

Power Amplifier

10MHz-1GHz/33dB Gain/33dBm Psat

Model: TLPA10M1G-33-33

TLPA10M1G-33-33 is a power amplifier with a minimum small signal gain of 33 dB and a minimum Psat of 33 dBm across the frequency range of 10MHz to 1 GHz. The DC power requirement for the amplifier is +15 VDC/0.2 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 10MHz-1GHz
- Gain: 33dB Min
- Output Power Psat: 33dBm 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	10MHz		1GHz	
Small Signal Gain	33	35		dB
Gain Flatness		±2	±3	dB
Output Psat	33	34		dBm
Harmonics@Pout=33dBm		-15		dBc
Input VSWR		1.5	2.0	:1
DC Voltage		+15	+16	V DC
DC Supply Current		0.2	1	A
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	76*48*15(Without heatsink) 76*48*35(With heatsink)	mm
Weight	150	g

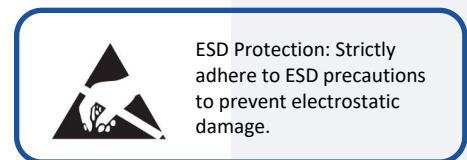
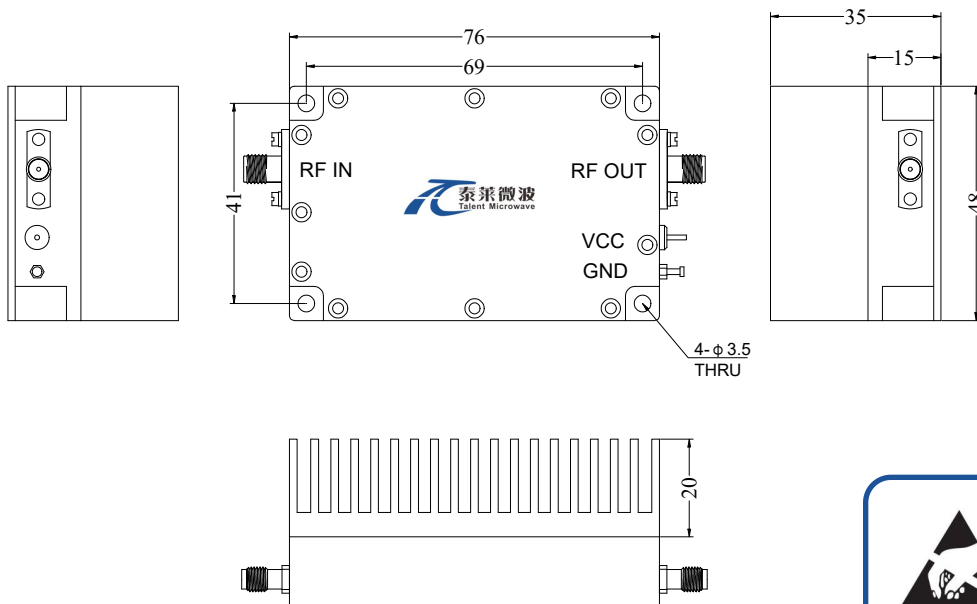
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+16 V
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Outline Drawing:

Unit:mm



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			

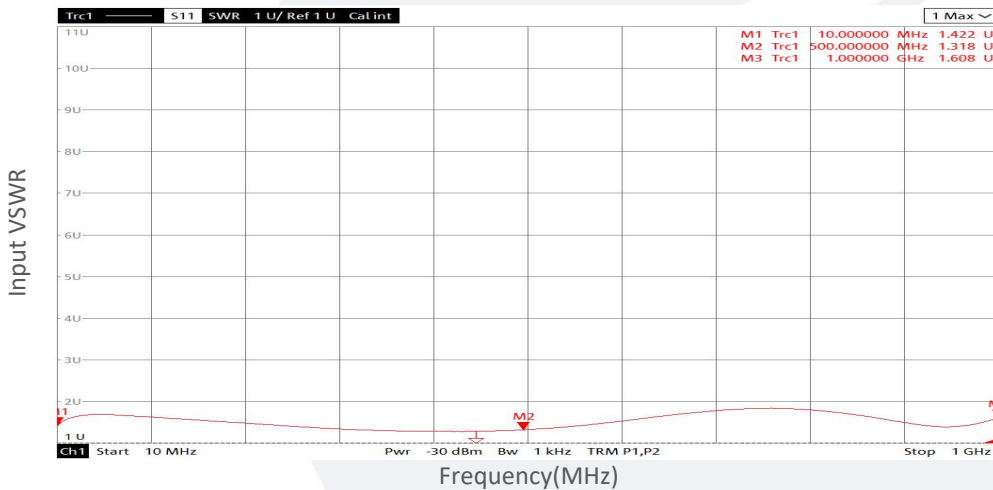
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA10M1G-33-33	Power amplifier 10MHz-1GHz, Gain:33dB,Psat:33dBm,+15V DC,Without Heatsink	Rev.1.1
TLPA10M1G-33-33-HS	Power amplifier 10MHz-1GHz, Gain:33dB,Psat:33dBm,+15V DC,With Heatsink	Rev.1.1

