

**Product Features**

- 50 ~ 3000 MHz
- GaAs MMIC
- 43dBm Output IP3
- 26dB Gain
- 24dBm P1dB
- Single +9V Supply

**Application**

- C DMA, W-CDMA Medium Power Amplifier
- High Linearity Drive Amplifier

**Description**

AP249 is a high linearity amplifier designed with GaAs MMIC. AP249 is designed for applications such as GSM, CDMA, W-CDMA driver devices which require high IP3

**ELECTRICAL CHARACTERISTICS****Absolute Minimum and Maximum Ratings**

PARAMETER	UNIT	MIN	MAX
Device Voltage	VDC		+12
RF Input Power	dBm		+10
Storage Temperature	°C	-40	+150

**Operating Ranges**

PARAMETER	UNIT	MIN	TYP	MAX
Operating Frequency	MHz	250		3000
Device Voltage	VDC		+9	+10
Case Temperature	°C	-40		+85

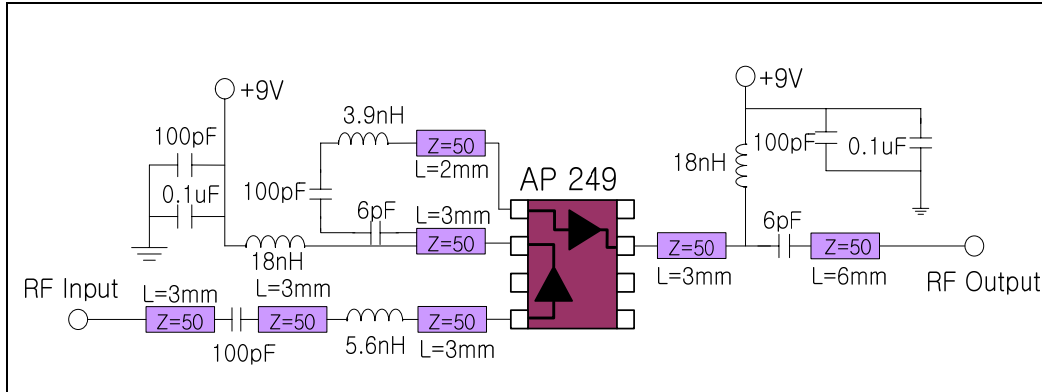
**Electrical Specifications**

(Ta=+25 °C, V<sub>DD</sub>=+9V, Fc=900 MHz)

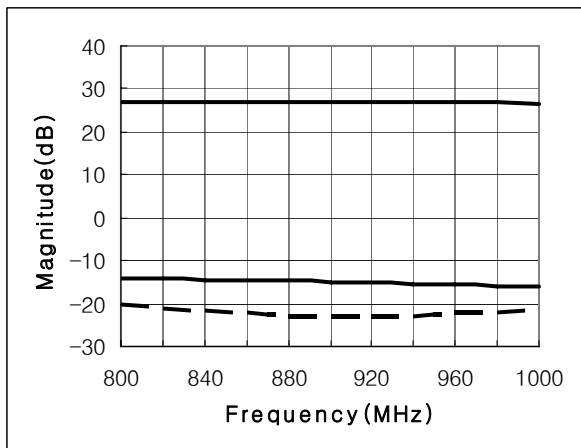
PARAMETER	UNIT	MIN	TYP	MAX
Gain	dB	27	28	
Input Return Loss	dB		-15	
Output Return Loss	dB		-15	
Output IP3	dBm	+40	+43	
1dB Compression Point	dBm		+24	
Noise Figure	dB		2.5	
DC Current	mA		240	
Supply Voltage	VDC		+9	
Thermal Resistance(Rth)	°C/W			20

OIP3 is measured with two tones, at an output power of 10dBm/tone separated by 1MHz

