

Features

- Gain: 35dB
- Output power +35dBm typical
- High P1dB: +34 dB m typical
- Supply Voltage: +24V



Typical Applications

- Wireless Infrastructure
- Military & Aerospace
- Fiber Optics

RF Microwave & VSAT
Test Instrument

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	18		23	23		28	GHz
Gain	31	35	41	31	34	41	dB
Gain Flatness		± 2.5			± 2.5		dB
Gain Variation Over Temperature (-45°C ~ +85°C)		± 2.0			± 2.0		dB
Input Return Loss		15			13		dB
Output 1dB Compression Point (P1dB)	31	33		32	34		dBm
Saturated Output Power (Psat)		34			35		dBm
Isolation S12		-50			-50		dB
Supply Current (Vcc=+24V)		0.85	1.5		0.85	1.5	A
Efficiency at P1dB		15			15		%

Weight	11 ounces(Max.)	Impedance	50 ohms
Input / Output Connectors	2.92mm-Female	Material	copper
Finish	Nickel Plated	Package Sealing	Epoxy Sealed

* P1dB, P3dB and Psat power testing signal: 200μs pulse width with 10% duty cycle.

* For average CW power testing, a 5dB back off from Psat is required unless water/oil cooling system is applied.

QOTANA TECHNOLOGIES

Wide Band Solid State Power Amplifier 18GHz~28GHz

Absolute Maximum Ratings

Operating Voltage	+28V
RF Input Power (RFIN)	+2dBm

Biassing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +24V biasing

Power OFF Procedure

Step 1	Turn off +24V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

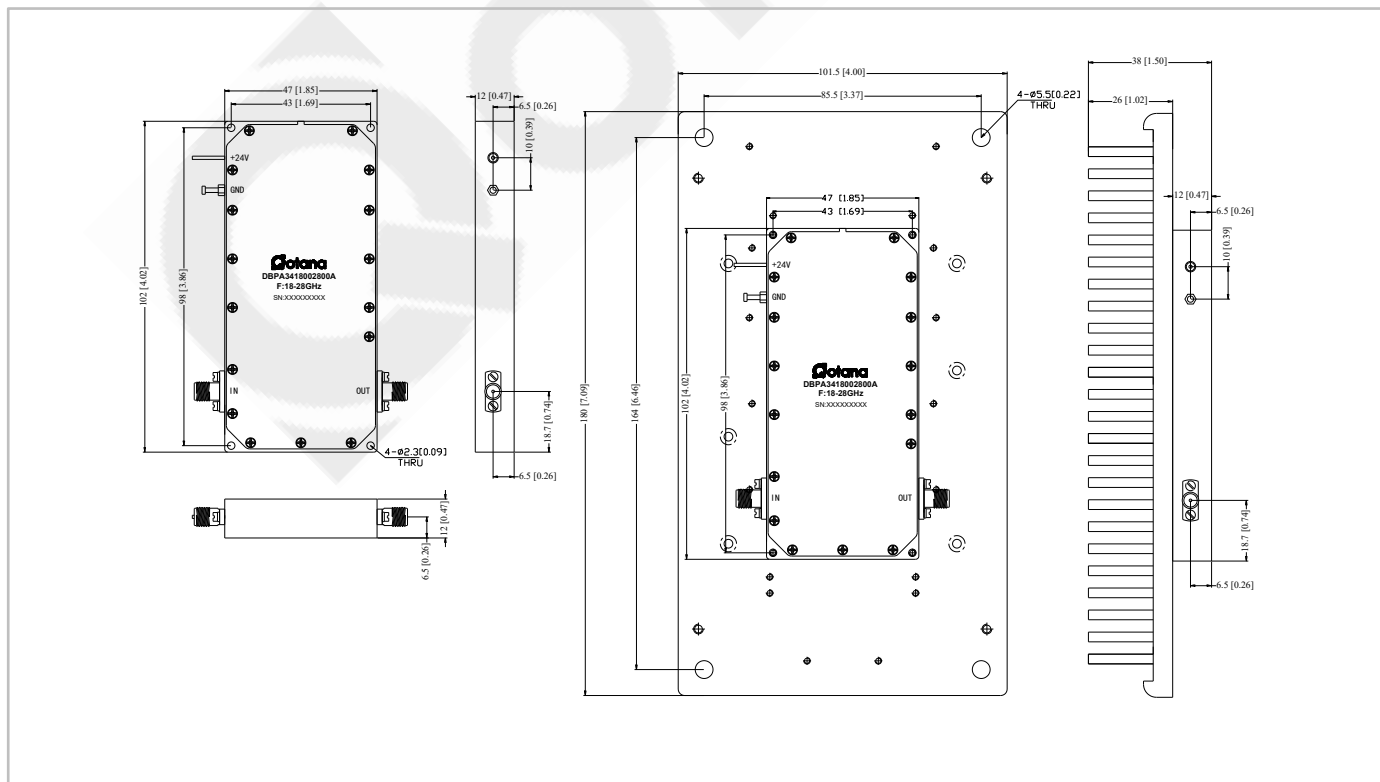
Environmental Specifications

Operational Temperature	-45°C~+85°C
Storage Temperature	-55°C~+125°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

