

## Power Amplifier

0.38-6GHz/35dB Gain/37 dBm Psat

Model: TLPA0.38G6G-30-37

TLPA0.38G6G-30-37 is a power amplifier with a minimum small signal gain of 35 dB and a nominal Psat of 37 dBm across the frequency range of 0.38 to 6 GHz. The DC power requirement for the amplifier is +30 VDC/2 A. The input and output port configuration offers coax adapter structure with SMA female.

### Features:

- Frequency range: 0.38-6 GHz
- Gain: 35dB Min
- Output Power Psat: 37dBm Min
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

### Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	0.38-6			GHz
Small Signal Gain	35			dB
Gain Flatness		±2.5	±4	dB
Output P1dB		35		dBm
Output Psat	37			dBm
Supurious		-60		dBc
Harmonic		-15		dBc
Input VSWR		1.5	2.5	:1
DC Voltage		30		V DC
DC Supply Current		2		A
Impedance	50			Ohms

### Mechanical Specifications:

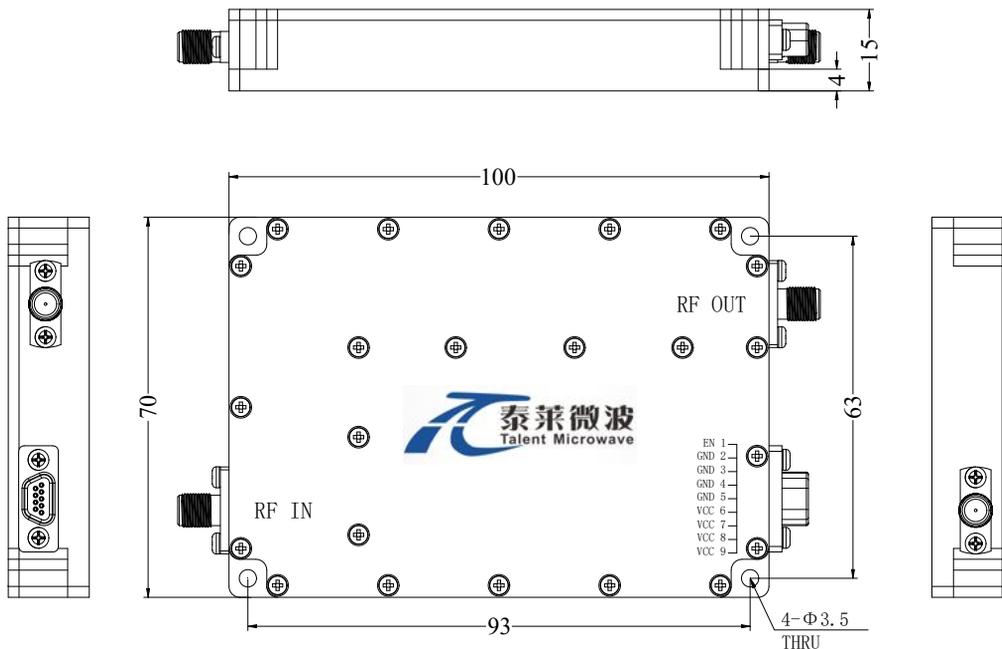
Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Power Supply Connector	J30J-9ZKW Male	
Size	100*70*15	mm
Weight	200	g

### Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+32 V
RF Input Power	+8 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

