

Gain Control Amplifier

2-6GHz/40dB Gain/SMA Female

Model: TLPA2G6G-40-15-GCR20

TLPA2G6G-40-15-GCR20 is a gain control amplifier with a minimum small signal gain of 40 dB and a minimum P1dB of 15 dBm @no gain control across the frequency range of 2 to 6 GHz. The DC power requirement for the amplifier is +12 VDC/360 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 2-6GHz
- Gain: 40dB Min
- Output Power P1dB: 15dBm 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	2		6	GHz
Small Signal Gain	40			dB
Gain Control range	20			dB
Gain Flatness			±2.25	dB
Output P1dB@no gain control	15			dBm
Output P1dB@max gain control		12		dBm
Noise Figure@no gain control			3	dB
Noise Figure@max gain control		4		dB
VSWR			2	:1
DC Voltage		12	15	V DC
DC Supply Current		360		mA
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	1.48*1.28*0.35	Inch

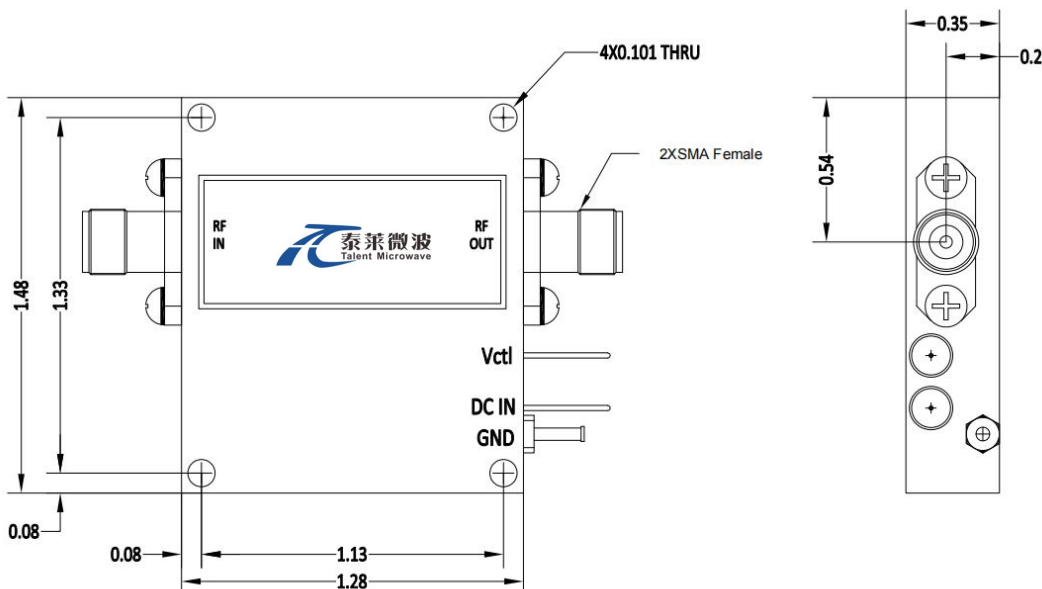
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+15 V
RF Input Power	TBD
ESD sensitivity (HBm)	Class 0, passed 150V

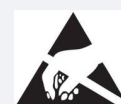


Outline Drawing:

Unit:Inch



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



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

Environmental Conditions:

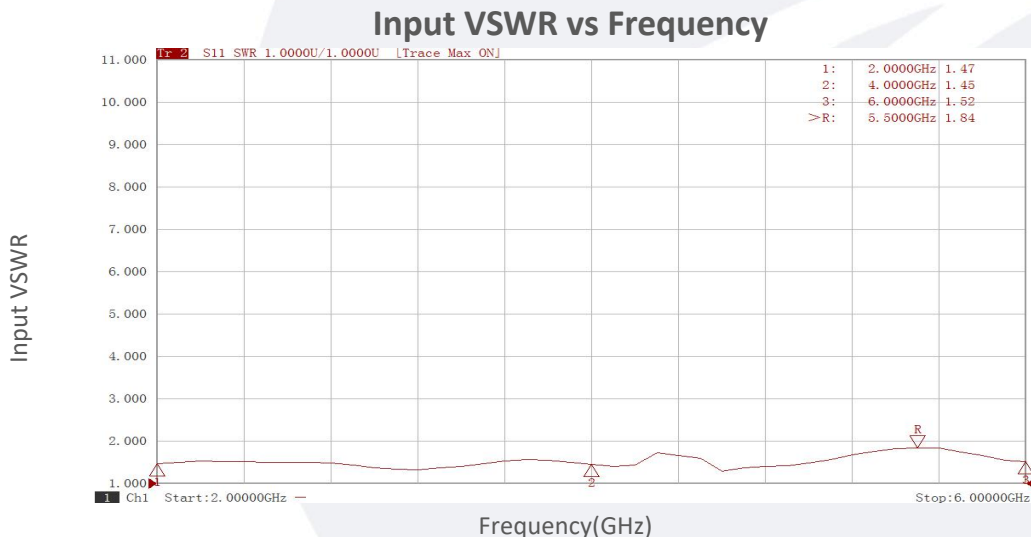
Parameter	Min	Typ	Max	Units
Operating Temperature*	-40		+60	°C
Non-operating Temperature*	-50		+70	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

