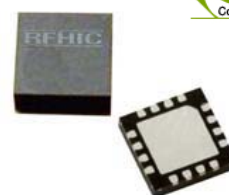


Product Features

- 3-Way Splitter
- 30MHz-1100MHz(1dB Flat)
- Small size (3X3 mm)
- QFN SMD Type package
- Higher productivity
- Lower manufacturing cost
- -59/-60dBc CSO 135 Channels @ +15dBmV/ch
- -70/-71dBc CTB 135 Channels @ +15dBmV/ch
- -71/-73dBc XMD 135 Channels @ +15dBmV/ch
- 4/3.5dB Typical Noise Figure
- 75 ohm input and outputs

Application

- Multi Tuner Set-Top Boxes
- Home Gateways
- FTTx (G-PON, GE-PON)



Package : QFN 3X3

Description

AD354 is designed as low cost Active Divider for many applications including FTTH, CATV System.

This MMIC is based on Gallium Arsenide Enhancement Mode pHEMT which shows low current draw and very low noise.

The data in this spec sheet is valid only for 75 ohm application.

Specifications

PARAMETER		UNIT	MIN	TYP	MAX	Condition
Frequency		MHz	30		1100	
Gain		dB		2.4		Port1, Port2
				5.4		Port3
Gain Flatness		dB		0.4	1	50MHz – 1000MHz
Input Return Loss		dB		-15	-10	
Output Return Loss		dB		-15	-10	
IN&OUT Port Isolation		dB		-30		
OUT&OUT Port Isolation		dB		-23		
Output IP3		dBm		26		At 500MHz
1dB Compression Point		dBm		10		Port1, Port2
Output IP3		dBm		29		At 500MHz
1dB Compression Point		dBm		13		Port3
Noise Figure		dB		4		Port1, Port2
				3.5		Port3
CSO	30 ~ 870MHz	dBc		-59		135 channel@
CTB		dBc		-70		Input Power +15dBmV/ch
XMOD		dBc		-71		Port1, Port2
CSO	30 ~ 870MHz	dBc		-60		135 channel@
CTB		dBc		-71		Input Power +15dBmV/ch
XMOD		dBc		-73		Port3
DC Current		mA		115		Vdd = 5.0V

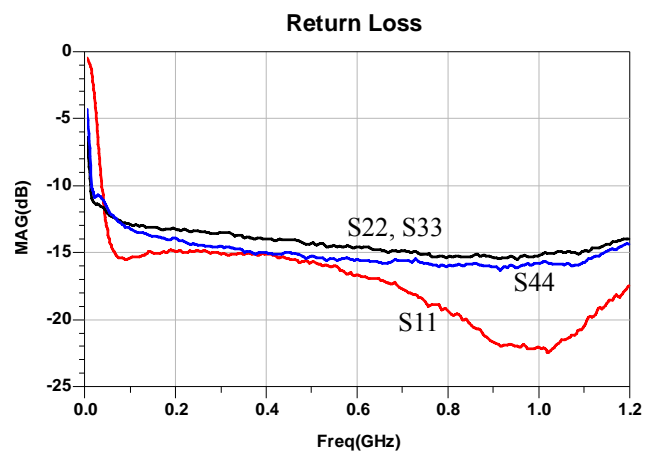
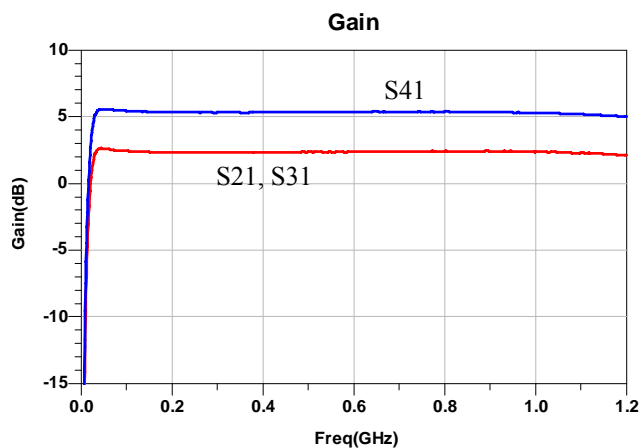
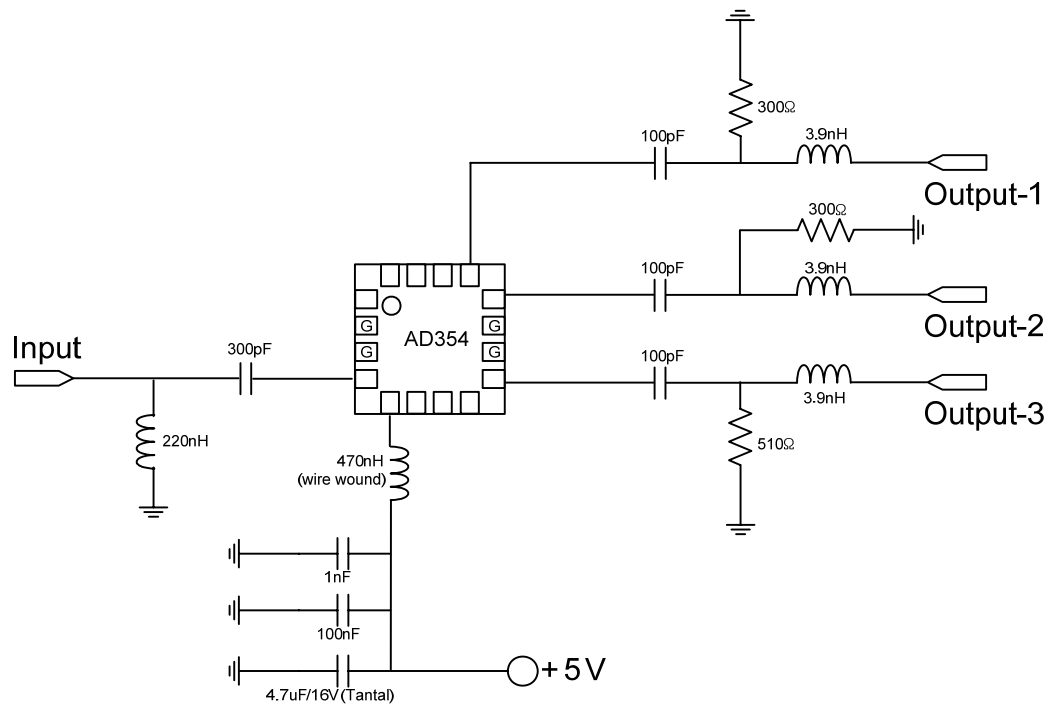
NOTE