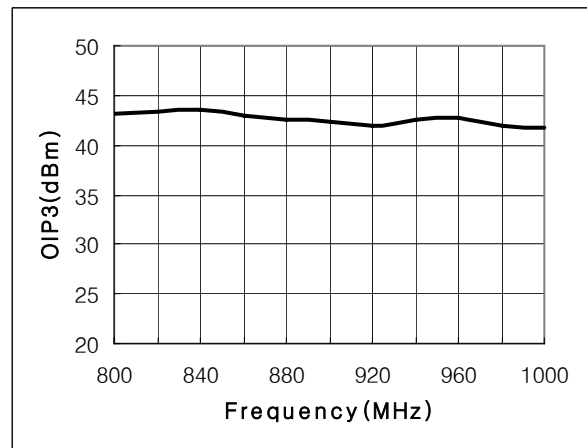
Application Circuit (900 MHz)



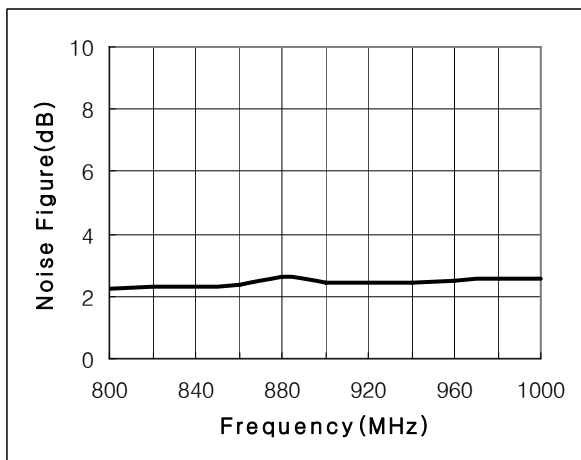
S-Parameter vs. Frequency



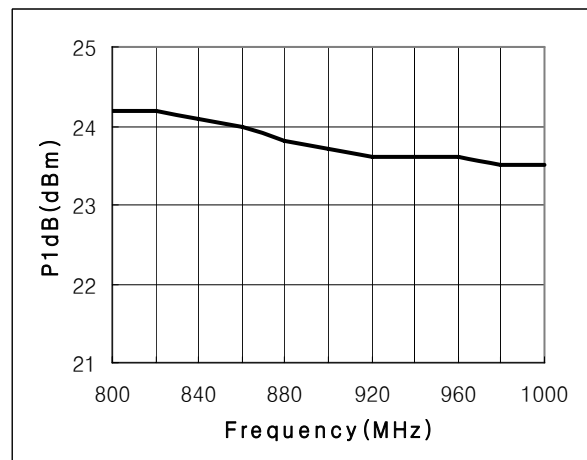
OIP3 vs. Frequency



