

## Introduction

TM6111 is a new booster designed for extending the range of wireless radio devices requiring high linearity amplification. It provides operating frequency from 2400MHz to 2500MHz. TM6111 fitted with a Low Noise Amplifier and together with a high linearity power amplifier. It is fully capable of enhancing the coverage area of WLAN 802.11b/g application by amplifying transmitted and received signals.

## Specification Summary

Parameter	Min.	Typ.	Max.	Unit	Comment
Frequency Range	2400		2500	MHz	
Output Power @ 1dB Compression		30.5		dBm	
Linear Output Power		29		dBm	@ 802.11b / 11Mbps
		25		dBm	@ 802.11g / 54Mbps
EVM at Pout=25dBm			5.6	%	@ 802.11g / 54Mbps
Linear Output Power		23		dBm	@802.11.n / 75Mbps
EVM at Pout=23dBm		3		%	
Tx Mode Turn On Power		-3		dBm	
Fixed Transmit Gain		12		dB	
Receiver Input Power			-30	dBm	
Receiver Gain		10		dB	
Noise Figure		2.5		dB	
Transmit Current consumption		660		mA	@23dBm
		680			@27dBm
		800			@30dBm
Receiver Current consumption		16		mA	
Input/output VSWR	1.2		1.5		
5V DC Supply Voltage		5		V	
Operating Temperature	-20	25	85	°C	

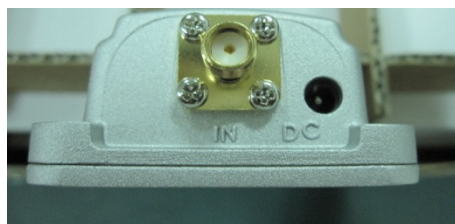
【Note1】 : Product operating mode support: bi-directional, half-duplex and Auto-Switching (Plug & Play).

【Note2】 : The above spec is defined base on 25 °C / RH=70%.

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**Voltage of DC Jack-5V/1A**



**Warranty Paster & Barcode location**

5V/1A



Warranty Paster

Barcode

091036038007

**Product Photo**



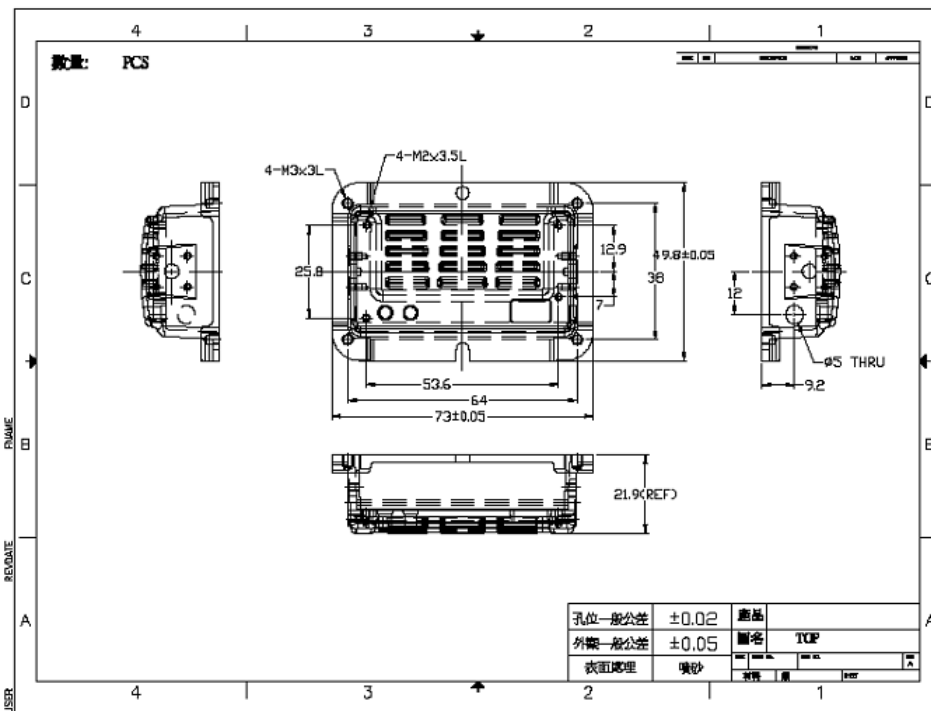
**Package Dimension (booster/Cable/Adapter)**



