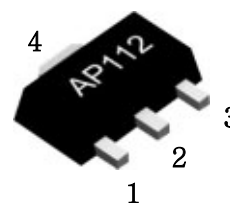


**Product Features**

- DC ~ 2.2GHz
- GaAs MMIC
- 34dB Output IP3
- 17dB Gain
- 20dB P1dB
- Single +5V Supply
- SOT89 SMT Package

**Application**

- PCS Repeater
- RF Sub-Systems
- Base Station
- Converter

**Description**

AP112 uses DC up to 2.2GHz frequency.

The package is SOT-89, which is pin-to-pin compatible with competitor's products.

Pin No.	Function
P1	Input
P3	Output, Bias
P2, P4	Ground

**Specifications (50MHz to 1000MHz)**

PARAMETER	Units	Minimum	Typical	Maximum	Condition
S21(SSG)	dB	17	17.7		
S11 (Input Return Loss)	dB		-15		
S22 (Input Return Loss)	dB		-14		
Output IP3	dBm	34	38		
Output P1dB	dBm		20		
Noise Figure	dB		3.4		
DC Current	mA		100	105	Vdd = 5.0V
Supply Voltage	V		5		

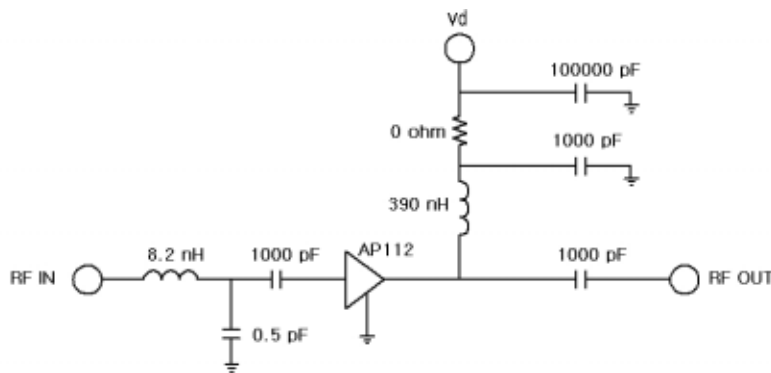
**Specification (50MHz to 2200MHz)**

PARAMETER	Units	Minimum	Typical	Maximum	Condition
S21(SSG)	dB	16	17		
S11 (Input Return Loss)	dB		-12		
S22 (Input Return Loss)	dB		-11		
Output IP3	dBm	28	34		
Output P1dB	dBm		18		
Noise Figure	dB		3.4		
DC Current	mA		100	105	Vdd = 5.0V
Supply Voltage	V		5		

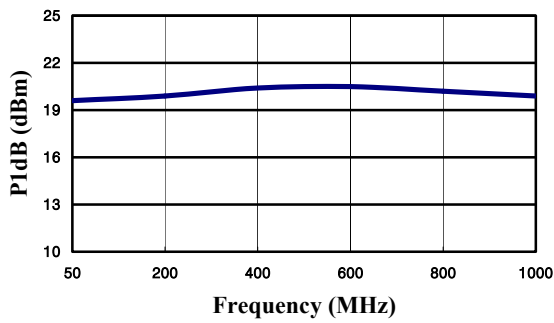
Application Circuit 1. : 50MHz ~ 1000MHz

PARAMETER	Units	50MHz	200MHz	400MHz	600MHz	800MHz	1000MHz
S21(SSG)	dB	17.6	17.9	17.6	17.7	17.7	17.6
S11(Input Return Loss)	dB	-12.2	-16.1	-16.1	-15.4	-15.3	-14.0
S22(Input Return Loss)	dB	-11.4	-14.3	-15.5	-14.1	-15.7	-17.1
Output IP3	dBm	38	38.5	38.8	38.5	36.5	35.2
Output P1dB	dBm	19.6	20	20.4	20.5	20.1	19.9
Noise Figure	dB	3.2	3.24	3.28	3.4	3.45	3.55
Bias	Vd = 5V, Id = 100mA						

