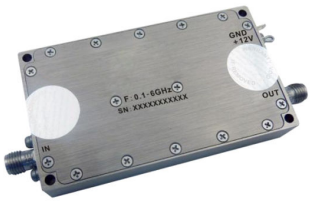
RFecho
A Gateway to RFWorld

Ultra Wide Band Low Noise Amplifier 0.1GHz~6GHz



Features

- Gain: 38dB Typical
- Noise Figure: 2.8dB Typical
- Output P1dB : +21dBm Typical
- Supply Voltage: +12V

Typical Applications

- Wireless Infrastructure
- 5G communication
- Test and measurement Instrument

RF Microwave & VSAT
Fiber Optics

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.1		3	3		6	GHz
Gain	35	38		35	37		dB
Gain Flatness		±1.0			±1.0		dB
Gain Variation Over Temperature (-40ºC~+85ºC)		±1.0			±1.5		dB
Noise Figure		3.0	5.0		2.8	3.5	dB
Input VSWR		1.8			1.8		:1
Output VSWR		1.8			1.8		:1
Output 1dB Compression Point (P1dB)	19	21		18	20		dBm
Saturated Output Power (Psat)		23			22		dBm
Output Third Order Intercept (IP3)		29			28		dBm
Supply Current (Vcc=+12V)		180	280		180	280	mA
Isolation S12		-60			-55		dB

Weight	2.47 ounces	Impedance	50ohms
Input / Output Connectors	SMA-Female	Material	Aluminum
Finishing	Nickel plated	Package Sealing	Epoxy Sealing (Standard)
			Hermetically Sealed (Option with extra charge)

Absolute Maximum Ratings

Operating Voltage	+15V
RF Input Power	-10dBm

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +12V biasing

Power OFF Procedure

Step 1	Turn off +12V biasing
Step 2	Remove RF connection
Step 3	Remove Ground.

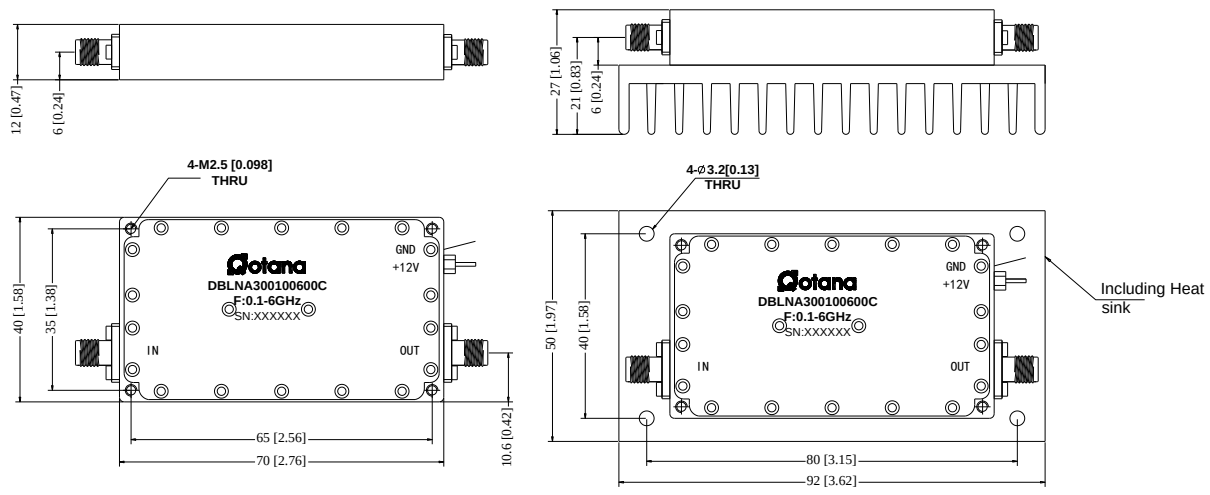
Environmental Specifications

Operational Temperature	-40ºC~+85ºC
Storage Temperature	-50ºC~+105ºC
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35ºc, 95%RH at 40ºc
Shock	20G for 11msec half sine wave,3 axis both directions