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

Ordering Information:

Base Number	Description	Revision
TLPA2G6G-40-15-GCR20	Gain Control Amplifier 2-6GHz, Gain:40dB,P1dB:15dBm,+12V DC,SMA Female	Rev.1.1

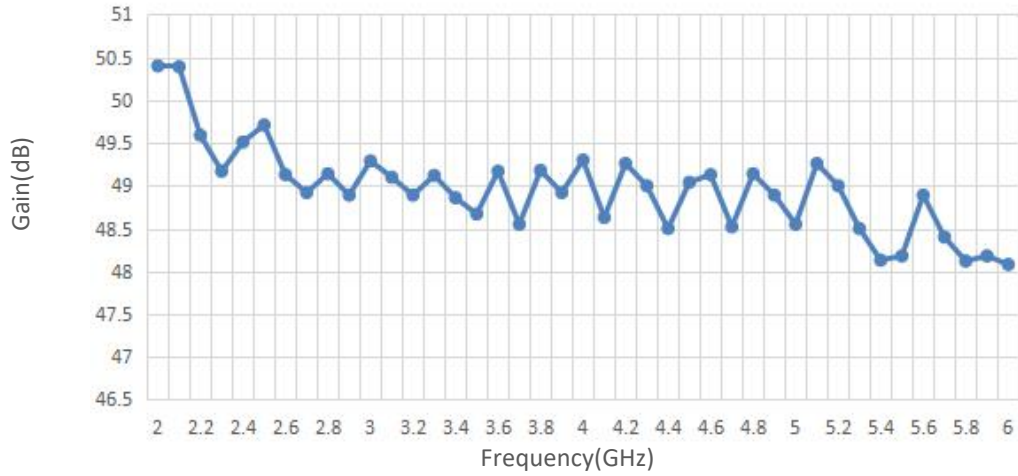
Typical Performance Data:



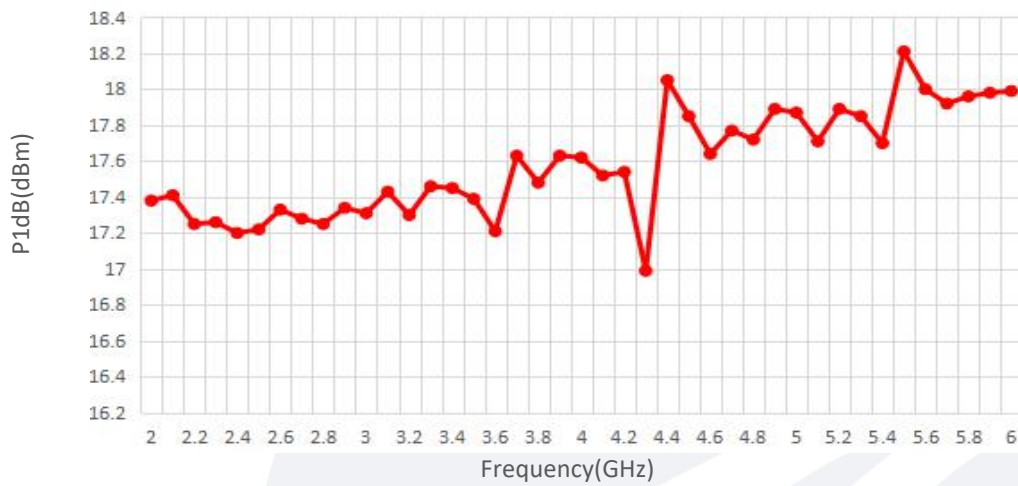
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

