



## DESCRIPTION

AM273547SF-6H is a wideband power amplifier designed for Wireless Internet Access, Wireless Local Loop, and Two Way Radio. It operates from 2.7GHz to 3.5GHz and typically delivers more than 30 watts (45dBm) CW output power and 50dB small signal gain. The module has a built-in a negative voltage generator. It can be biased from +11V to +12V single voltage supply. The amplifier module has 6 screw slots for mounting to a heat sink.

## FEATURES

- Wide bandwidth from 2.5 to 4.0GHz
- High output power,  $P_{1dB} = 45dBm$  (30W)
- High gain, 50dB
- 11V to 12V DC single bias.

## APPLICATIONS

- Wireless Internet Access
- Mobile WiMAX 802.16e
- Wireless Local Loop
- Two Way Radio

## PERFORMANCE ( $V_{dd} = +12V$ , $I_{dq} = 13A$ , $T_a = 25^{\circ}C$ )

Parameters	Minimum	Typical	Maximum
Frequency	2.7 – 3.5GHz	2.5 – 4.0GHz	
Gain (Small signal)	48dB	52dB	56dB
Gain Ripple		$\pm 2dB$	$\pm 4dB$
$P_{1dB}$	43.0dBm	44.5dBm	
$P_{3dB}$	43.5dBm	45.0dBm	
IP3 at 3GHz		53dBm	
Input VSWR		2:1	
Output VSWR		2:1	

## ABSOLUTE MAXIMUM RATING

Parameters	Symbol	Rating
Supply voltage	$V_{dd}$	13V
Continuous dissipation at room temperature	$P_t$	225W
Operating ambient temp	$T_a$	-45°C to +85°C
Storage temperature	$T_{sto}$	-60°C to +150°C

SMALL SIGNAL DATA

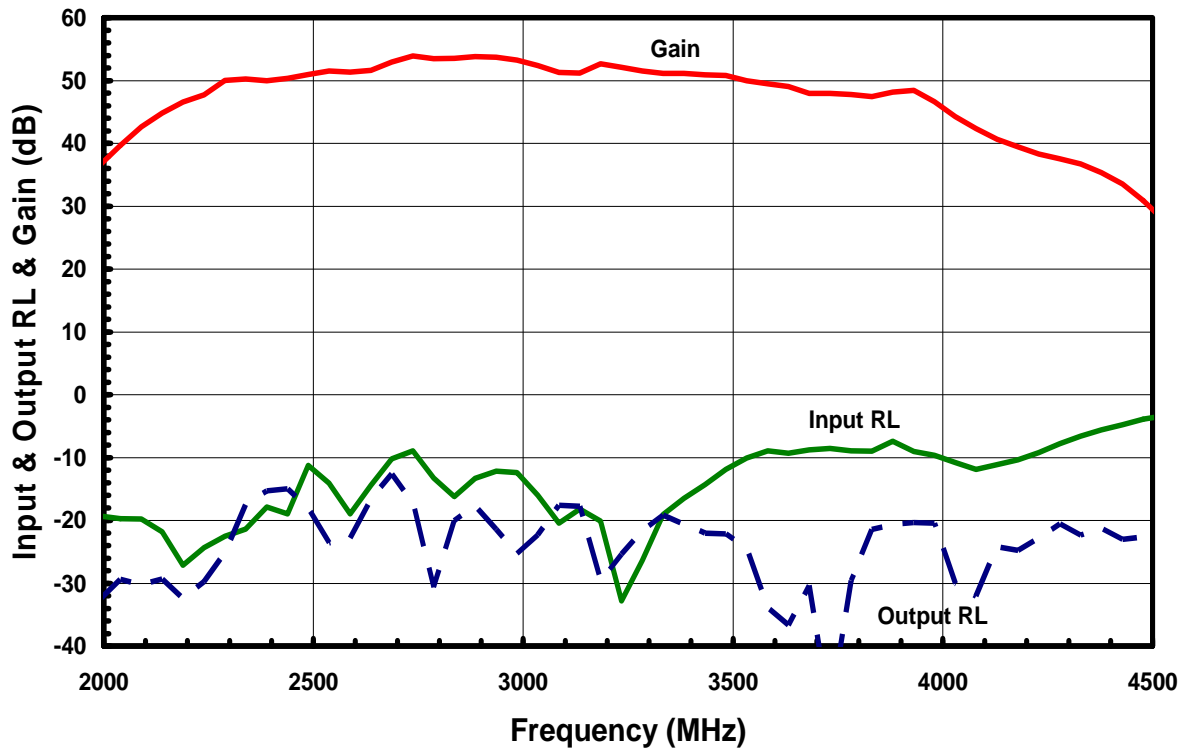


Figure 1: Gain and return loss as a function of frequency. ( $V_{dd}= +12V$ ,  $I_{dq}=13A$ ,  $T_a=25^{\circ}C$ )