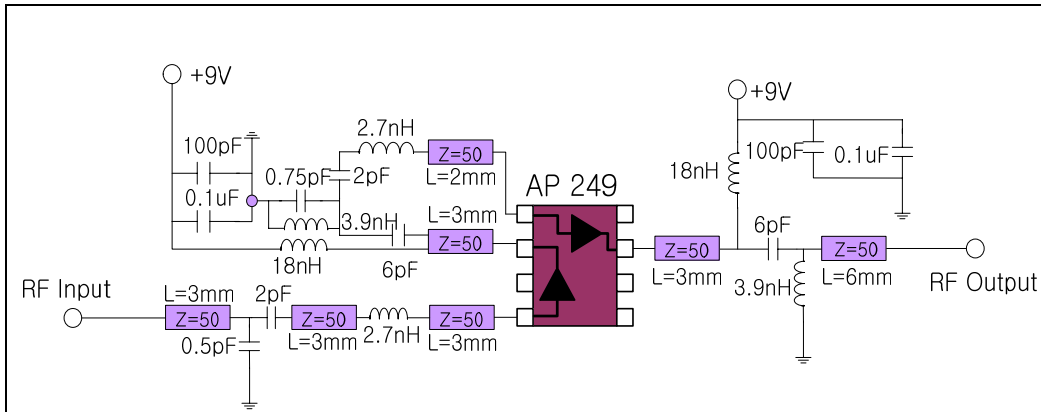
Noise Figure vs. Frequency



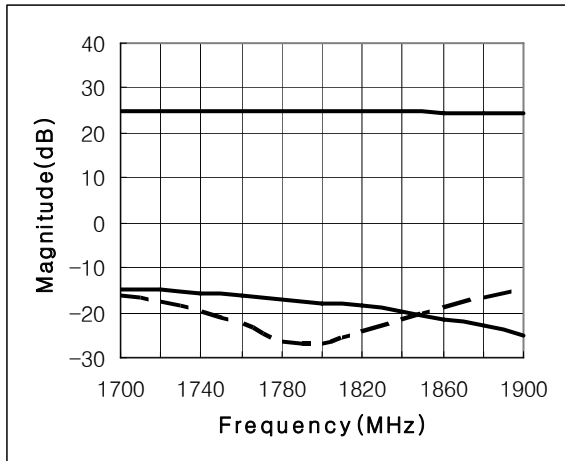
P1dB vs. Frequency



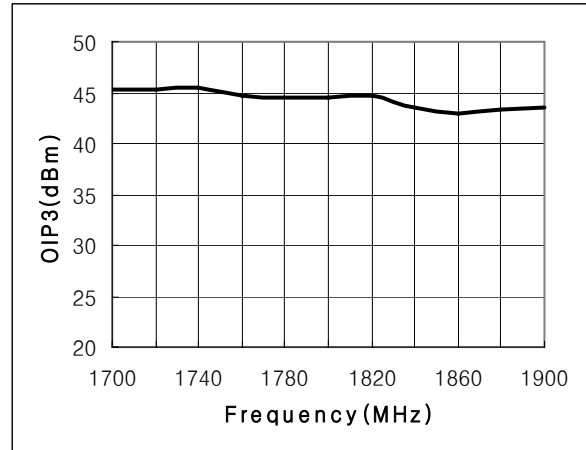
Application Circuit (1800MHz)



