P/N:DBLNA328003600A

QOTANA TECHNOLOGIES

Wide Band Low Noise Amplifier 28GHz~36GHz

Features

- Gain: 20dB Typical
- Noise Figure: 2.5dB Typical
- P1dB Output Power: +9dBm Typical
- Supply Voltage: +5V



Typical Applications

- Wireless Infrastructure
- Military & Aerospace
- Fiber Optics

RF Microwave & VSAT
Test Instrument

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	28		32	32		36	GHz
Gain		20			19		dB
Gain Flatness		±1.0			±2.0		dB
Gain Variation Over Temperature(-45 ~ +85)		±2.0			±2.0		dB
Noise Figure		2.5	3.0		3.0	3.5	dB
Input VSWR		1.6			1.6		: 1
Output VSWR		1.5			1.5		: 1
Output 1dB Compression Point (P1dB)	8	9		8	9		dBm
Saturated Output Power (Psat)		12			12		dBm
Output Third Order Intercept (IP3)		15			15		dBm
Isolation S12		-50			-50		dB
Supply Current (Vcc=+5V)		66	80		66	80	mA

Weight	0.71 ounces	Impedance	50ohms
Input / Output Connectors	2.92mm-Female	Material	Aluminum
Finish	Standard: Gold 40 micron; Nickel 220 micron thickness	Package Sealing	Epoxy Sealed (Standard)
	Option: Gold 80 micron; Nickel 180 micron thickness		Hermetically Sealed (Option with extra charge)