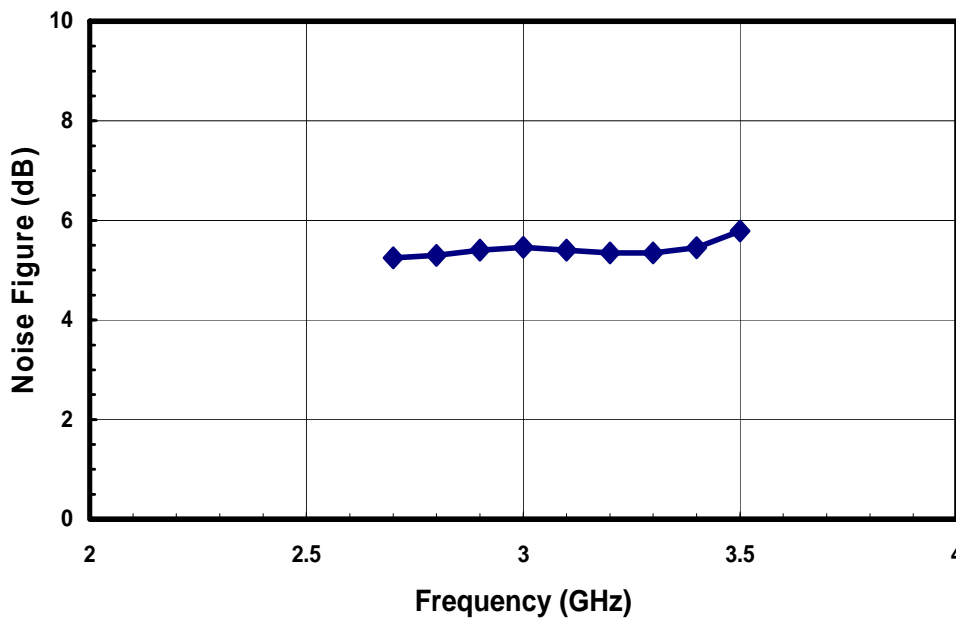


Figure 2: Noise Figure vs frequency. ( $V_{dd}= +12V$ ,  $T_a=25^{\circ}C$ )

