

**Features**

- Gain: 35dB typical
- Output power +38dBm typical
- High P1dB: +35 dBm Full Band
- Supply Voltage: +28V @ 350 m A
- 50 Ohm Matched



**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	0.7		3	3		6	GHz
Gain	33	36	46	32	34	46	dB
Gain Flatness		±2.5			±2.5		dB
Gain Variation Over Temperature (-40°C~+85°C)		±2.0			±2.0		dB
Input VSWR		1.6			1.6		:1
Output 1dB Compression Point (P1dB)	36	38		35	37		dBm
Saturated Output Power (Psat)		40			39		dBm
IM3		34			34		dBc
Supply Current		350	1500		350	1500	mA
Isolation S12		-55			-50		dB

Weight	6.5 ounces(Max.)	Impedance	50ohms
Input / Output Connectors	SMA-Female	Material	Aluminum
Finish	Nickel Plated	Package Sealing	Epoxy Sealed (Standard)
			Hermetically Sealed

**QOTANA TECHNOLOGIES**

**Wide Band Power Amplifier 0.7GHz~6GHz**

**Absolute Maximum Ratings**

Operating Voltage		+29V
RF Input Power(+28V)	@0.7~1GHz	+1dBm
	@1~6GHz	+3dBm

**Biasing Up Procedure**

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +28V biasing

**Power OFF Procedure**

Step 1	Turn off +28V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

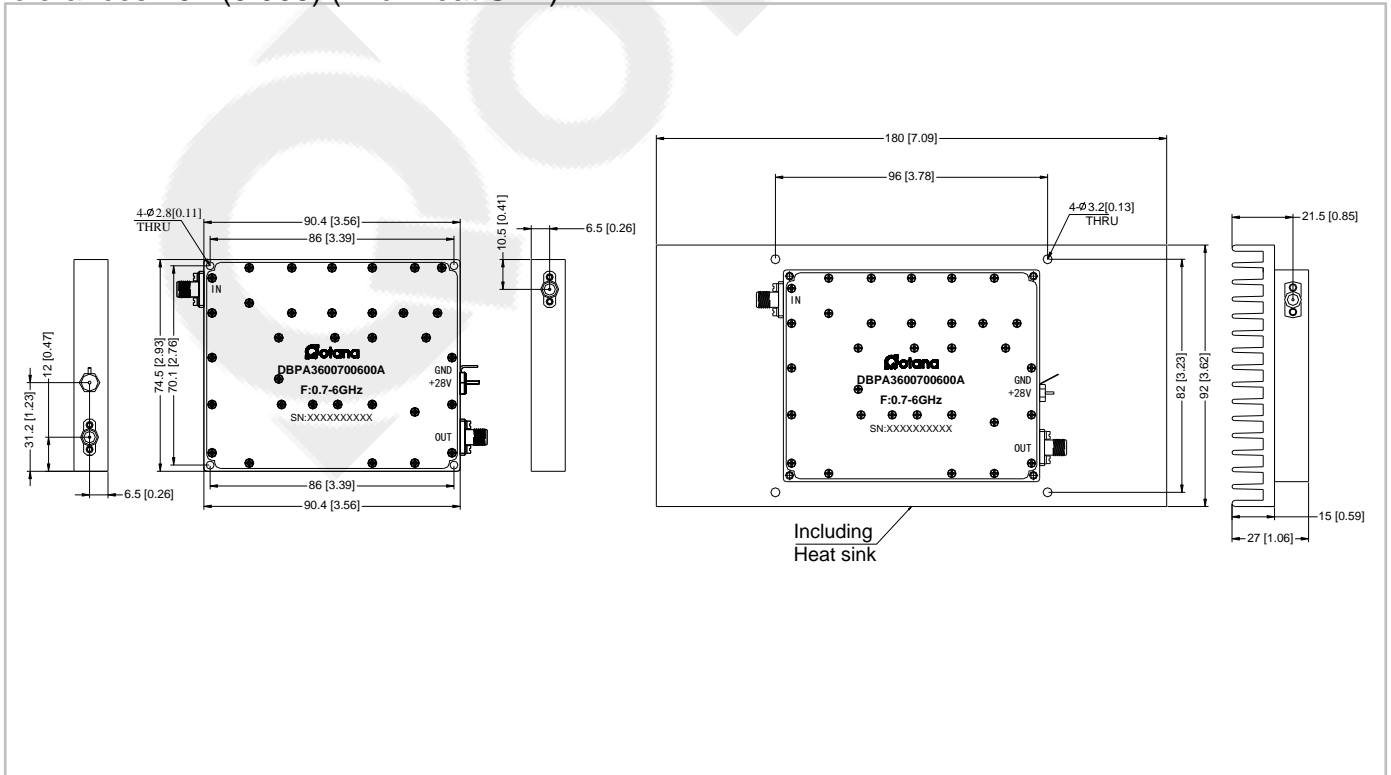
**Environmental Specifications**

Operational Temperature	-40°C~+85°C
Storage Temperature	-50°C~+105°C
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 35°C, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions

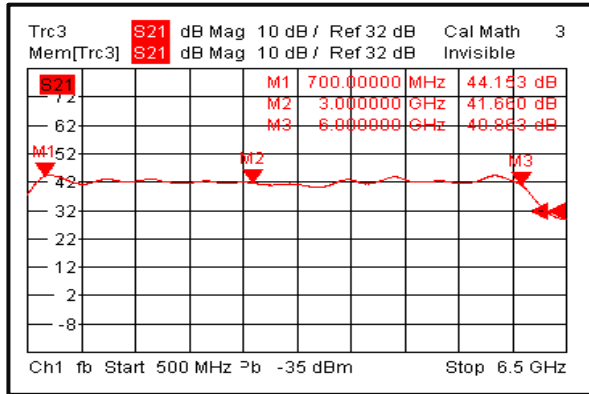
**Outline Drawing:**

All Dimensions in mm (inches)  
Tolerances ±0.2(0.008) (Excl Heat Sink)

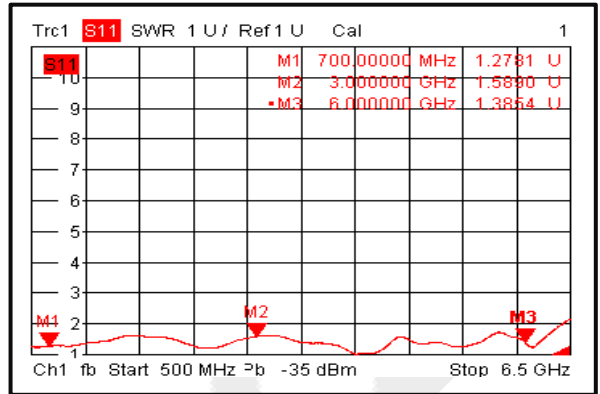
Heat Sink required during operation(Sold Separately)