### Outline Drawing:

Unit:mm



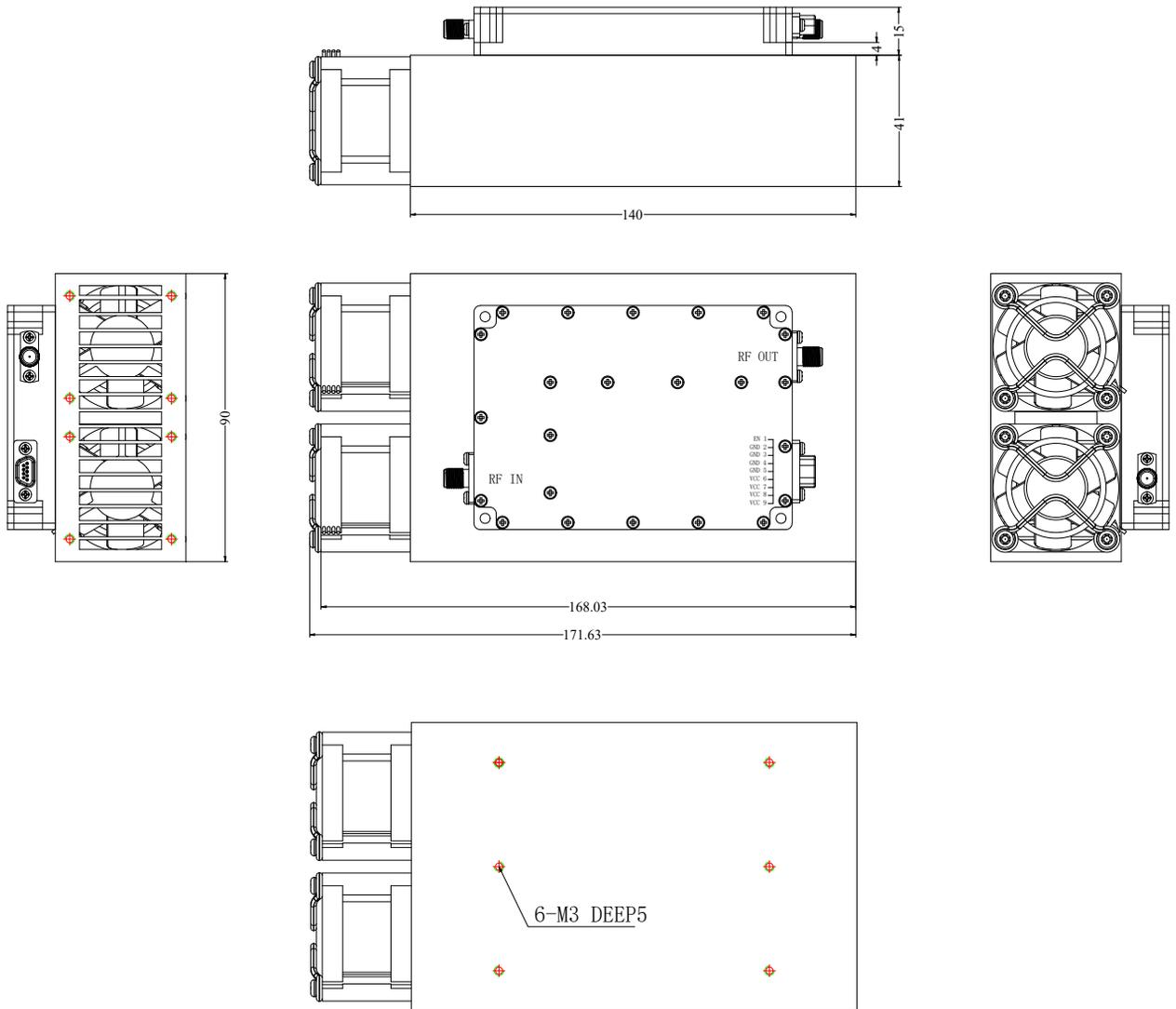
**\*\*\*Heat Sink Required During Operation**



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

**Outline Drawing:**

Unit:mm



**Fan power supply**

Red line	Power supply positive, +24.0-28.0VDC DC current: 0.3A
Black line	Ground

### DC Supply Connector(J30J-9ZKW Male):

Pin	Name	Function
1	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High) Amplifier Disable: Short to ground
2	GND	Ground
3	GND	Ground
4	GND	Ground
5	GND	Ground
6	VCC	+26.0-30.0VDC
7	VCC	+26.0-30.0VDC
8	VCC	+26.0-30.0VDC
9	VCC	+26.0-30.0VDC

### Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-40		+60	°C
Non-operating Temperature*	-50		+70	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

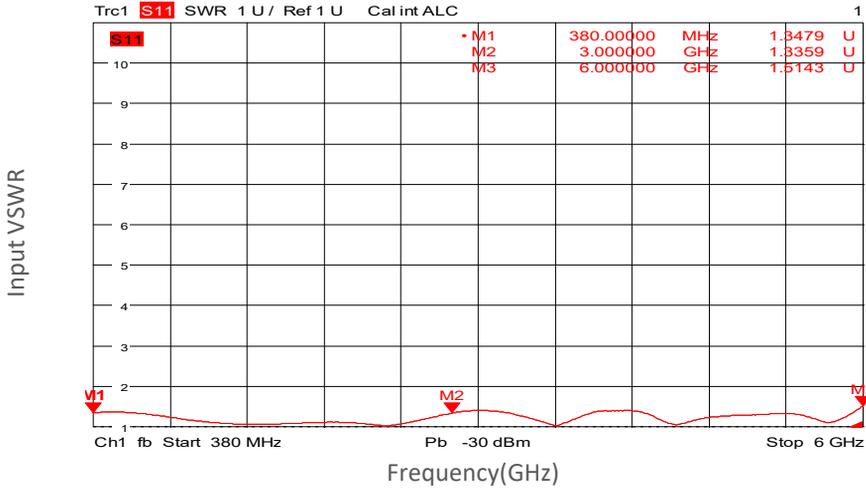
\*Note: For a wider temperature range, please consult the manufacturer.