POWER DATA

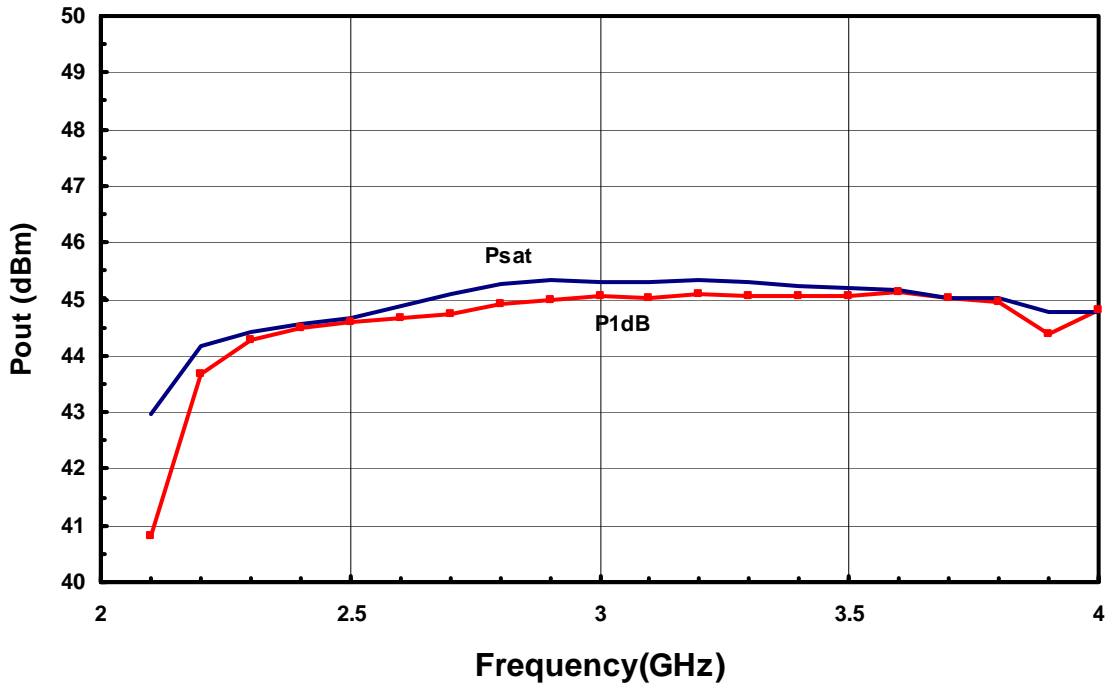


Figure 3: P<sub>1dB</sub> and P<sub>sat</sub> (V<sub>dd</sub> = +12V) versus frequency.

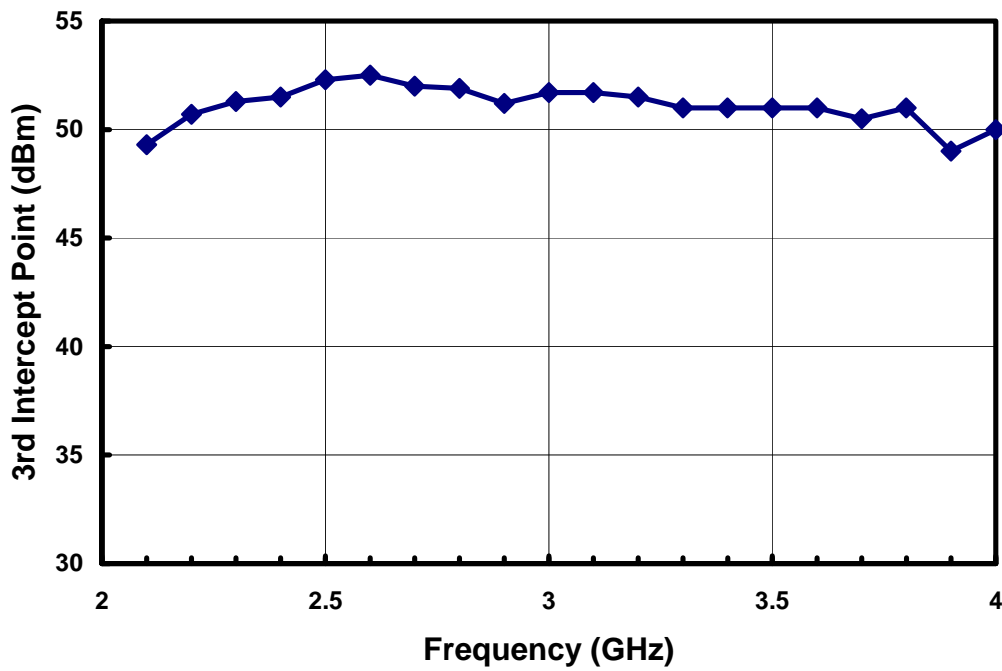


Figure 4: 3<sup>rd</sup> order inter-modulation intercept.