Typical Performance Data:

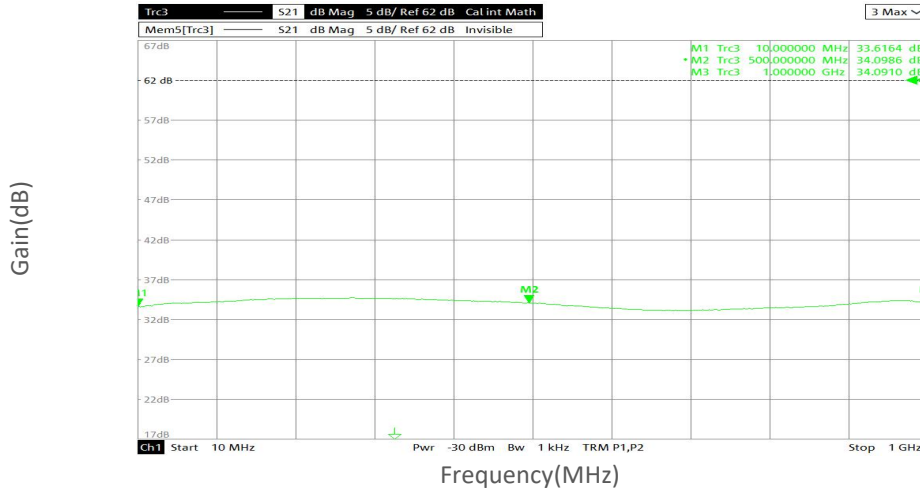
Input VSWR vs Frequency



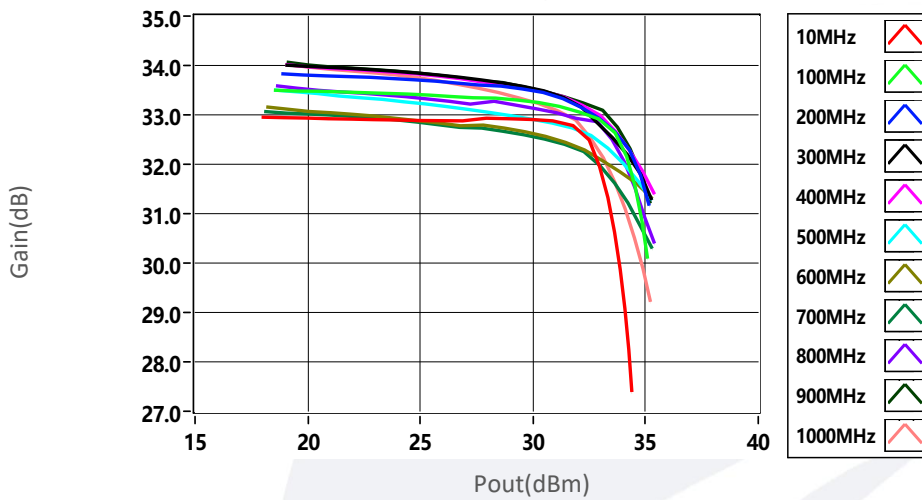
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