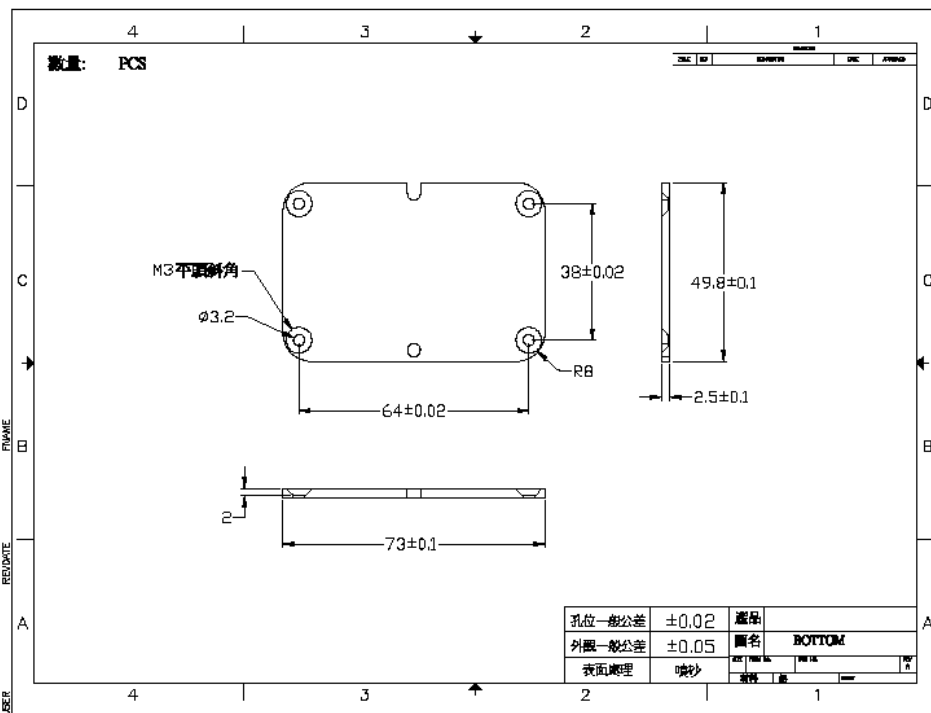
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House Dimension –Top View and Side Views



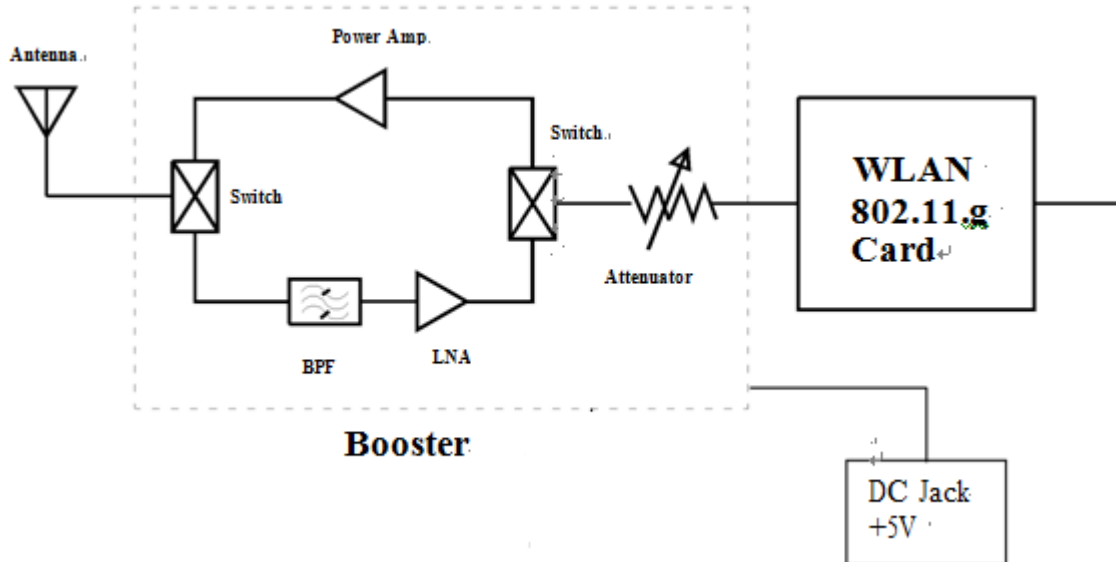
House Dimension –Bottom



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## System Application



The booster is an Auto-sensing bi-directional design including power amplifier, receiving low noise amplifier, Tx/Rx switch, power detector and power supply. The booster will be in receiving mode while in sleeping or listening mode. The power amplifier is turned off to cut down power consumption. After the WLAN 802.11.g LAN card output is enabled, the power detector senses the rising power energy. The booster is switched to Tx mode. The Power Amplifier is turned on.

For optimizing output power to get the best linearity amplification, there is a fixed attenuator on board. The output power is variant from different WLAN cards. Its range is from 12 to 18 dBm. The fixed Tx Gain can be adjustable by changing the  $\pi$ -type attenuator on board. Tx Gain can be 7~18 dB. The input power for the Tx path must be larger than 2 dBm for turning on the power amplifier and switching to Tx mode. The typical Rx Gain is 10 dB typically. The max Rx input power is -20 dBm at 802.11.g mode, and -10 dBm at 802.11.b mode.

The sensitivity is dominated by the baseband receiver. The added LNA will get some improvement for the sensitivity. The DC Jack can feed in +5V Voltage to the booster.

**Revision History**

Rev 1.3 Page 3, House dimension Top and side views, Bottom

Page 4, Add system application