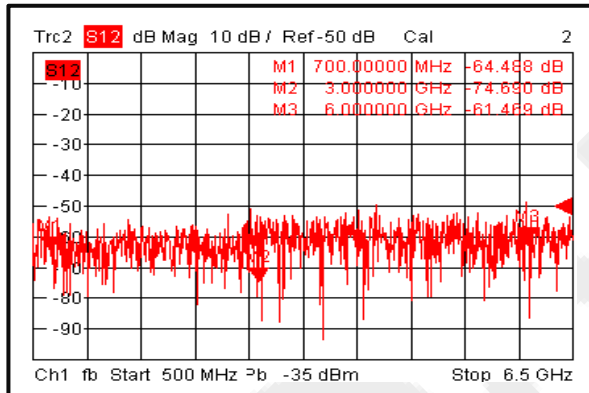
Gain@+25°C



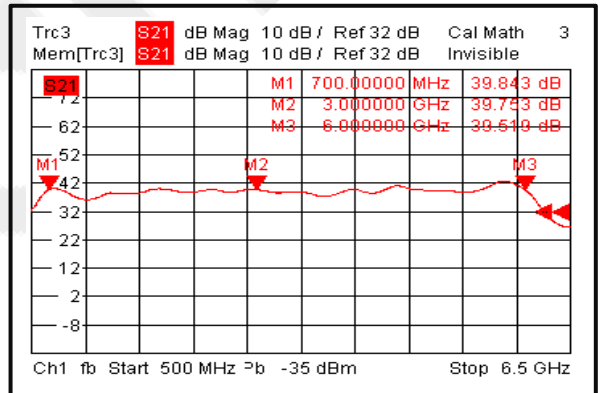
Input VSWR @+25°C



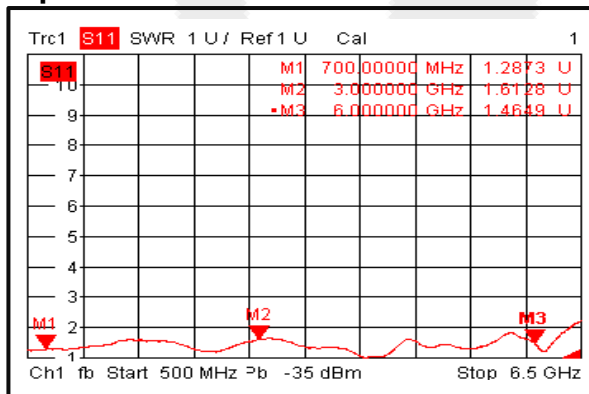
Isolation@+25°C



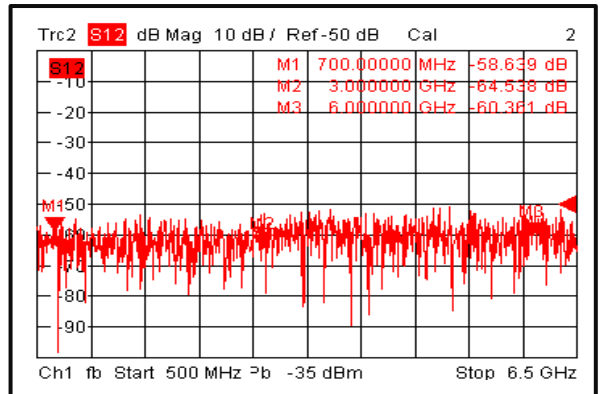
Gain@-40°C



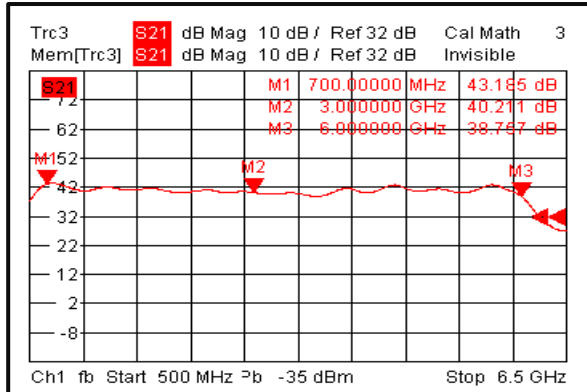
Input VSWR @-40°C



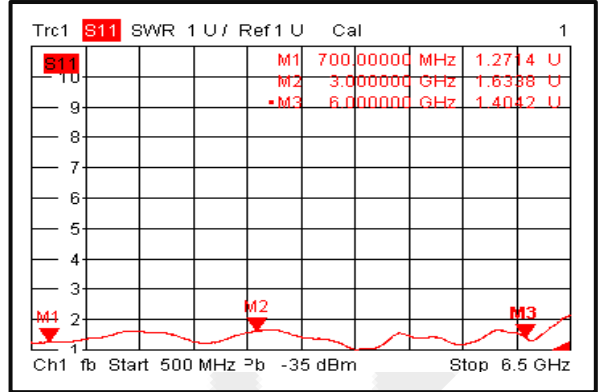
Isolation@-40°C