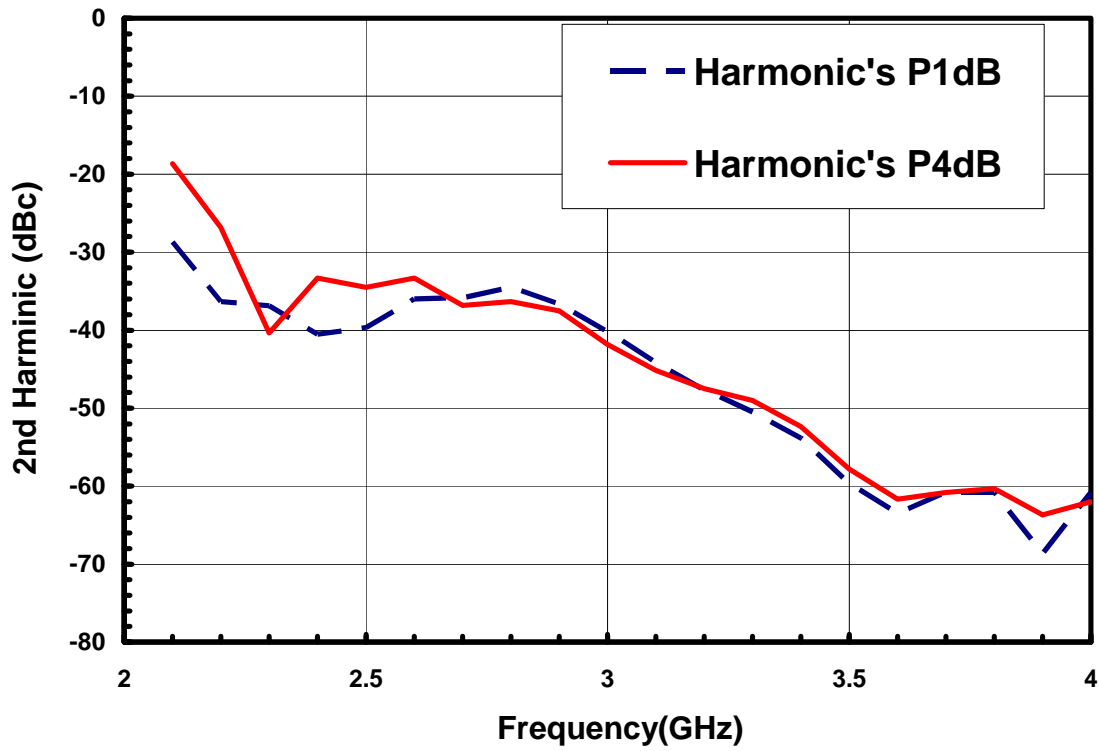


Figure 5: Second Harmonic versus Frequency (dBc)

**PACKAGE OUTLINE**

Figure 6 is the photograph of the housing. Figure 7 shows the package outline. The dimension is 8.0”(L) x 4.75”(W) x 1.0”(H). The module needs a single +12V / 13ADC supply. It has SMA connectors for RF input and output, and DC pins for +12V and ground.



Figure 6: Photograph of PA Module

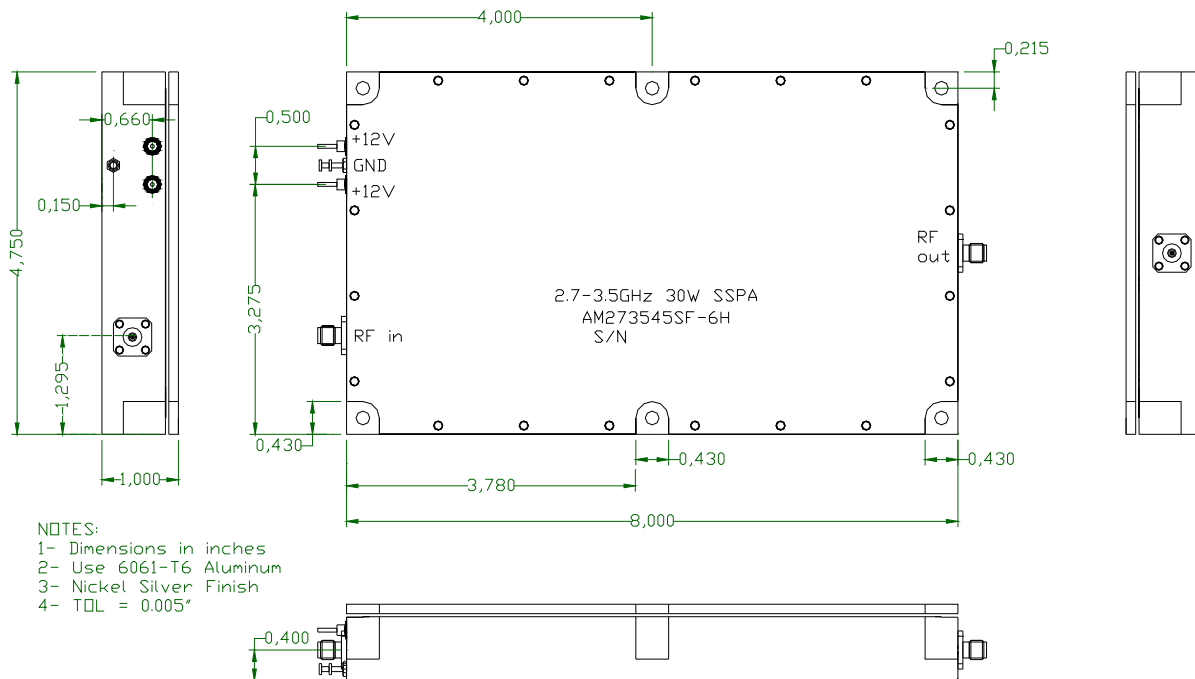


Figure 7: Outline of PA Module. 8”(L) x 4.75”(W) x 1.0”(H)