Product Features

Frequency: 30MHz ~ 2.7GHz

Gain : 17.4dB@1GHz

P1dB Compression: 30.2dBm@1GHz

OIP3: 49.4dBm@1GHz

Vdd=+11V, I_{DQ} =339mA

Package: DFN8L (plastic seal)

Application

Communication Base Stations

Test and Measurement Equipment

Point-to-point Communication

VHF/UHF Stations

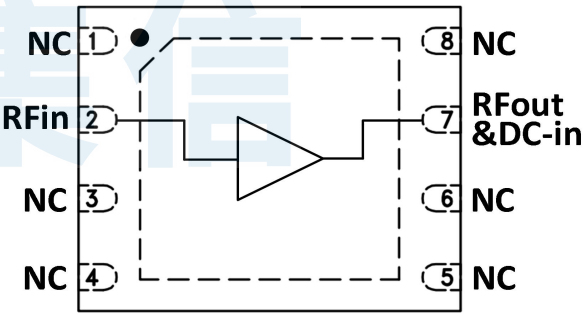
Ordering Information

Part Number	Package	Description
BR9535DA	DFN8L	30MHz to 2.7GHz 1W Driverr Amplifier

General Description

BR9535DA is a 1W linear drive amplifier fabricated by GaAs process. Which is housed in DFN8L package, , It provides 36dB gain at 2.6GHz,the 1dB compression point is greater than 30.2dBm and OIP3 is greater than 49.4dBm. Due to the input and output ports of the device are internally matched, high power or high linearity Application can be achieved with only external capacitors and choke inductors. The product is suitable for application in wireless communication infrastructure, FDD/TDD base stations, radar, and high power amplifier driver stages.

Functional Block Diagram



Electrical Specifications

Parameters	Min.	Typ.	Max.	Units	Test Condition
Gain	-	17.4	-	dB	1GHz
Input Return Loss	-	-17.2	-	dB	1GHz
Output Return Loss	-	-28.1	-	dB	1GHz
Isolation	-	-22.7	-	dB	1GHz
P1dB Compression	-	30.2	-	dBm	1GHz
OIP3	-	49.4	-	dBm	1GHz
Noise Figurer	-	3.1	-	dB	1GHz
Test Conditions: Vdd=+11V, I_{DQ}=339mA, OIP3 spacing=1MHz, Pout=16dBm per tone, Temp=+25℃					

Absolute Maximum Ratings

Maximum Operating Voltage (Vdd) : +14V

Maximum RF input Power: +24dBm

Recommended Operating Conditions

Power Supply : +10V ~ +12V

Storage Temperature: -65℃ ~ +150℃

Operating Temperature: -55℃ ~ +125℃

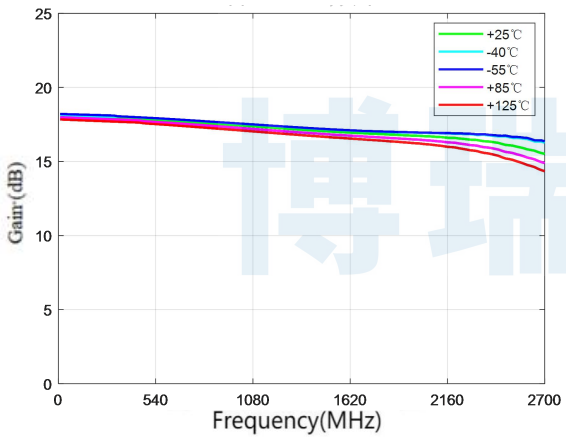
ESD WARNING

ELECTROSTATIC SENSITIVE DEVICE

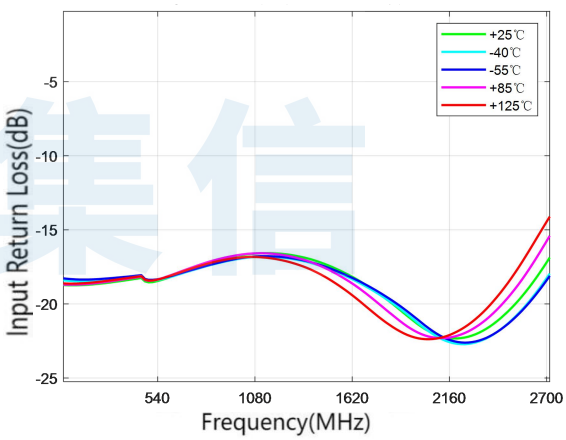
OBSERVE HANDLING PRECAUTIONS

Typical Performance (EVB test results+8V 30MHz-2700MHz)