### Ordering Information:

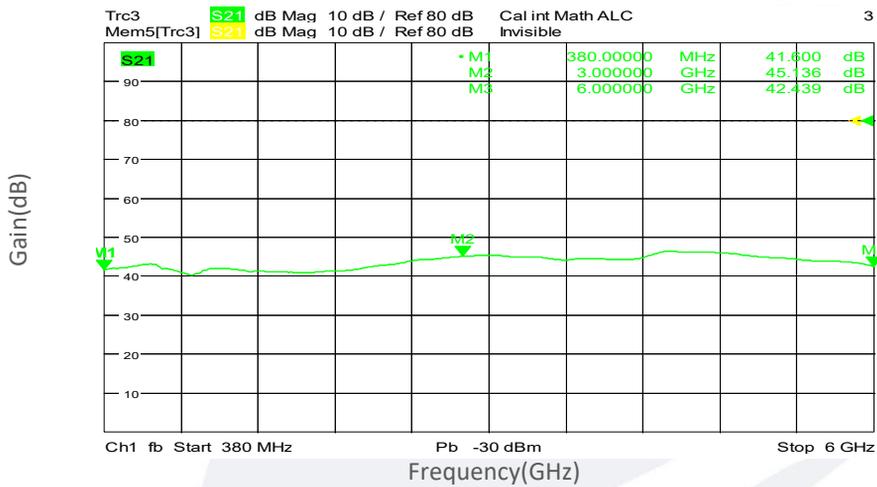
Base Number	Description	Revision
TLPA0.38G6G-30-37	Power amplifier 0.38-6GHz,Gain:35dB,Psat:37dBm, +30V DC,Without Heatsink	Rev.1.2
TLPA0.38G6G-30-37-HS	Power amplifier 0.38-6GHz,Gain:35dB,Psat:37dBm, +30V DC,With Heatsink	Rev.1.2

