

Product Features

- Small size
- SMD Type Package
- NO matching circuit needed
- High efficiency
- Dual supply voltage
- Higher linearity
- 8 pin Air cavity package
- Higher productivity
- Lower manufacturing cost
- GaAs MMIC
- 30 – 870MHz
- -70dBc CSO 135 Channels@ output Level +40dBmV
- -63dBc CTB 135 Channels@ output Level +40dBmV

Applications

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



Package : SOIC-8

Descriptions

The power amplifier is designed for base stations and repeater systems.

GaAs MMIC is used and attached on a copper carrier of 8 pin air cavity package with dual supply voltage.

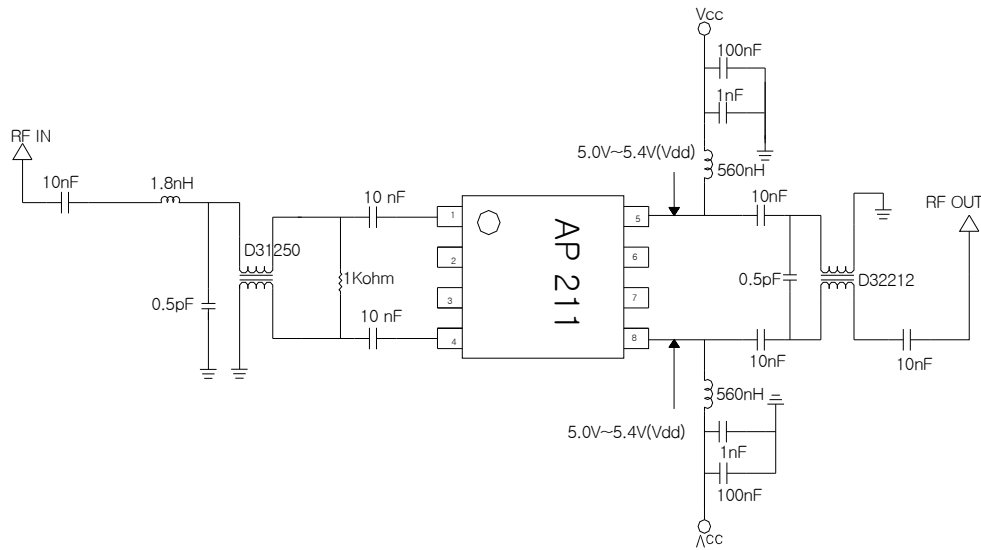
Specifications

Parameter		Units	Minimum	Typical	Maximum	Condition
Frequency Range		MHz		30~870MHz		
Supply Voltage		V		5		Vdd=5V
Single Ended CATV Evaluation						
Current		mA	200	230	260	
S21-Gain		dB	11.5		12.5	30MHz
S21-Gain		dB	11		12	870MHz
S11-Input Return Loss		dB	-5	-6.5		
S22-Output Return Loss		dB	-10	-12.5		
OIP3		dBm		43		NOTE 2
OIP1		dBm	23.5	24.5		
Noise Figure		dB		2.5	4.5	
CSO	30 - 870MHz	dBc		-70	-65	135 channels,+40dBmV/ch
CTB		dBc		-63	-60	135 channels,+40dBmV/ch
XMD		dBc		-53	-50	135 channels,+40dBmV/ch

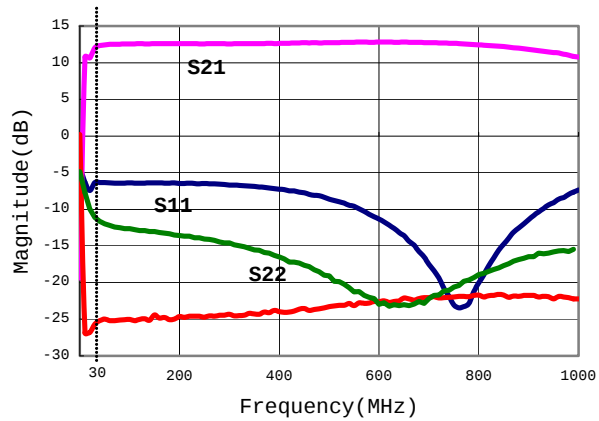
NOTE

1. Test conditions unless otherwise noted. T=25°C, Vdd=5.0V, 75Ω system
2. OIP3 measured with 2 tones at an output power of +11dBm/tone separated by 1MHz

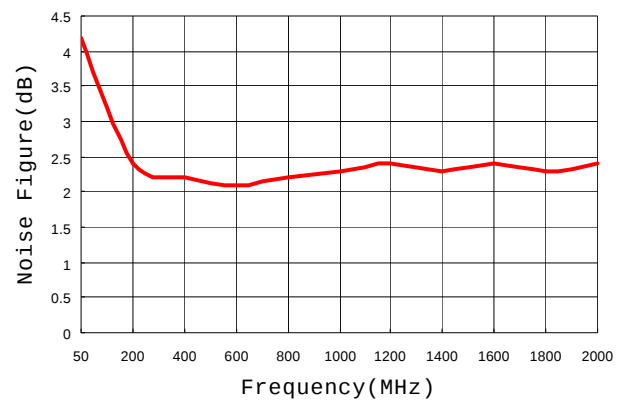
Application 1 : Forward (30MHz ~ 870MHz)