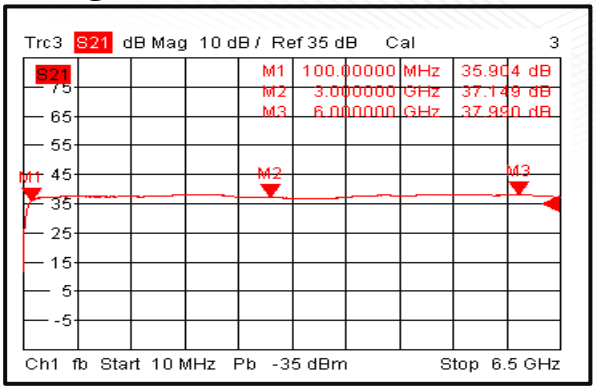
Outline Drawing:

All Dimensions in mm (inches)

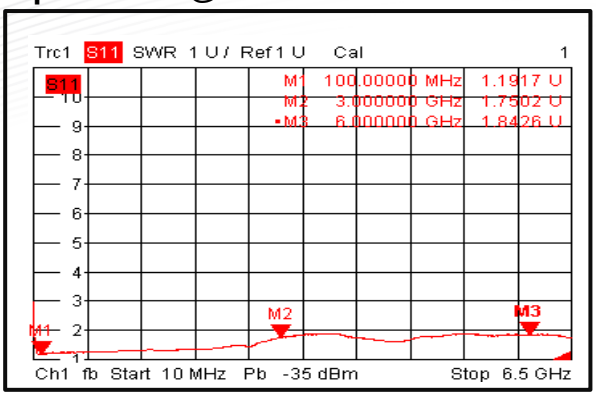
Heat Sink required during operation(Sold Separately)