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Absolute Maximum Ratings

Operating Voltage	+5 .5V	
RF Input Power (RFIN)	28-32GHz	+5dBm
	32-36GHz	-1dBm

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +5V biasing

Power OFF Procedure

Step 1	Turn off +5V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

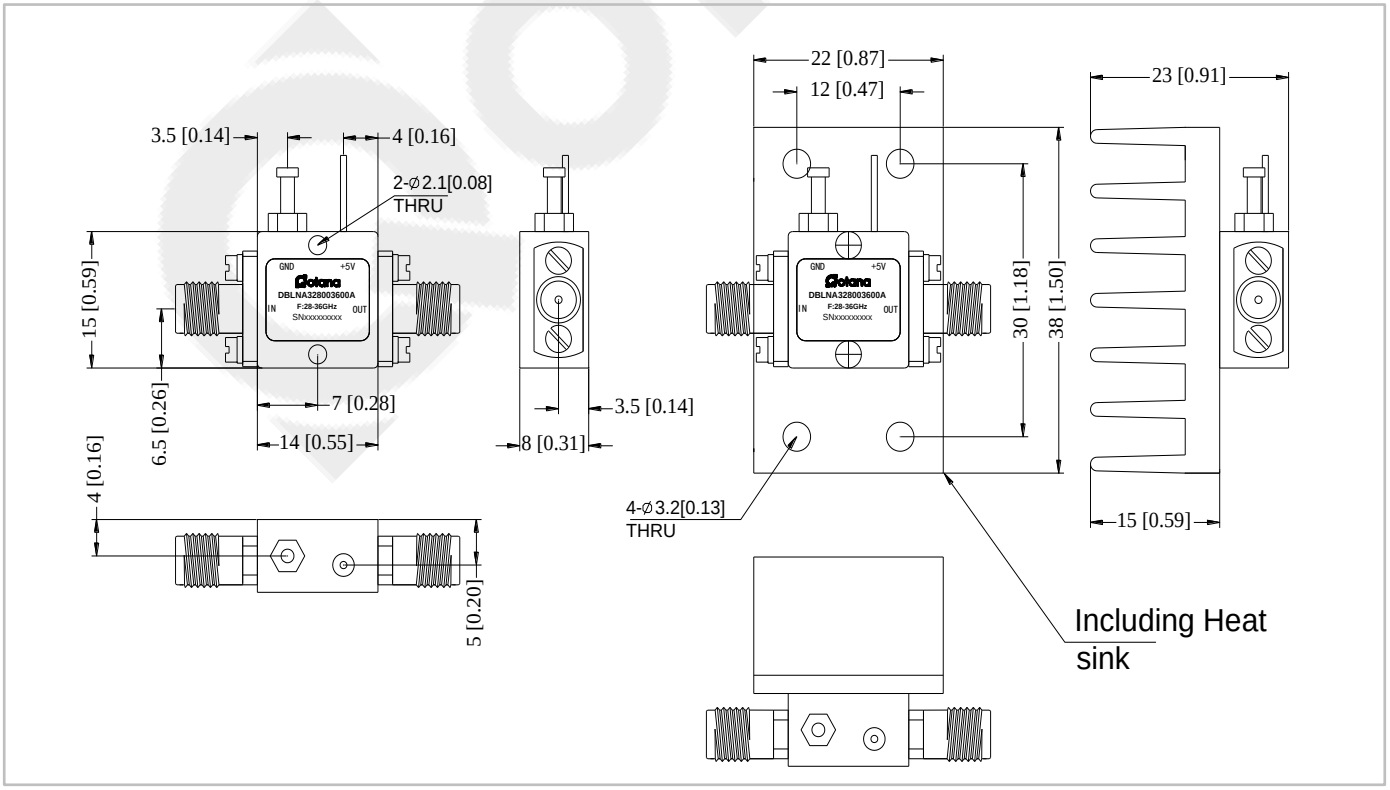
Environmental Specifications

Operational Temperature	-45ºC~+85ºC
Storage Temperature	-55ºC~+125ºC
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 35c, 95%RH at 40ºc
Shock	20G for 11msec half sine wave,3 axis both directions

Outline Drawing:

All Dimensions in mm (inches)

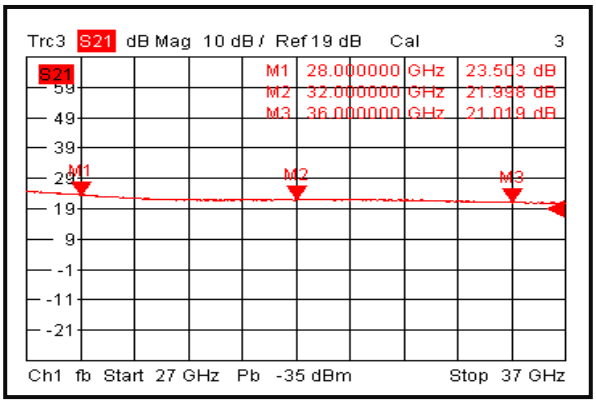
Heat Sink required during operation(Sold Seperately)



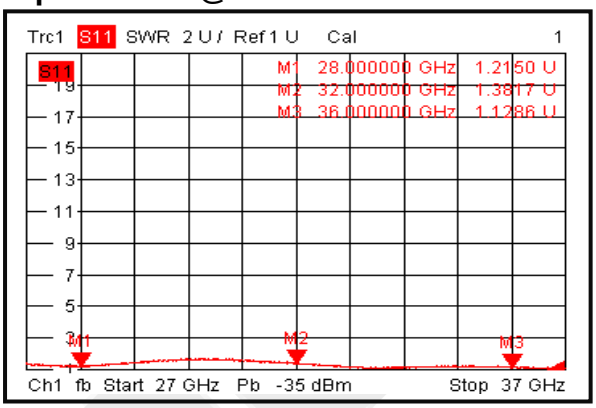
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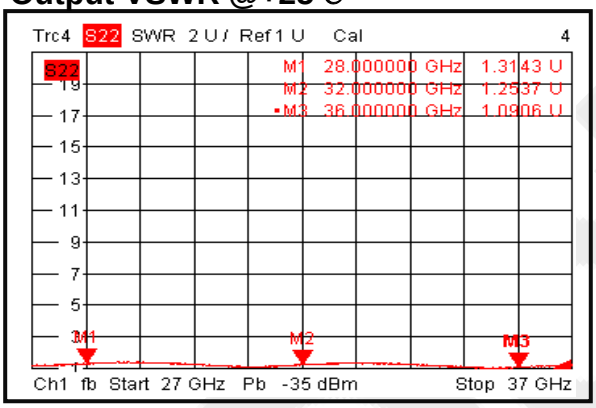
Gain @+25℃