**Typical Performance Data:**

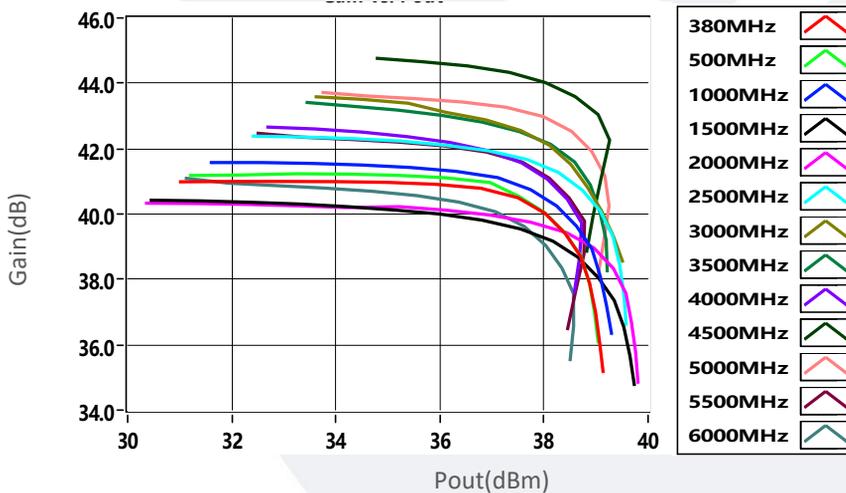
**Input VSWR vs Frequency**



**Small Signal Gain vs Frequency**

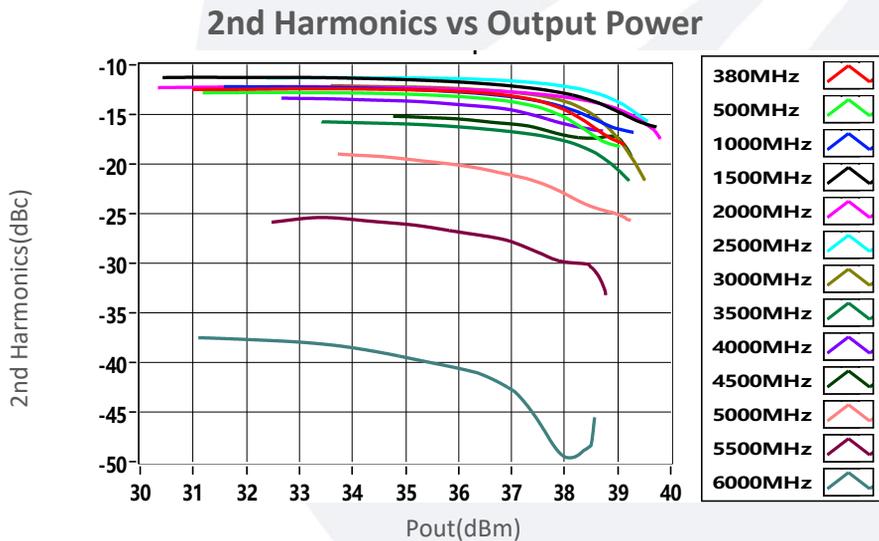
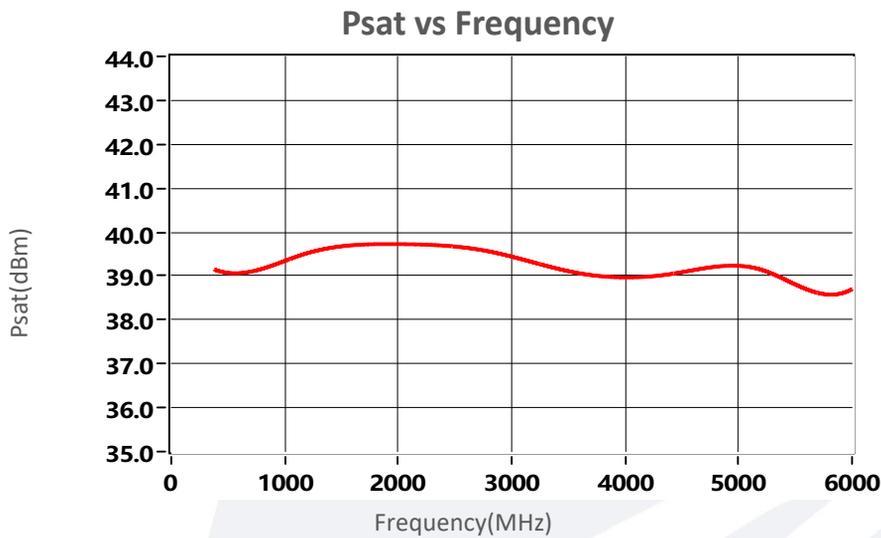
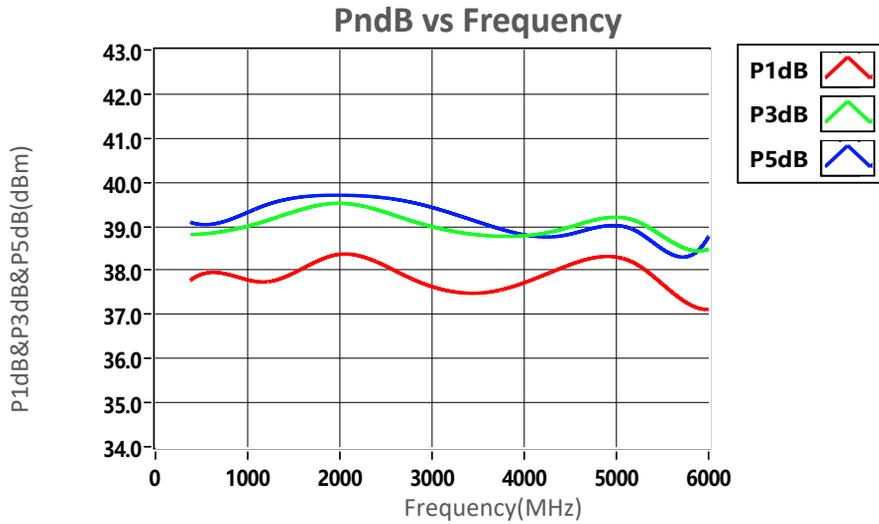


**Gain vs Output Power**



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

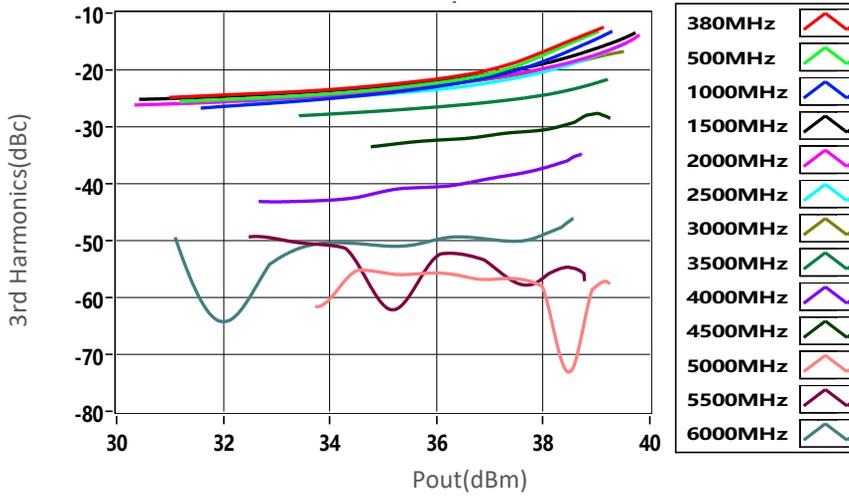
### Typical Performance Data:



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**Typical Performance Data:**

**3rd Harmonics vs Output Power**



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