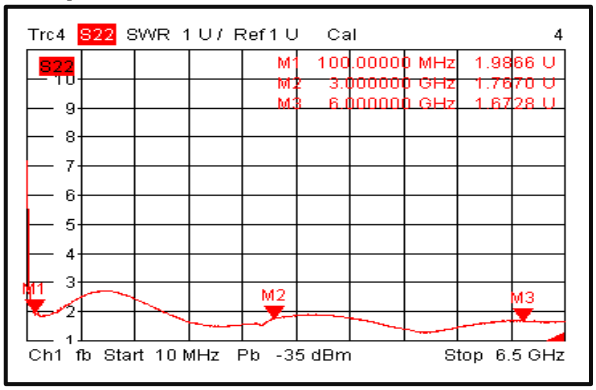
Gain@+25℃



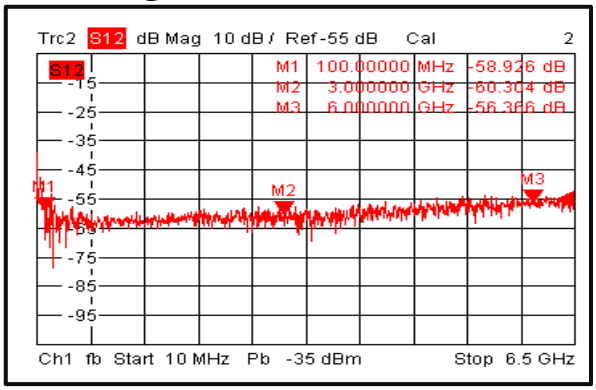
Input VSWR@+25℃



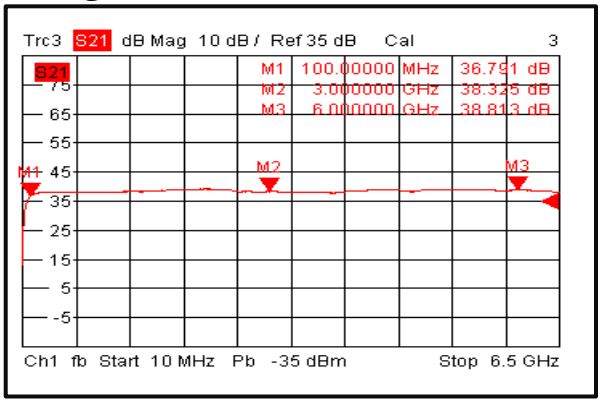
Output VSWR@+25℃



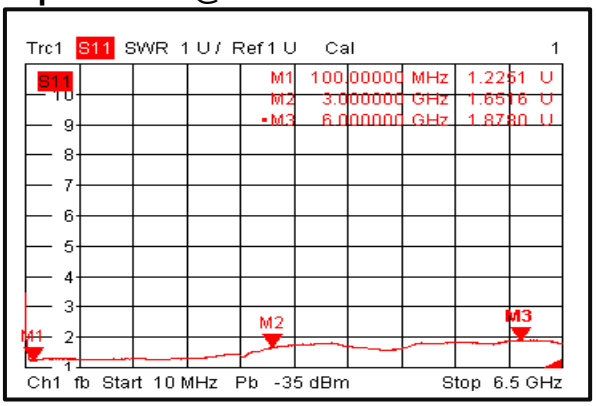
Isolation@+25℃



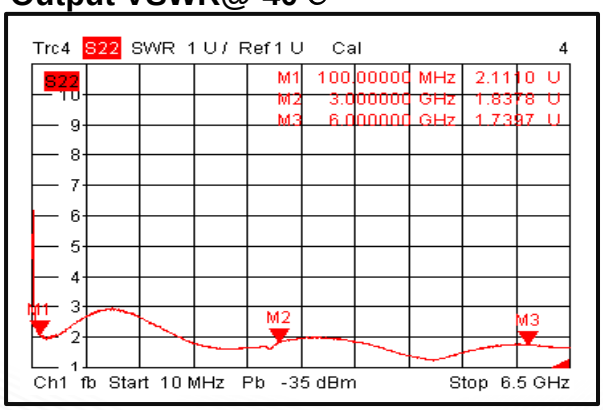
Gain@-40℃



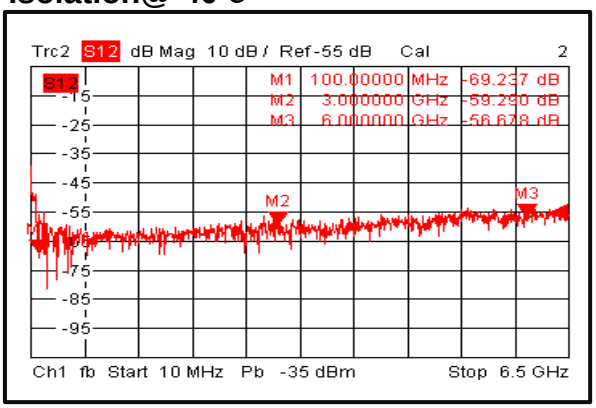
Input VSWR@-40℃



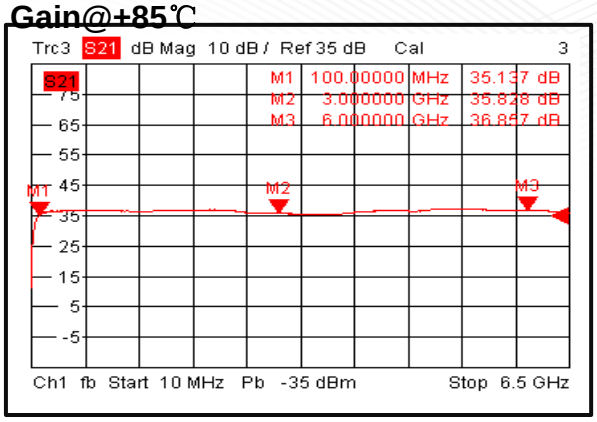