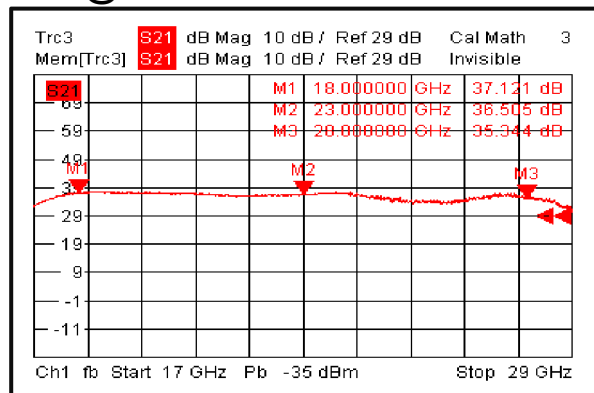
Outline Drawing:

All Dimensions in mm (inches)

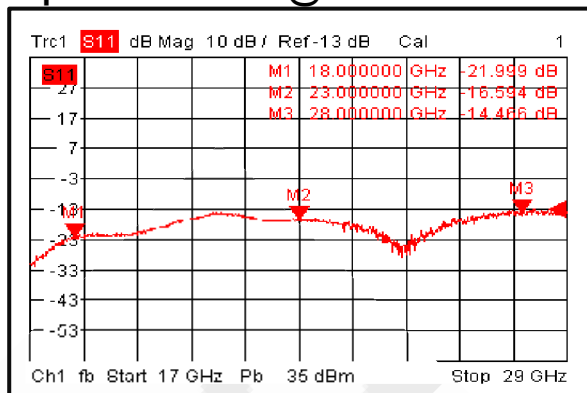
Heat Sink required during operation(Sold Separately)