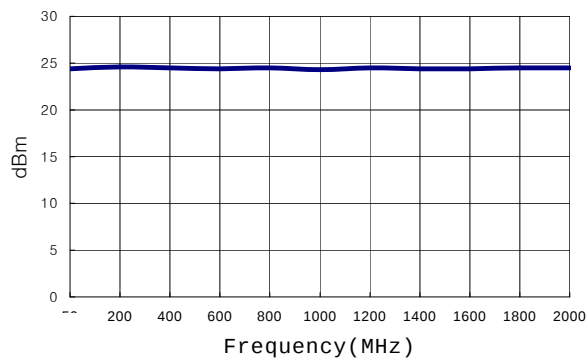
S-Parameters



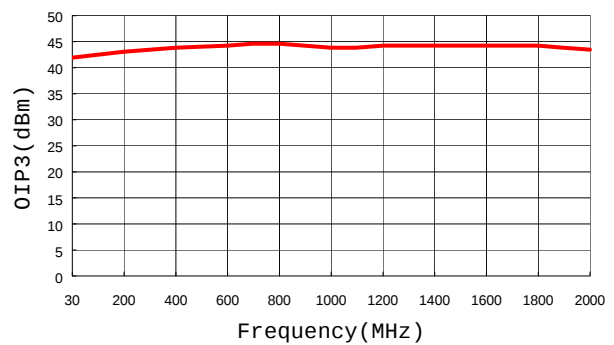
Noise Figure



P 1 dB



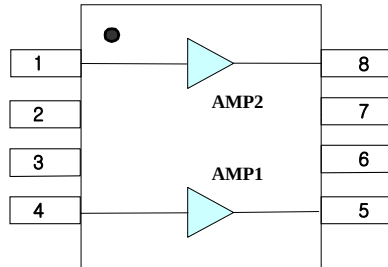
OIP3



Multi-Tone Test 135ch@+40dBmV(AP211)

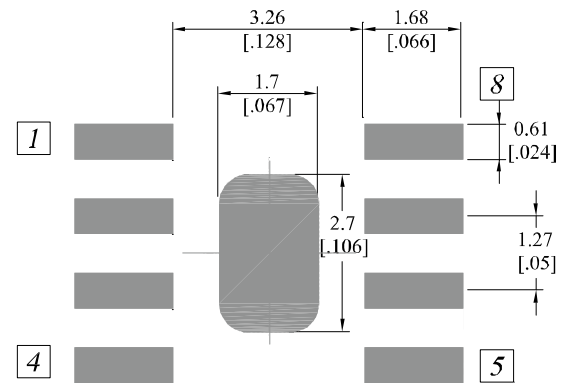
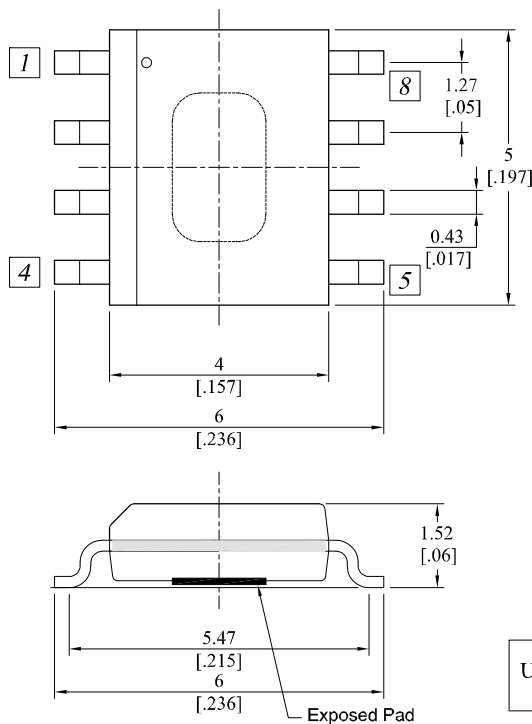
Level: +40dBmV		Tilt: 135CH FLAT								
FRQ	XMD(NCTA)	CTB_RAW	CTB_COR	N-FLR	CSU_RAW	CSU_COR	CSU_FRQ	CSL_RAW	CSL_COR	CSL_FRQ
55.25	55.2	65.7	65.7	85.3	82.9	85.9	56	71	71.2	54
77.25	55.2	66.7	66.7	86.2	72.8	73.1	78	85.5	89.8	76.61
109.25	56.2	65.7	65.7	86.2	84.2	88.5	110	72.9	73.1	108
211.25	55.1	65.6	65.6	86.5	77.5	78.2	212.5	72.1	72.3	210
331.25	55.4	63.6	63.6	85.2	73.4	73.7	332.5	71.3	71.5	329.99
445.25	54.8	64.4	64.4	85.6	72	72.2	446.49	71.2	71.4	444
547.25	54.8	63.7	63.7	83.8	70.6	70.9	548.5	70.7	71	545.99
637.25	55.3	63.9	63.9	84.2	71.1	71.4	638.5	69.9	70.1	635.99
745.25	55.3	64.2	64.2	83.7	72.2	72.5	746.5	71.4	71.7	743.99
859.25	53.3	63.2	63.2	82.1	69.4	69.7	860.49	77.6	79.5	858.5
Min	53.3	63.2	63.2	82.1	69.4	69.7	56	69.9	70.1	54
Max	56.2	66.7	66.7	86.5	84.2	88.5	860.49	85.5	89.8	858.5

Dimensions



PIN No	Description
1	RF IN(2)
5	RF OUT(1)
4	RF IN(1)
8	RF OUT(2)
2, 3, 6, 7	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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