Output VSWR@-40℃



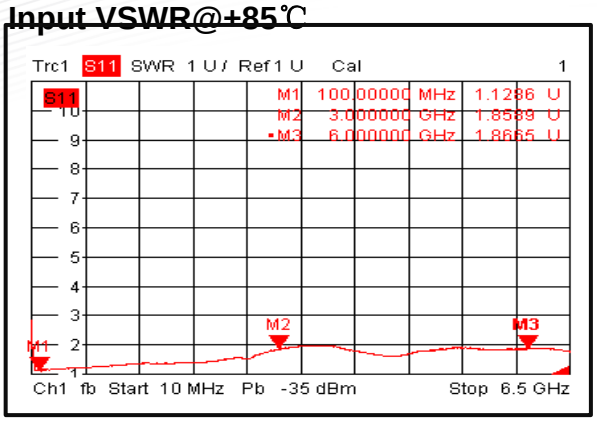
Isolation@-40℃



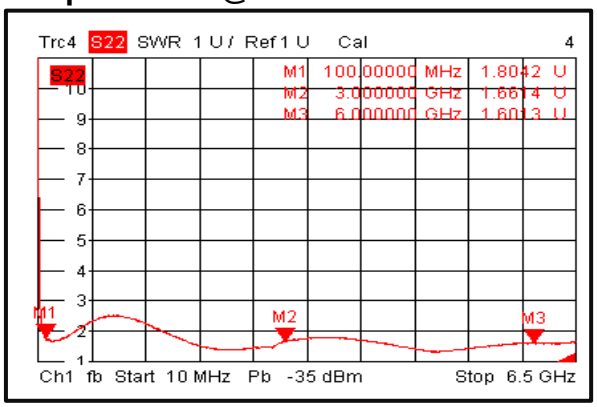
Gain@+85℃



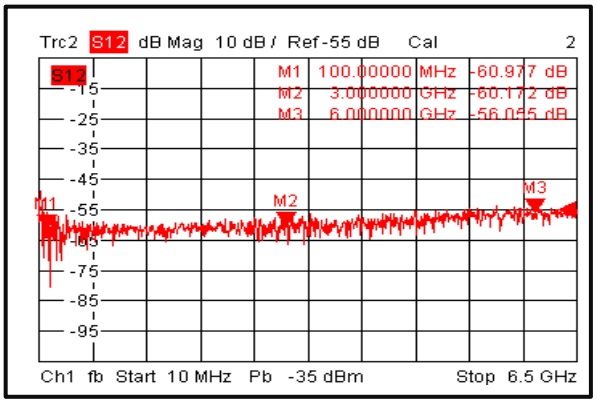
Input VSWR@+85℃



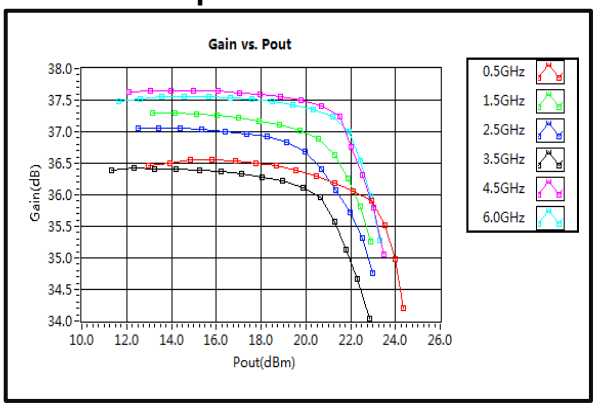
Output VSWR@+85℃



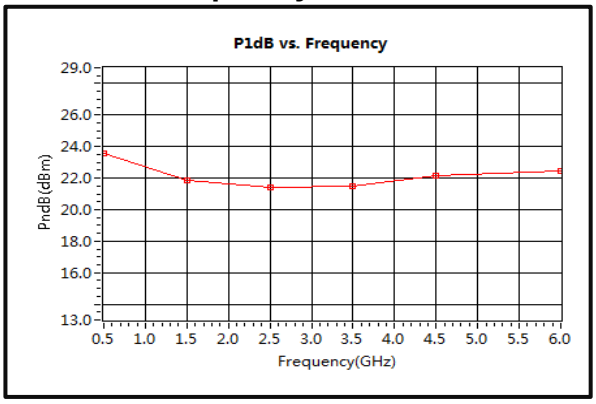
Isolation@+85℃



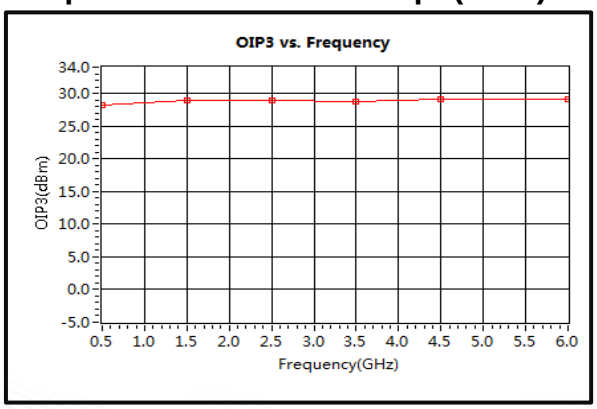
Gain vs. Output Power



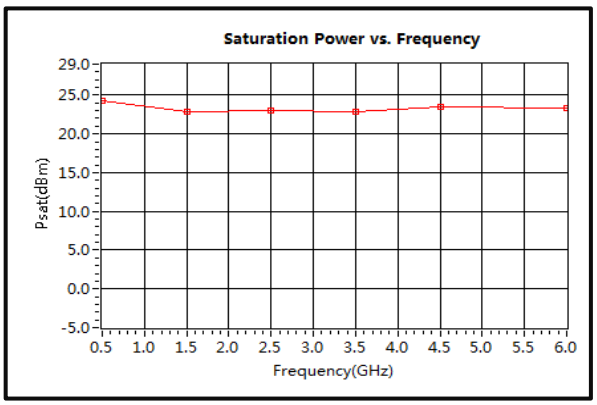