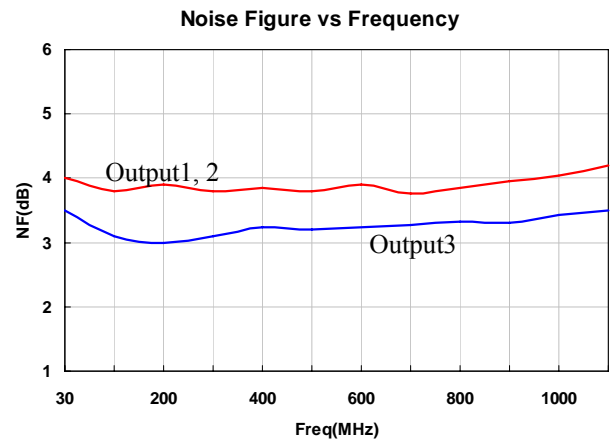
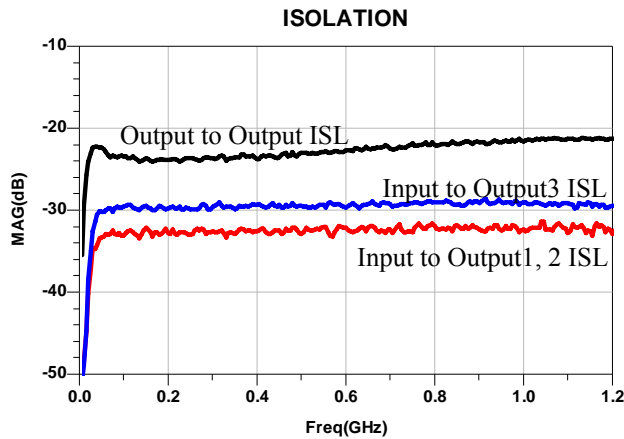
1. Test conditions unless otherwise noted. Test Freq = 500MHz, T=25℃, Vdd=5V, 75Ω system
2. OIP3 measured with 2 tones at an output power of +0dBm/tone separated by 1MHz, Test Freq = 500MHz

Absolute Minimum and Maximum Ratings

PARAMETER	UNIT	MIN	TYP	MAX
Device Voltage	VDC		+5	+5.5
Operating Temperature	°C	-40		+85
Storage Temperature	°C	-40		+150