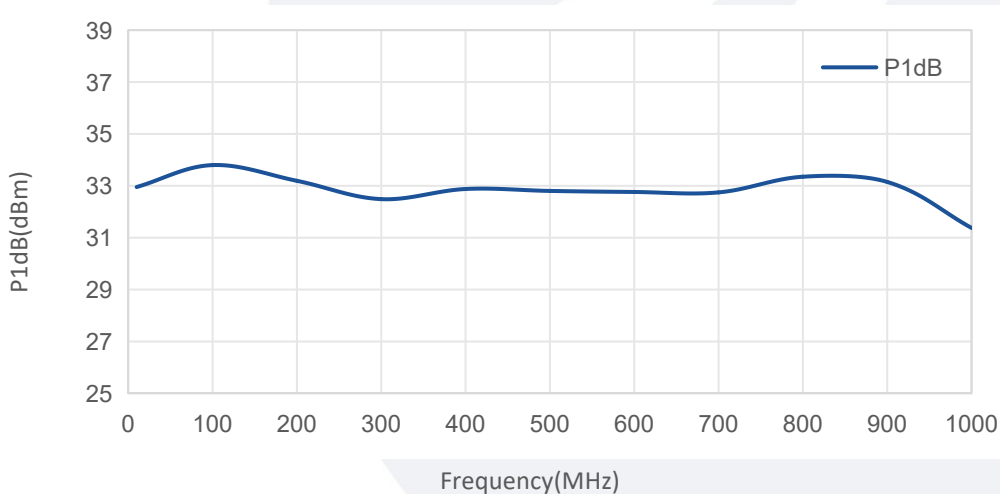
Gain vs Frequency



Gain vs Output Power



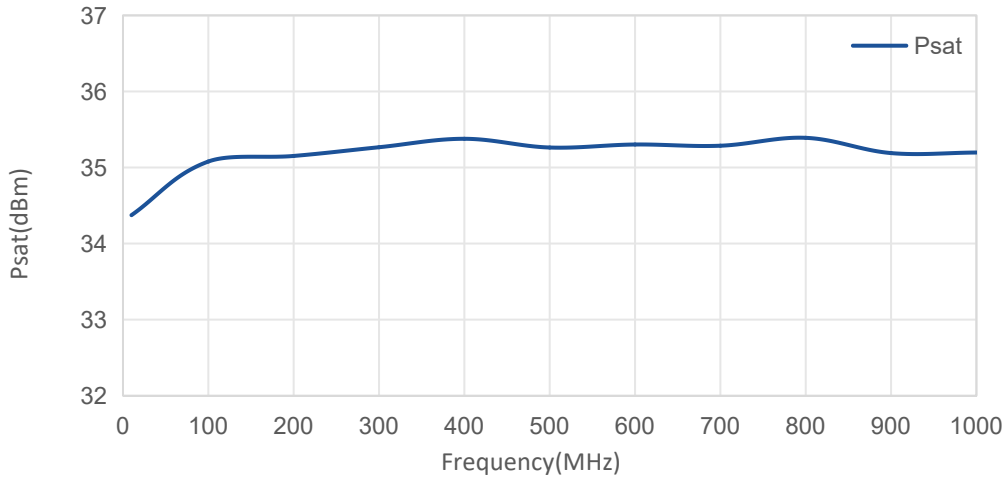
P1dB vs Frequency



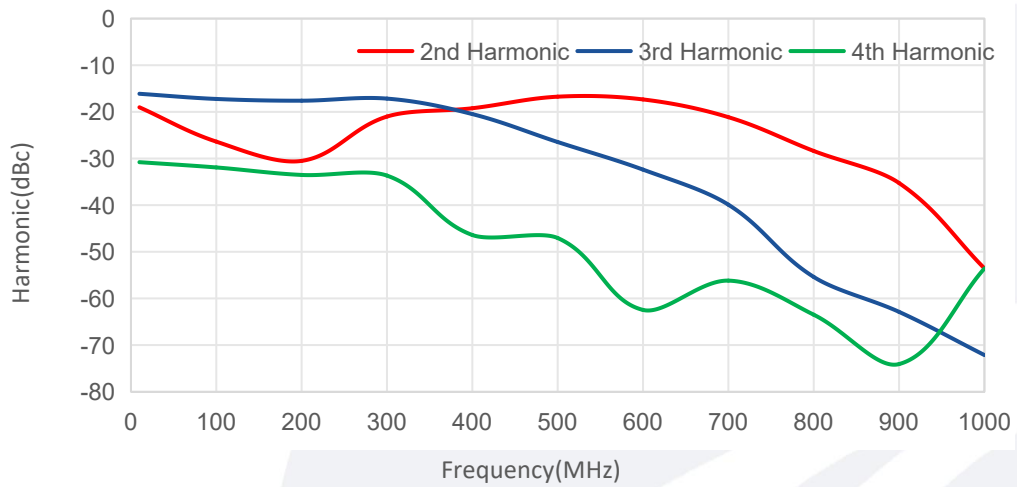
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Psat vs Frequency



Harmonics vs Frequency



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.