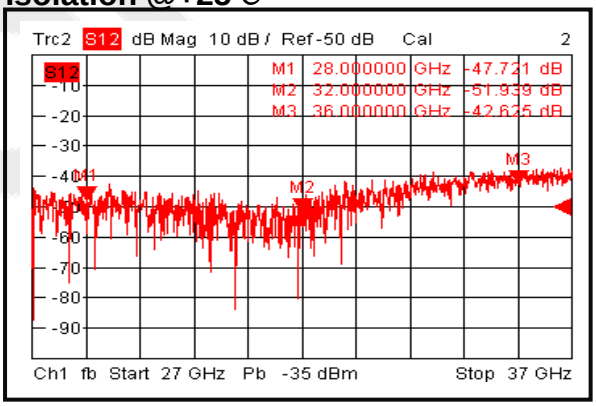
Input VSWR @+25℃



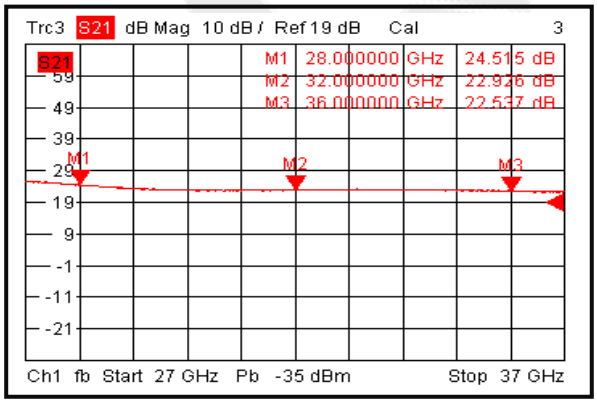
Output VSWR @+25℃



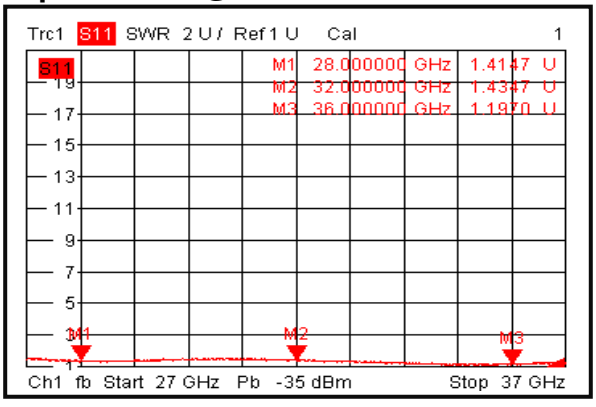
Isolation @+25℃



Gain @-45℃



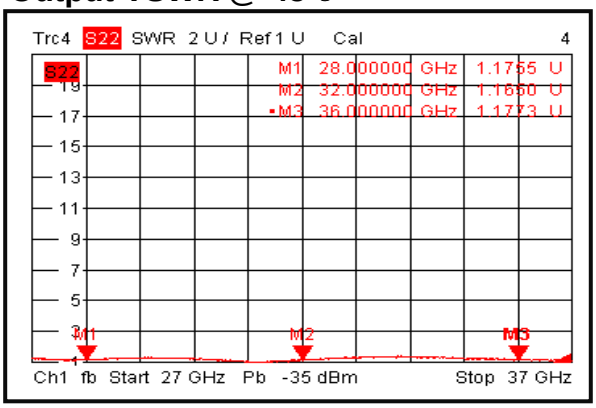
Input VSWR @-45℃



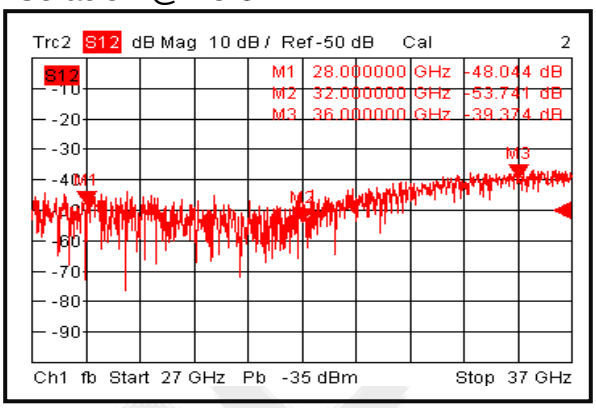
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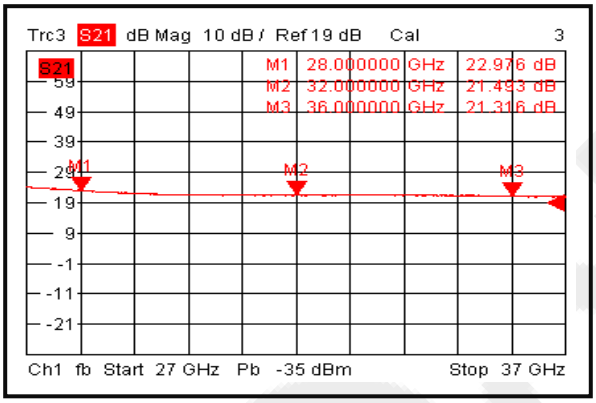
Output VSWR @-45℃