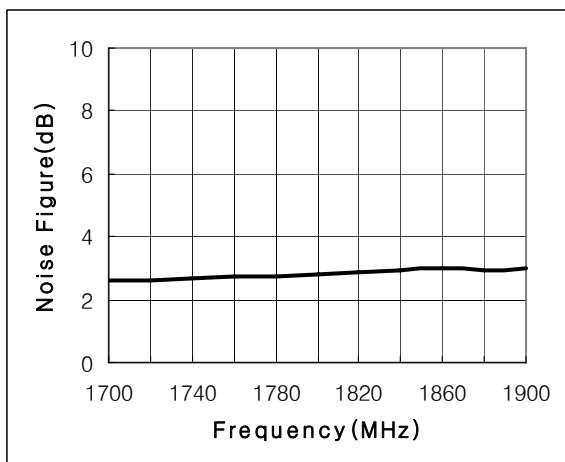
S-Parameter vs. Frequency



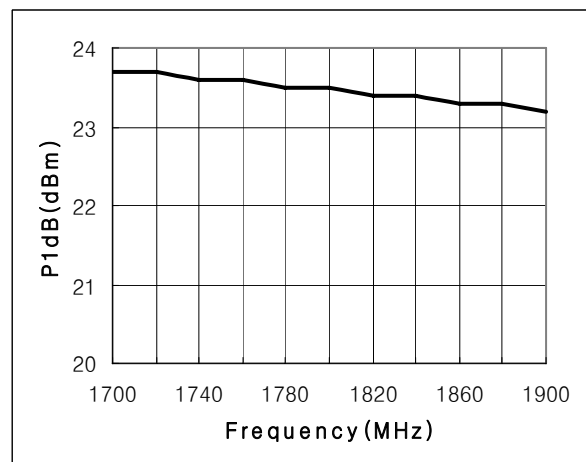
OIP3 vs. Frequency



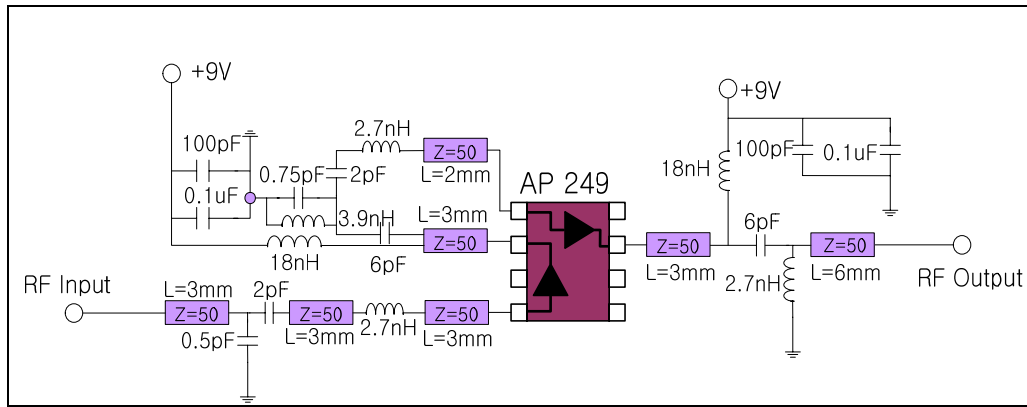
Noise Figure vs. Frequency



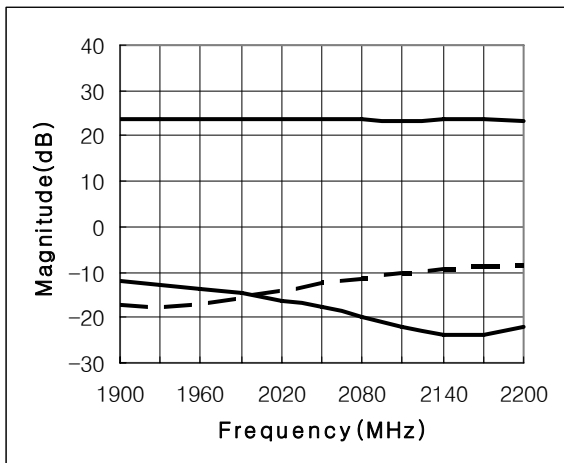
P1dB vs. Frequency



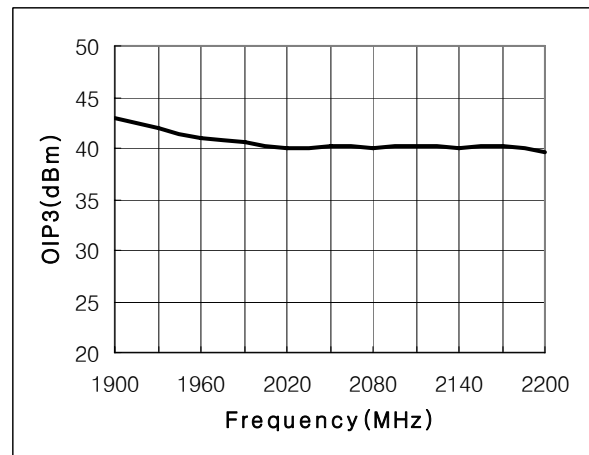
Application Circuit (2100MHz)