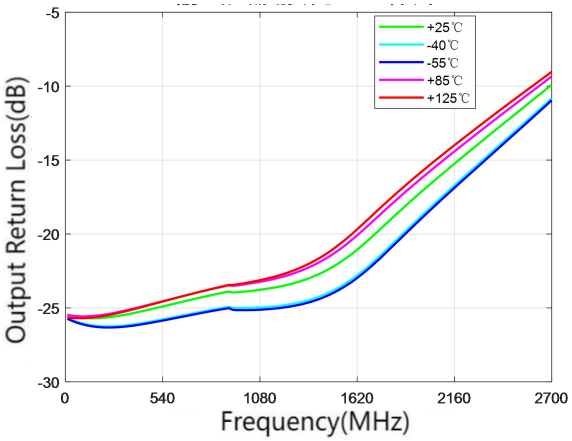
Parameters	Typ.							Units
Frequency	30	100	500	1000	1500	2000	2700	MHz
Gain	18.1	18.1	17.9	17.4	17	16.6	15.1	dB
Input Return Loss	-14.2	-20	-19.5	-17.2	-18.8	-24.2	-15.3	dB
Output Return Loss	-20.2	-20.7	-25	-28.1	-21.3	-20	-8.1	dB
P1dB Compression	29.3	29.4	30	30.2	30	27.6	25.6	dBm
OIP3	48.6	50.9	51.6	49.4	48	46.1	42.5	dBm
Noise Figure	2.9	2.9	2.9	3.1	3.4	3.8	4.8	dB
Test Conditions: Vdd=+11V, I=339mA, OIP3 spacing=1MHz, Pout=16dBm/tone, Temp=+25℃								