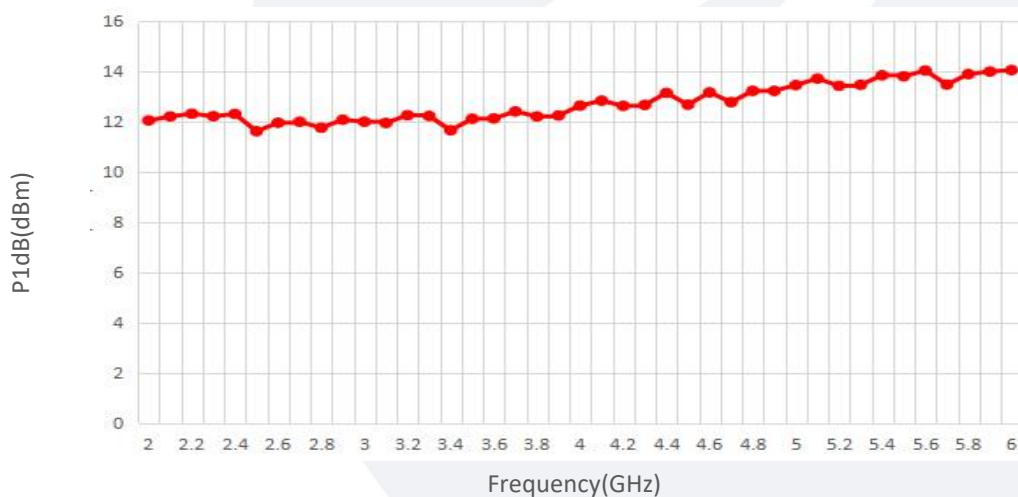
Small Signal Gain vs Frequency



P1dB@no gain control vs Frequency



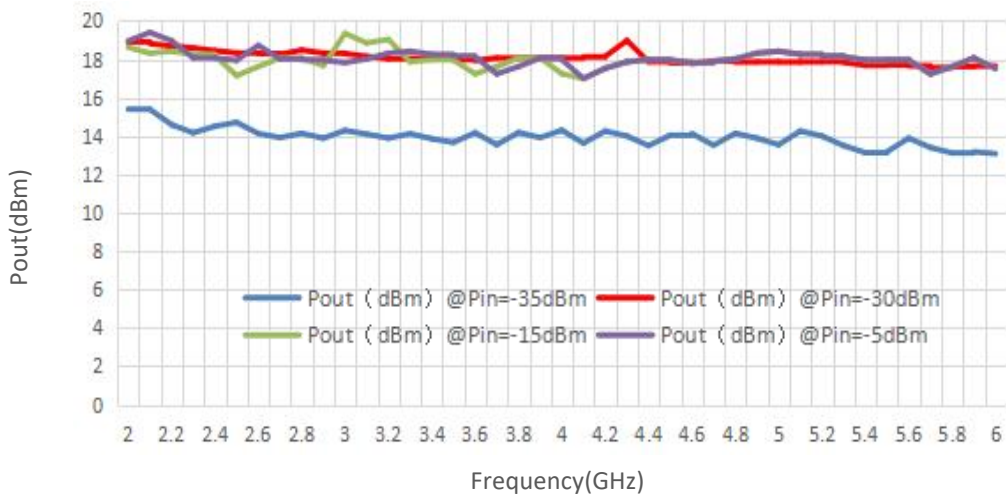
P1dB@max gain control vs Frequency



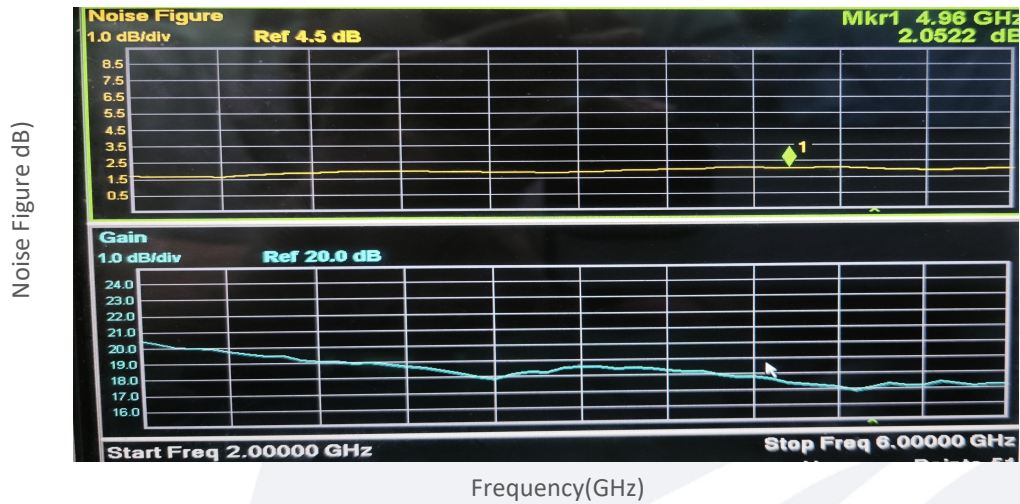
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