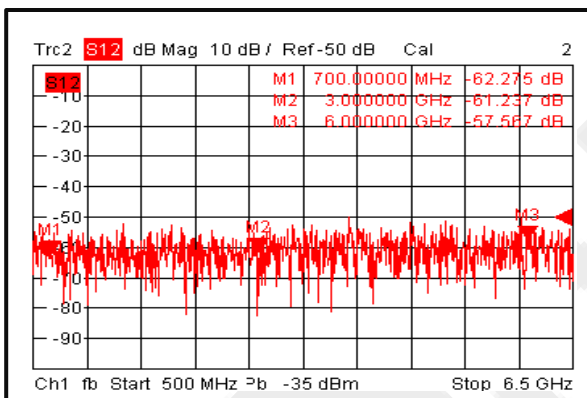
Gain@+85°C



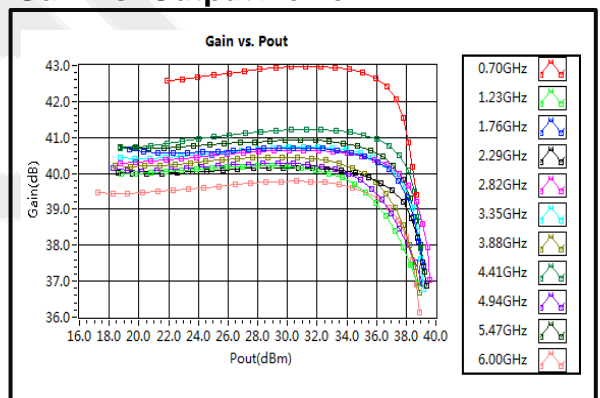
Input VSWR @+85°C



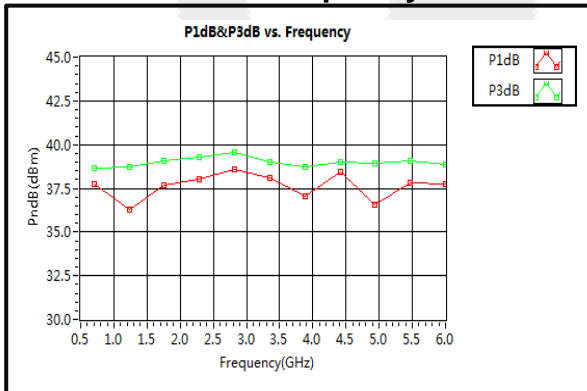
Isolation@+85°C



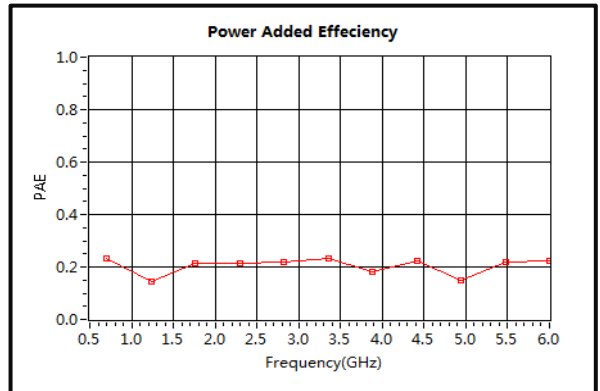
Gain vs. Output Power



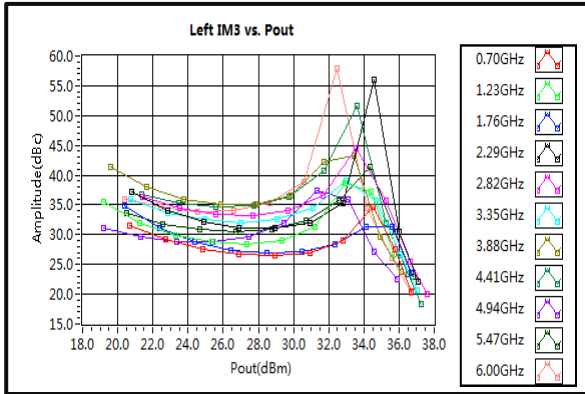
P1dB&P3dB vs. Frequency



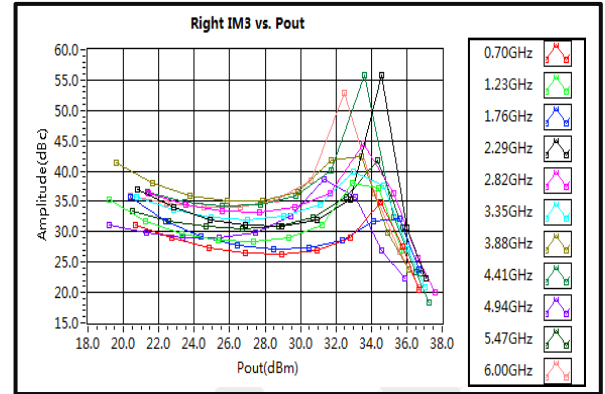