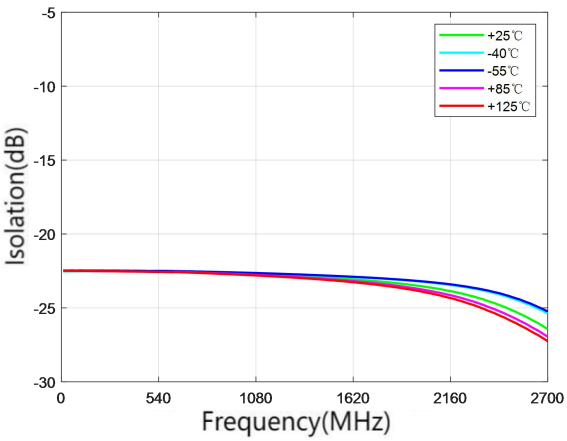
Gain



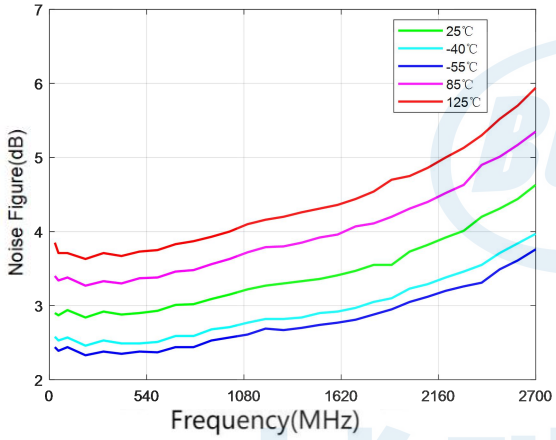
Input Return Loss



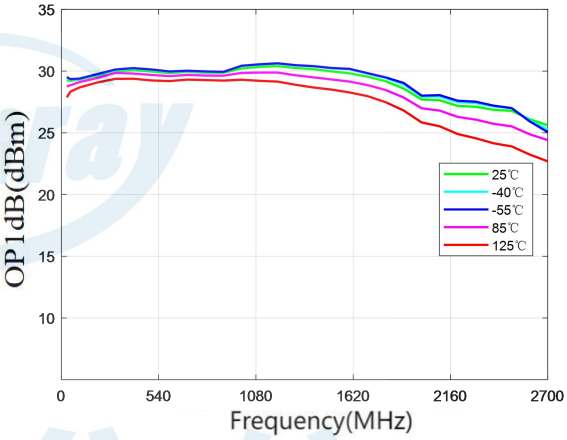
Output Return Loss



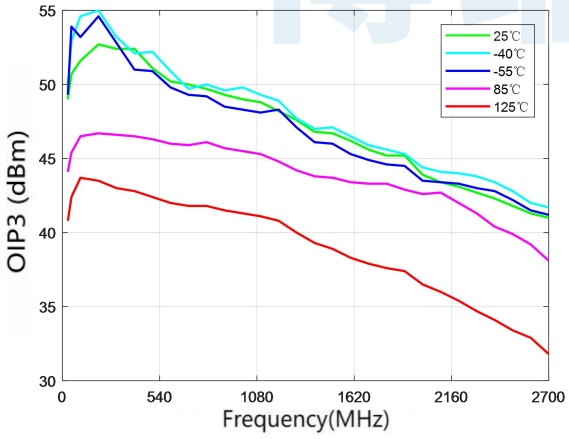
Reverse Isolation



Noise Figure

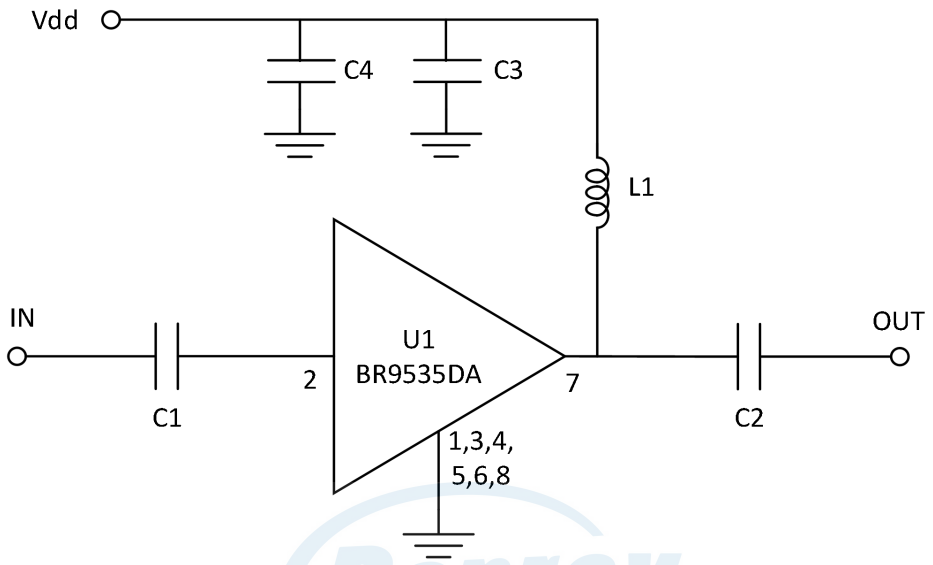


Output Power for 1dB Compression



Output Third-Order Intercept

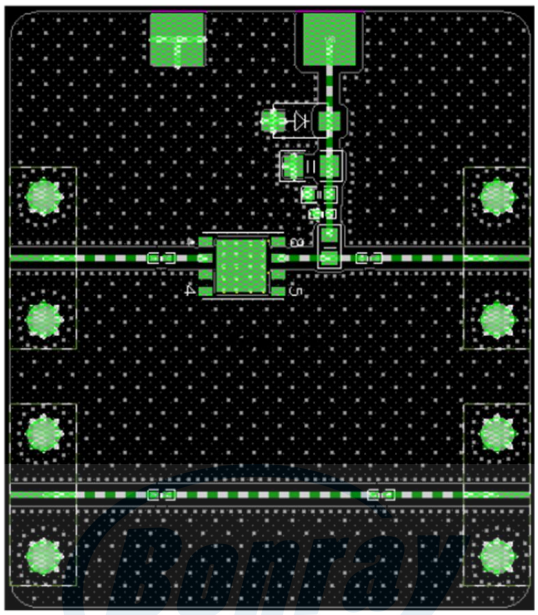
Application Information



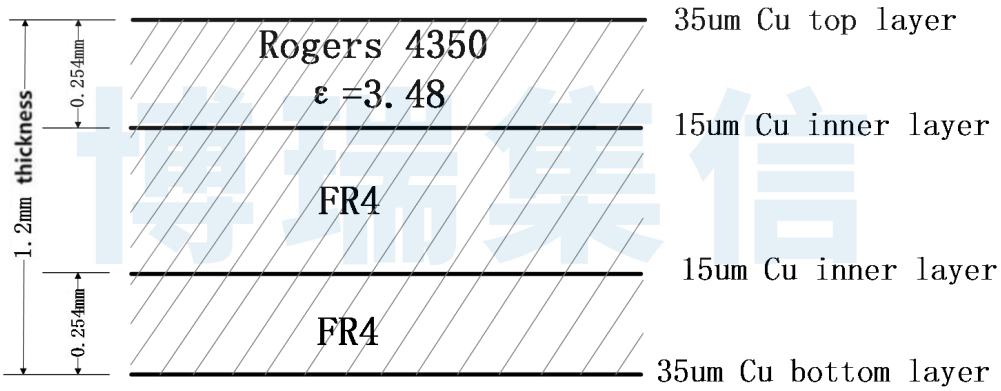
Bill of Material

Designator	Package	Description	Part Number
C1, C2, C3	0402	2.2 the nF	GRM155R71H222JA01D
L1	1008	1.1 uH	1008AF-112XJRB
C4	1206	10 u F	GRM31CR61H106KA12L

Evaluation Board

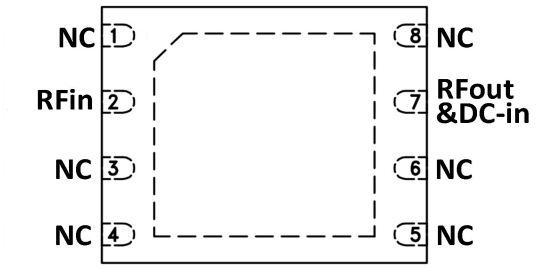


PCB



50 ohms Impedance Signal Lines： width=0.53mm, spacing=0.53mm

Pin lyout and Description



Pin Number	Pin Name	Description
1,3,4,5,6,8	NC	There is no connection inside the device, but all test data is based on these pin ground measurements.
2	RFin	Rf input
7	RFout&DC-in	Rf output as well as DC power supply pins.
-	EP	Grounded.

Package Dimensions (mm)