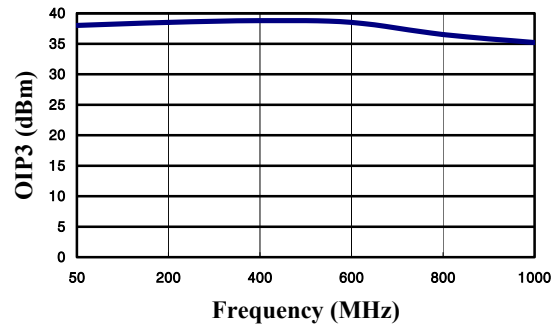
Schematic



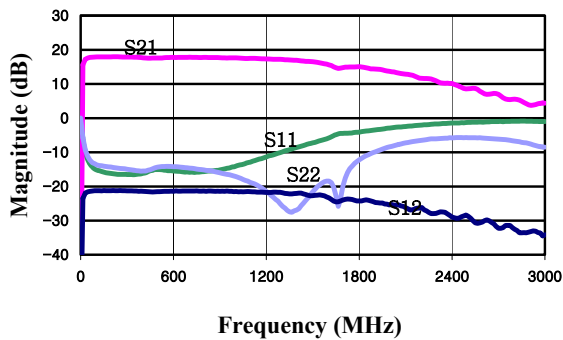
Output P1dB vs. Frequency



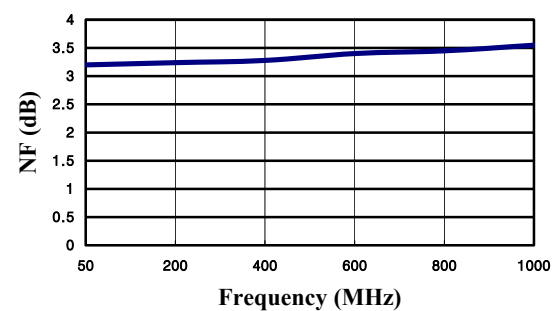
OIP3 vs. Frequency



S Parameter



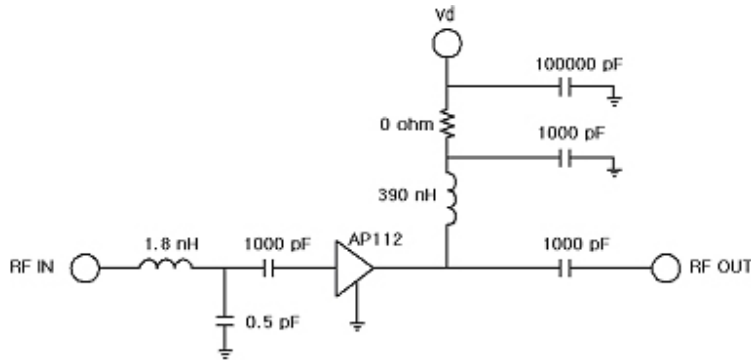
Noise Figure



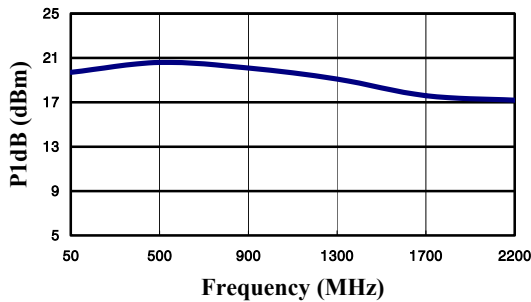
Application Circuit 2. : 50MHz ~ 2200MHz

PARAMETER	Units	50MHz	500MHz	900MHz	1300MHz	1700MHz	2200MHz
S21(SSG)	dB	17.5	17.8	17.8	17.6	16.4	16.3
S11(Input Return Loss)	dB	-11.8	-16.2	-17.3	-15.7	-12.2	-10.1
S22(Input Return Loss)	dB	-11.2	-13.7	-13.1	-11.8	-11.2	9.9
Output IP3	dBm	38	38.5	36.5	34.5	31	28
Output P1dB	dBm	19.7	20.6	20.1	19.1	17.6	17.2
Noise Figure	dB	3.0	3.1	3.2	3.4	3.55	3.71
Bias	Vd = 5V, Id = 100mA						

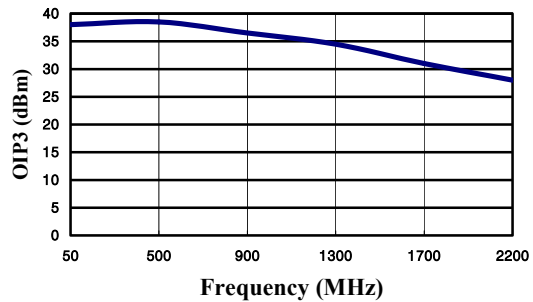
Schematic



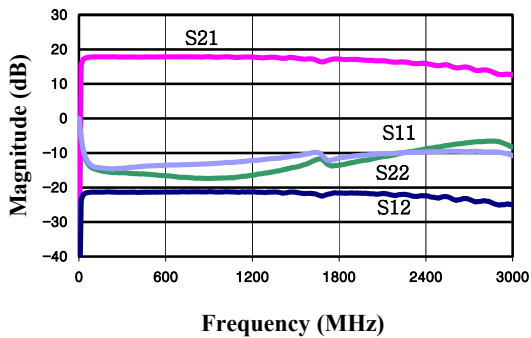
Output P1dB vs. Frequency



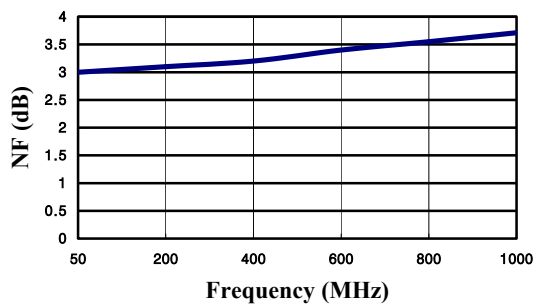
OIP3 vs. Frequency



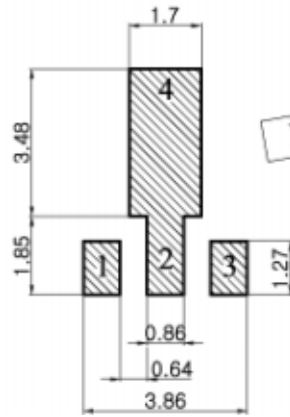
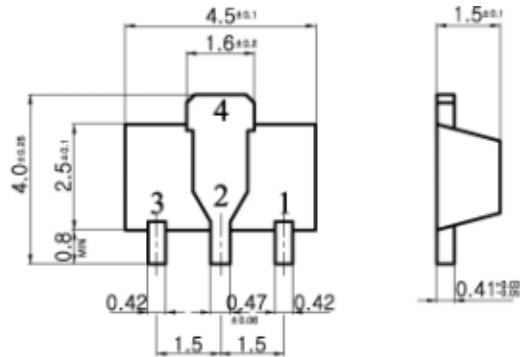
S Parameter



Noise Figure



Dimensions in mm



Recommended Pattern

Tol. : +0.05  
-0.0