Power Added Efficiency



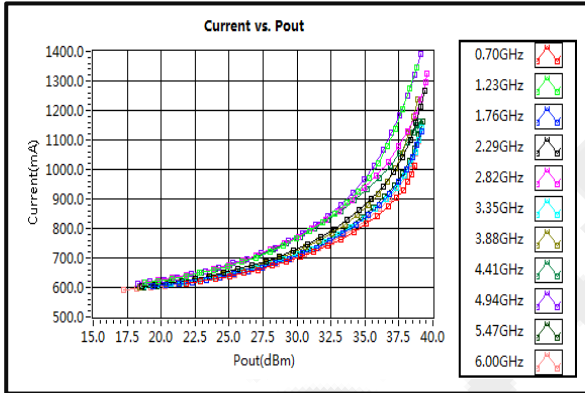
Left IM3 vs. Pout



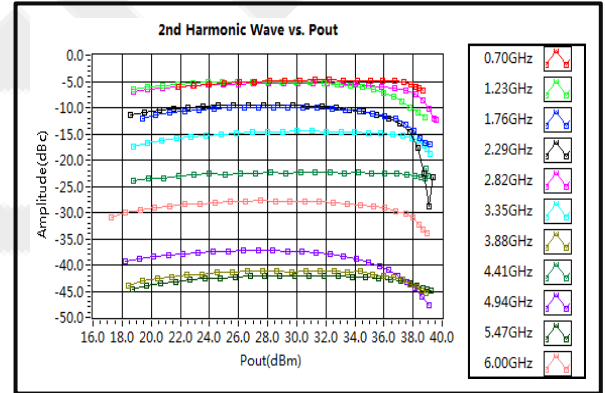
Right IM3 vs. Pout



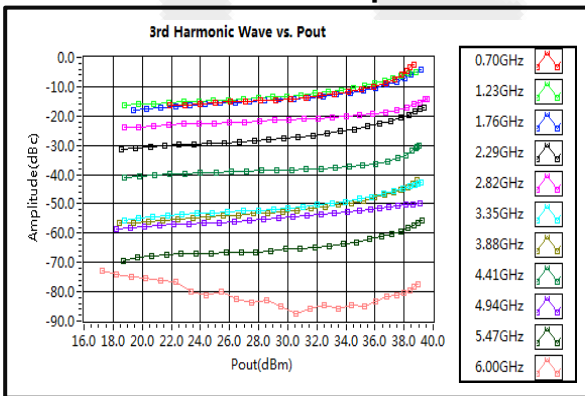
Current



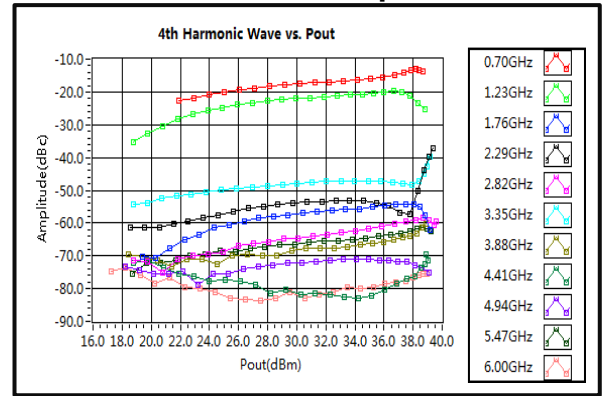
2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power



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