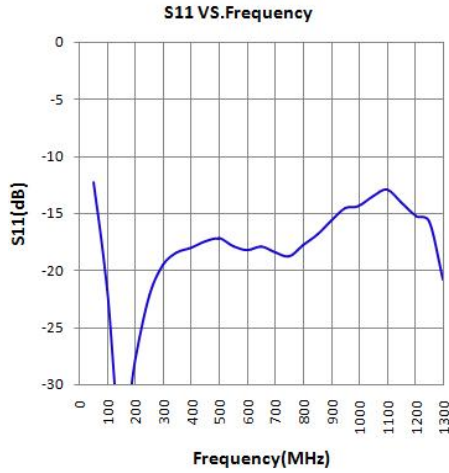
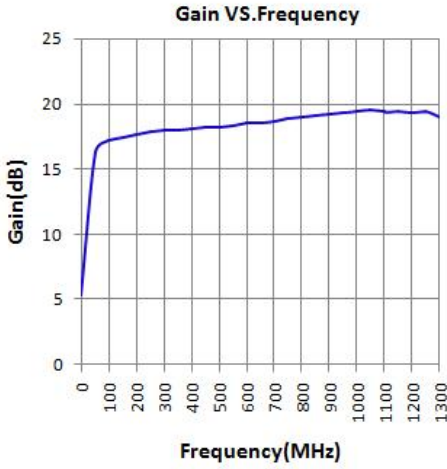
① Tone Spacing=6MHz, Pout per ton=9dBm ② OIP2 is measured at F1+F2 Frequency

③ 85Ch.,Flat,+35dBmV

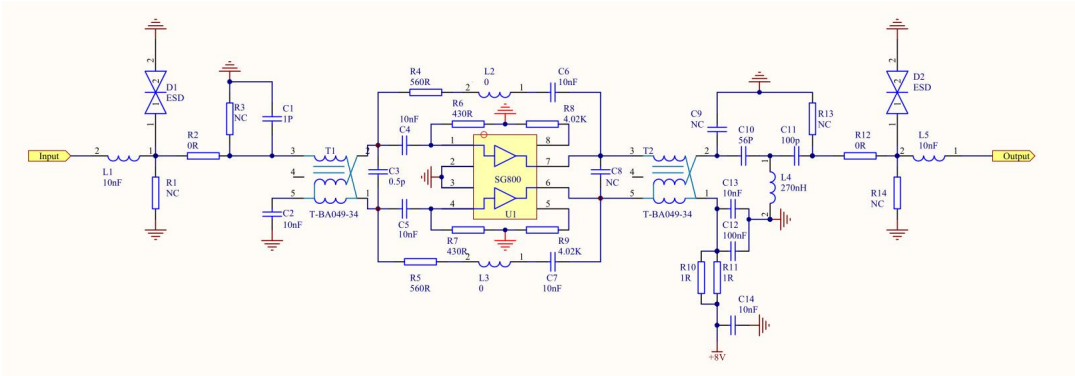
Important Note:

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 Performance Curves over temperature



Schematic Including Off-Chip Components



Off-Chip Component Values

Comment	Designator	Footprint	Quantity
10nF	C2 C4 C5 C6 C7 L1 L5	0402	7
10nF	C13 C14	0603	2
100nF	C12	0603	1
0.5pF	C3	0402	1
1pF	C1	0402	1
56pF	C10	0402	1
100pF	C11	0402	1
Q-BUE2FD18VBS	D1 D2	0402	2
1.2R	R10 R11	0805	2
270nH	L4	0603	1
430 ohm	R6 R7	0402	2
560 ohm	R4 R5	0402	2
4.02K	R8 R9	0402	2
0 ohm	R2 R12 L2 L3	0402	4
PORT	RF IN RF OUT		2
1:1	T1 T2	MAAM-0069	2
SG800	U1	SOIC-8	1

Lead-Free SOIC-8 Plastic Package

Package Dimensions (Type: SOIC-8)