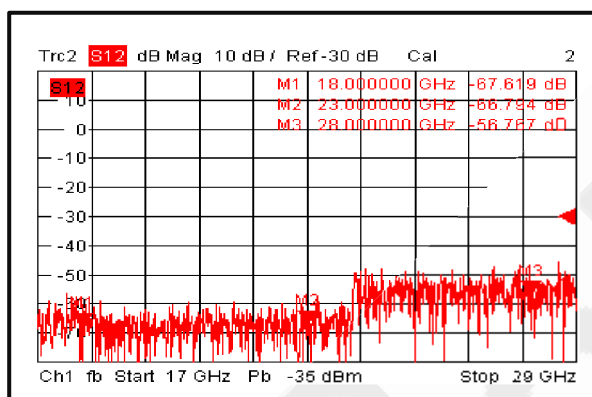
Gain@+25°C



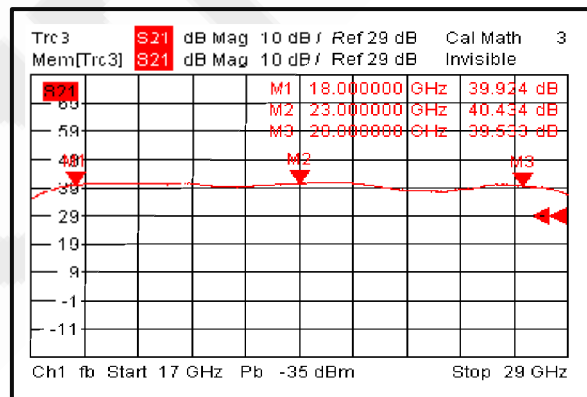
Input Return Loss@+25°C



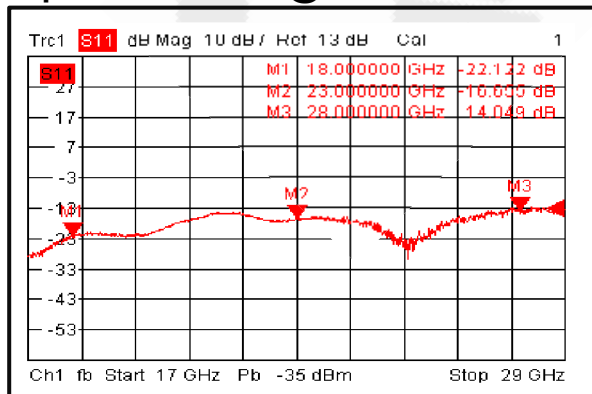
Isolation@+25°C



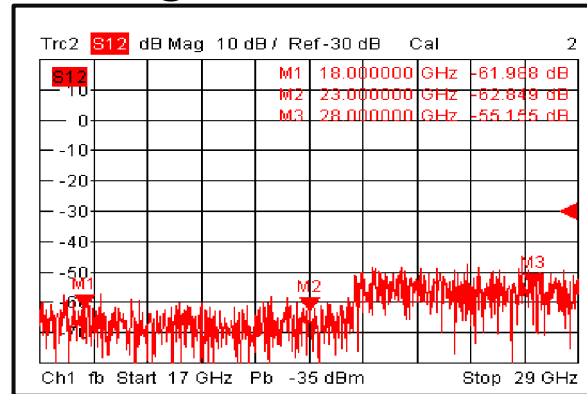
Gain@-45°C



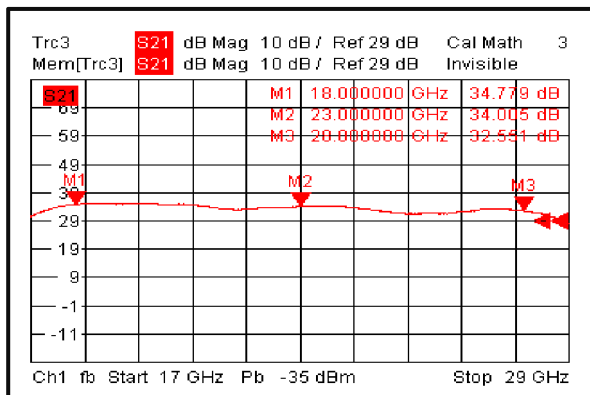
Input Return Loss@-45°C



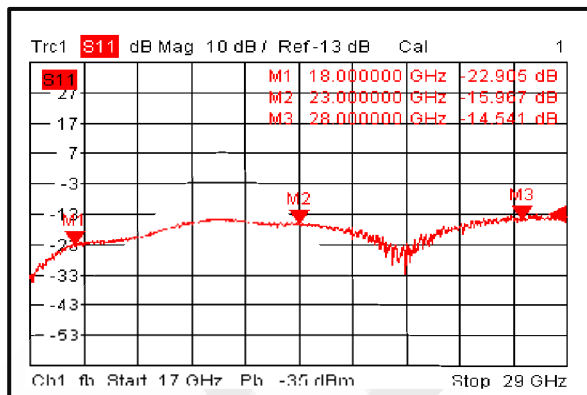
Isolation@-45°C



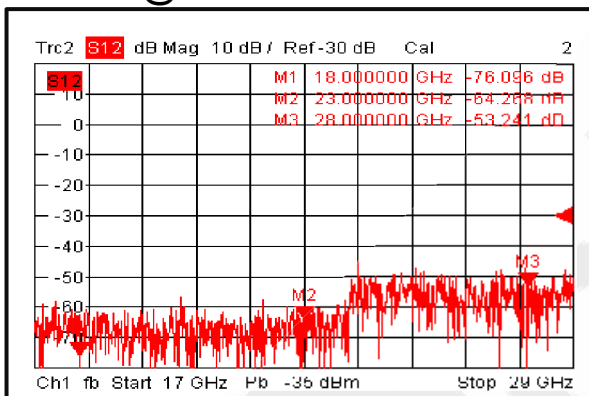
Gain@+85°C



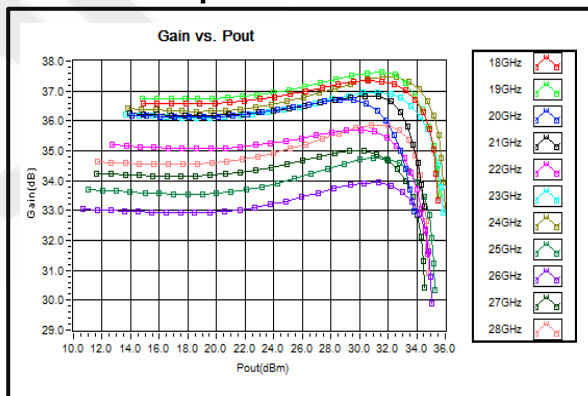
Input Return Loss@+85°C