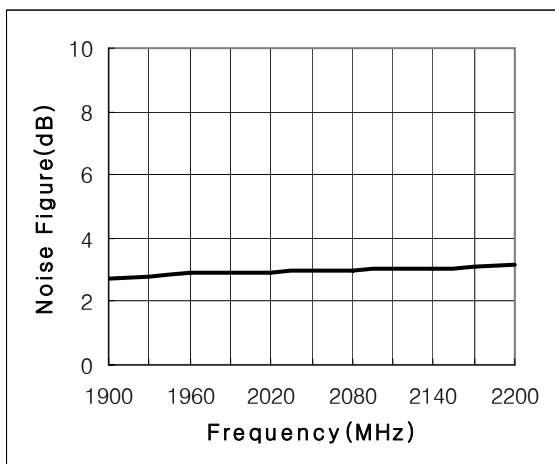
S-Parameter vs. Frequency



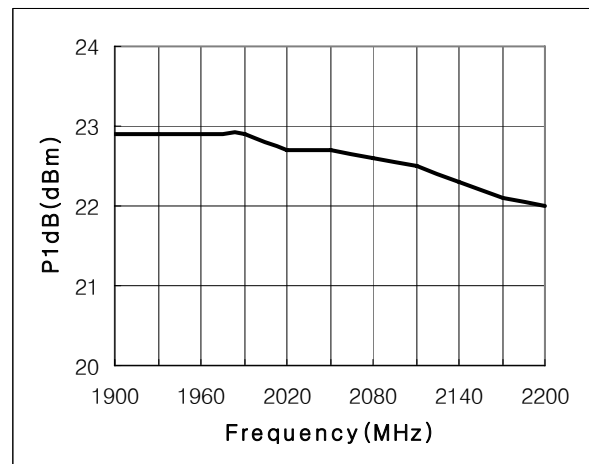
OIP3 vs. Frequency



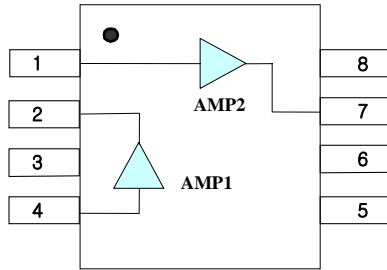
Noise Figure vs. Frequency



P1dB vs. Frequency

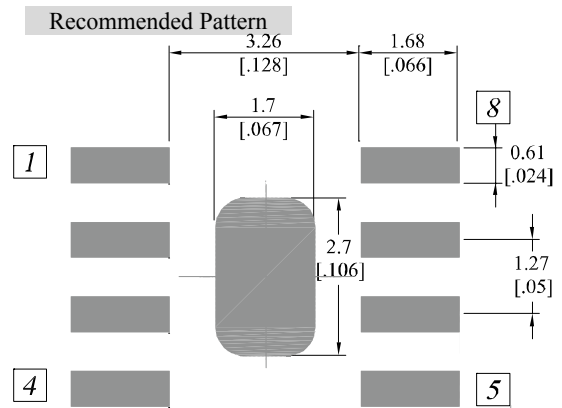
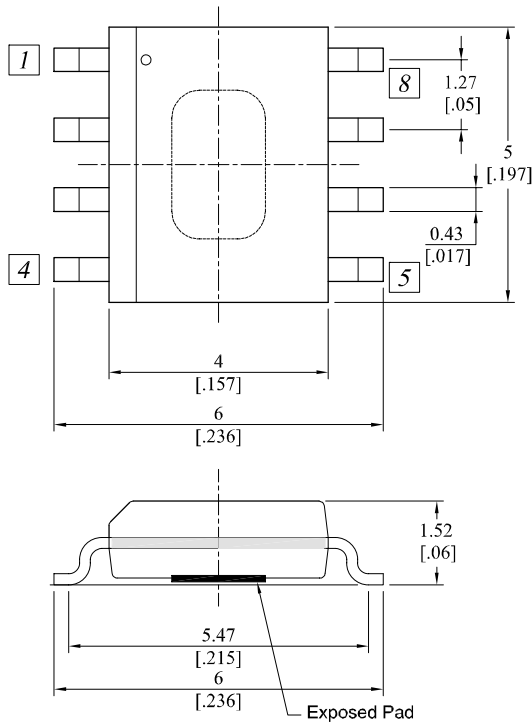


**Pin Description**



Pin No	Function
1	RF IN(2)
2	RF OUT(1)
4	RF IN(1)
7	RF OUT(2)
3, 5, 6, 8	N.C
Exposed slug	GND

**Package Dimensions (Type: SOIC-8)**



Unit : $\frac{\text{mm}}{\text{[inch]}}$	Tolerance : $\pm \frac{0.2}{.008}$
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