Application Circuit: 30~ 1000MHz, 5v, 75ohm System





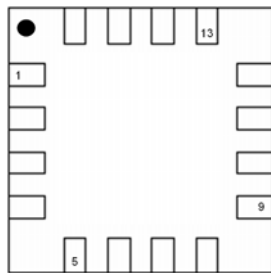
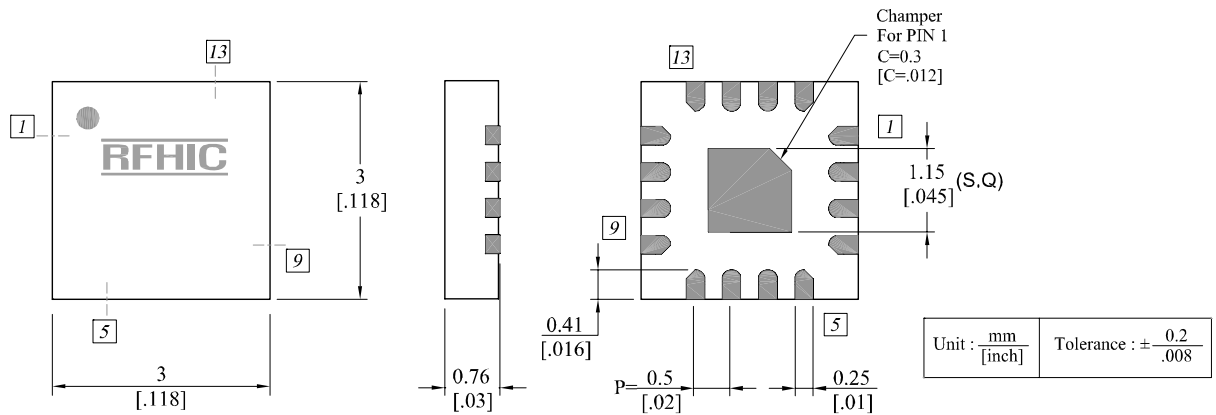
Multi-Tone Test 135CH_FLAT@Input Power +15dBmV/Ch_Output1&2

Level: +15dBmV		Tilt: 135CH								
FRQ	XMD(NCTA)	CTB_RAW	CTB_COR	N-FLR	CSU_RAW	CSU_COR	CSU_FRQ	CSL_RAW	CSL_COR	CSL_FRQ
55.25	75	78.3	82.6	79.2	77.3	81.7	55.99	59.4	59.4	53.99
77.25	80.4	78.5	82.8	79.4	61.3	61.3	77.99	79	83.3	76.2
109.25	79.5	78.4	82.7	79.3	78	82.3	109.99	61.8	61.8	107.99
211.25	74.9	76.9	81.2	78.6	76.5	80.8	212.49	63.5	63.6	209.99
331.25	74.4	74.6	77.6	77.5	74.3	77.3	332.5	64.1	64.3	329.98
547.25	72.5	72.5	74.7	76.7	73.6	76.2	548.49	66.6	67.1	545.98
637.25	73	72	73.7	76.8	73.8	76.8	638.49	69.1	69.9	635.98
745.25	72.6	71.2	72.7	76.7	73.8	76.8	746.49	72.5	74.4	743.98
859.25	71.1	70.6	72.5	75.1	72.9	76.5	860.49	74.8	79.1	858.49
Min	71.1	70.6	72.5	75.1	61.3	61.3	55.99	59.4	59.4	53.99
Max	80.4	78.5	82.8	79.4	78	82.3	860.49	79	83.3	858.49

Multi-Tone Test 135CH_FLAT@Input Power +15dBmV/Ch_Output3

Level: +15dBmV		Tilt: 135CH								
FRQ	XMD(NCTA)	CTB_RAW	CTB_COR	N-FLR	CSU_RAW	CSU_COR	CSU_FRQ	CSL_RAW	CSL_COR	CSL_FRQ
55.25	76.5	80.4	84.8	82.1	79.3	82.9	55.99	60	60	53.99
77.25	84.3	80.8	85.1	82.3	61.3	61.3	77.99	81.8	86.1	76.57
109.25	81.5	80.6	85	82	79.8	83.4	109.99	62.1	62.1	107.99
211.25	83.2	78.7	82.3	81.5	78	80.6	212.5	63.6	63.6	209.99
331.25	82.6	76.2	78.4	80.5	75.5	77.1	332.5	64.8	64.9	329.99
547.25	78.1	73.9	75.2	79.7	74.7	76.4	548.49	66.6	66.9	545.98
637.25	76.6	72.7	73.7	79.7	75.1	77	638.49	69.7	70.1	635.98
745.25	74.5	72.3	73.1	79.7	74.8	76.4	746.49	73.6	74.8	743.98
859.25	73.1	71.5	72.7	77.7	74.2	76.8	860.49	77	81.3	858.49
Min	73.1	71.5	72.7	77.7	61.3	61.3	55.99	60	60	53.99
Max	84.3	80.8	85.1	82.3	79.8	83.4	860.49	81.8	86.1	858.49

Package Dimensions (Type :QFN3)



Pin No	Function
4	Input
5	Bias
9	Output - 3
12	Output - 2
14	Output - 1
2, 3, 10, 11	GND
Other	NC

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