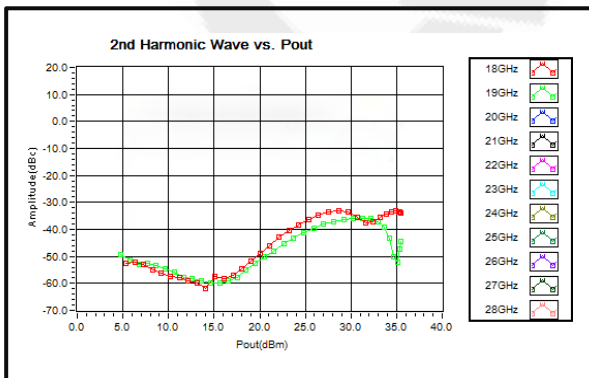
Isolation@+85°C



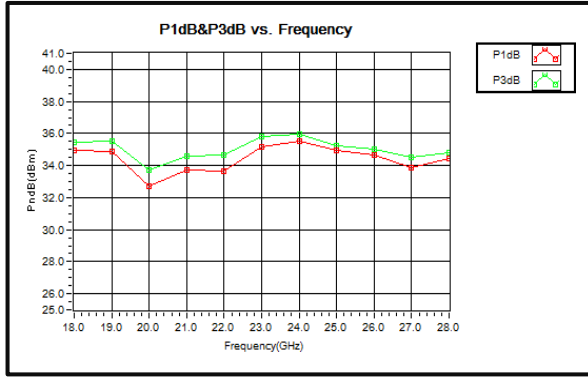
Gain vs. Output Power



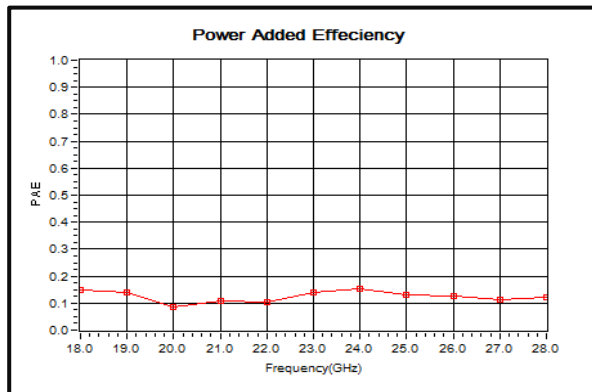
2nd Harmonic Wave Output Power



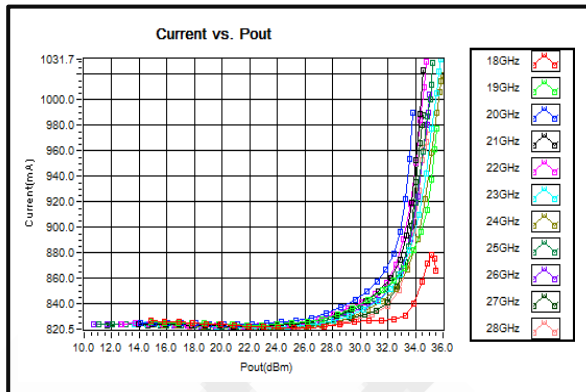
P1dB&P3dB vs. Frequency



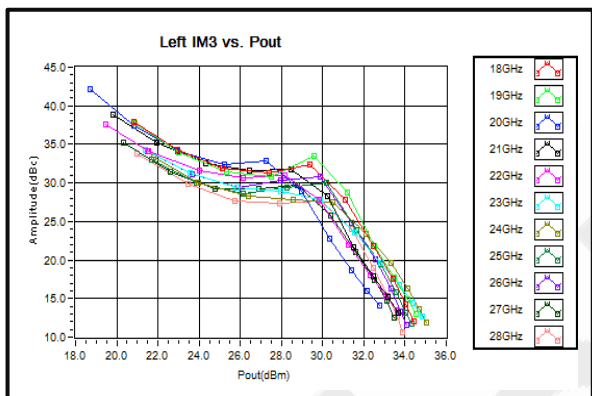
Power Added Efficiency



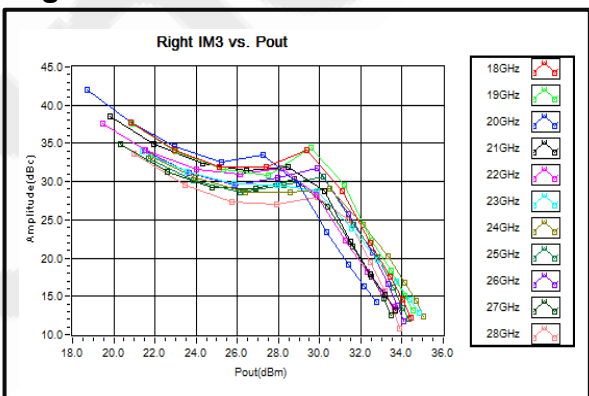
Current



Left IM3 vs. Pout



Right IM3 vs. Pout



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