P1dB vs. Frequency



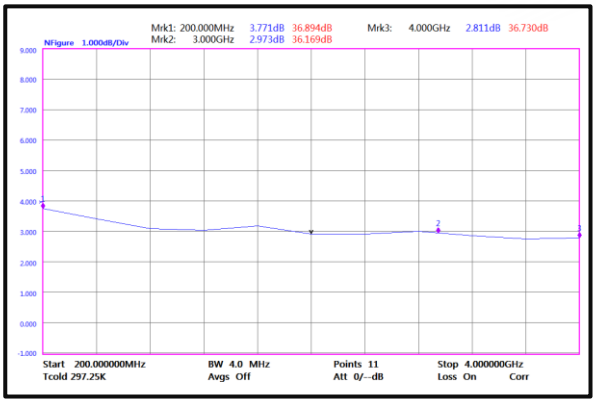
Output Third Order Intercept (OIP3)



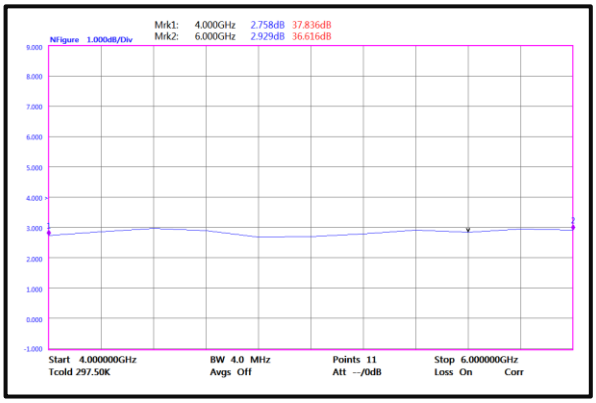
Saturation Power vs. Frequency



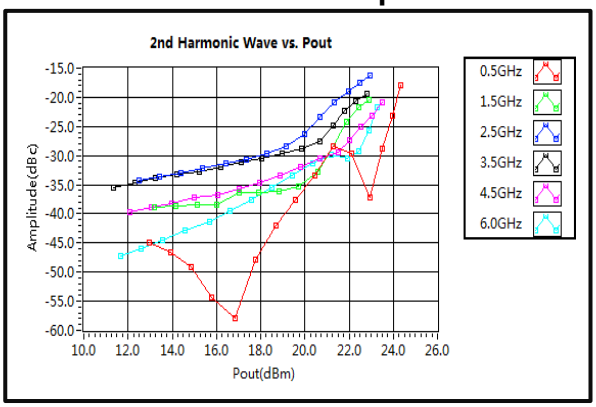
Noise Figure (200MHz-4GHz)



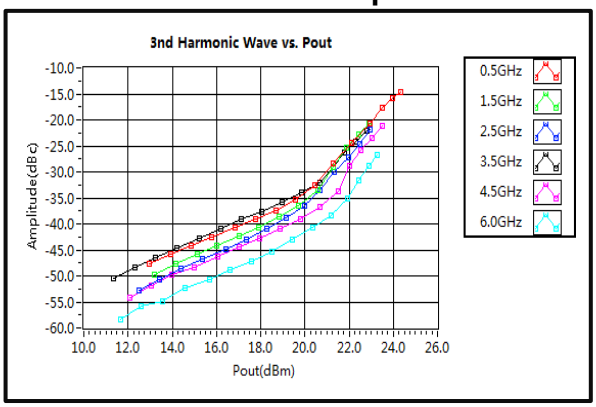
Noise Figure (4GHz-6GHz)



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power