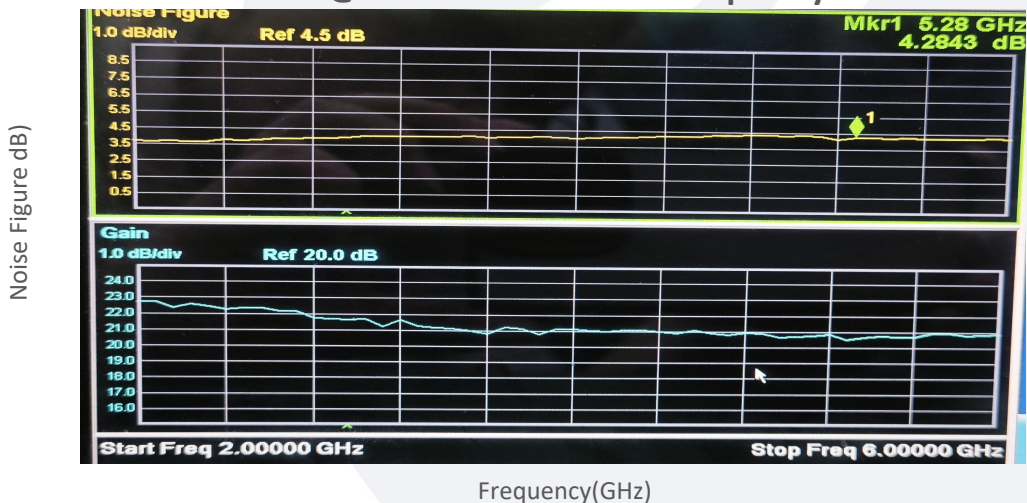
Pout@Equal_Pin



NF@min attenuation vs Frequency



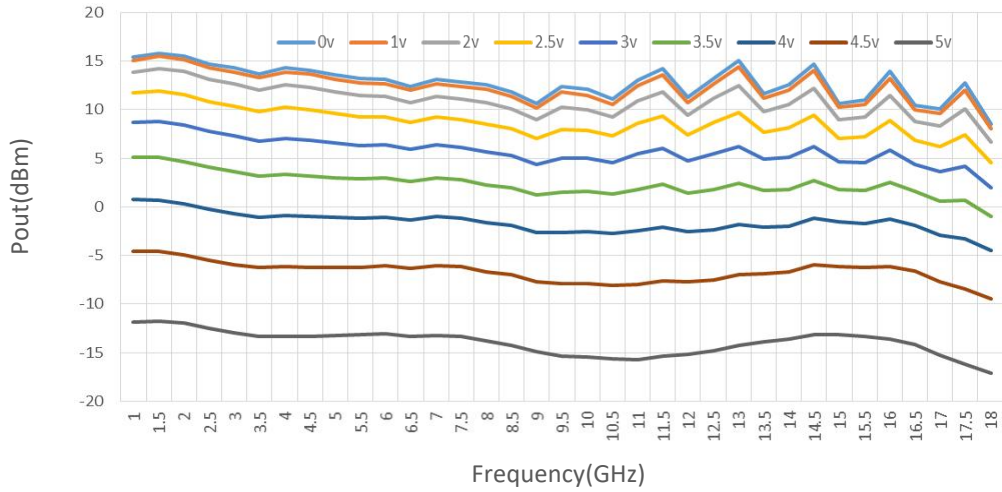
NF@max attenuation vs Frequency



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:

Attenuation@Vctrl 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.