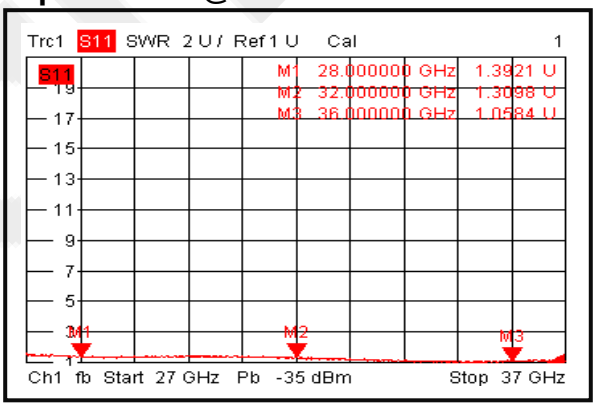
Isolation @-45℃



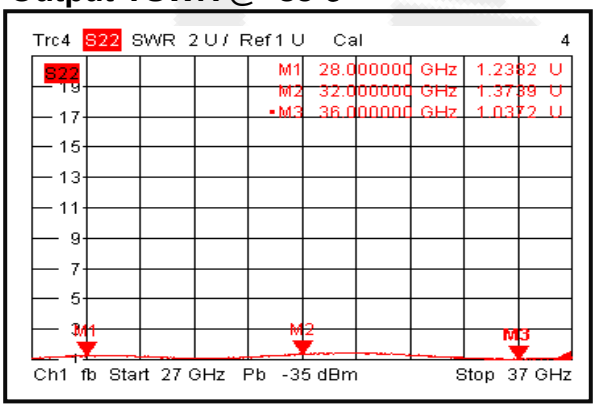
Gain @+85℃



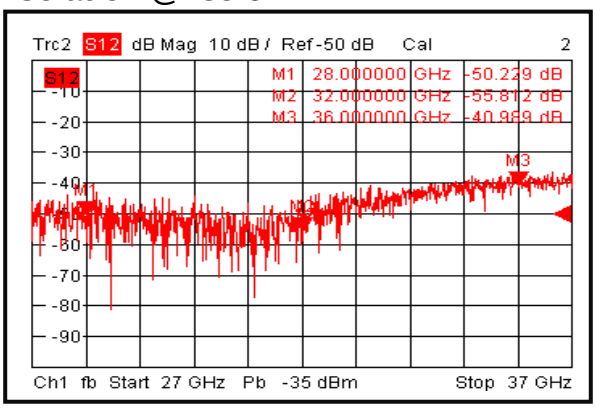
Input VSWR @+85℃



Output VSWR @+85℃



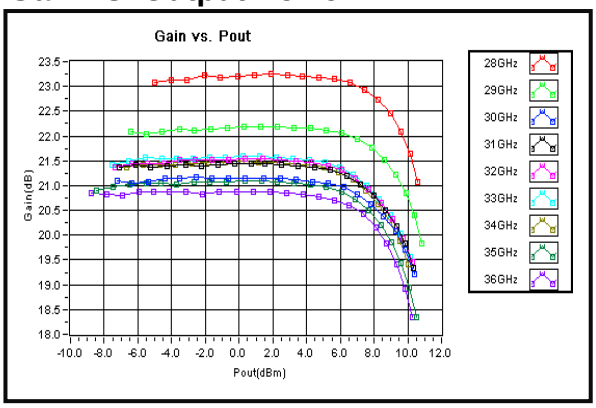
Isolation @+85℃



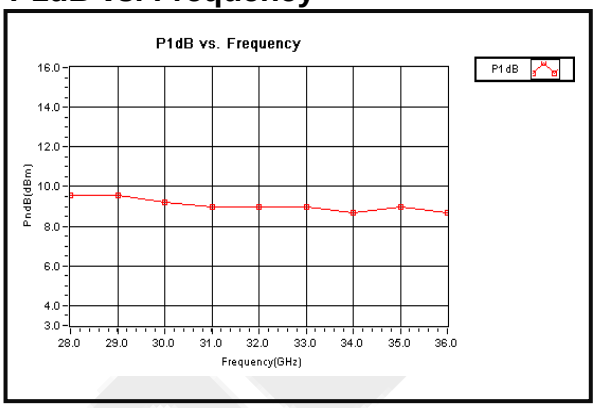
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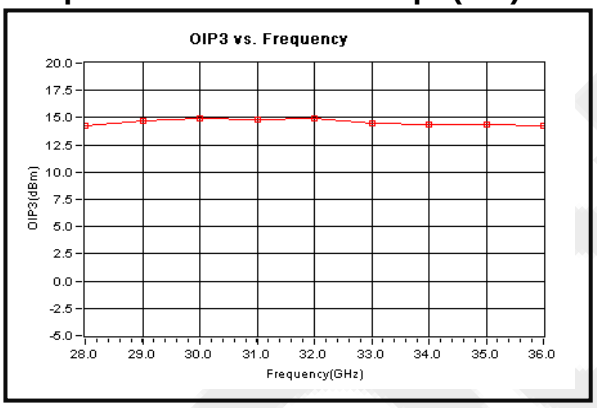
Gain vs. Output Power



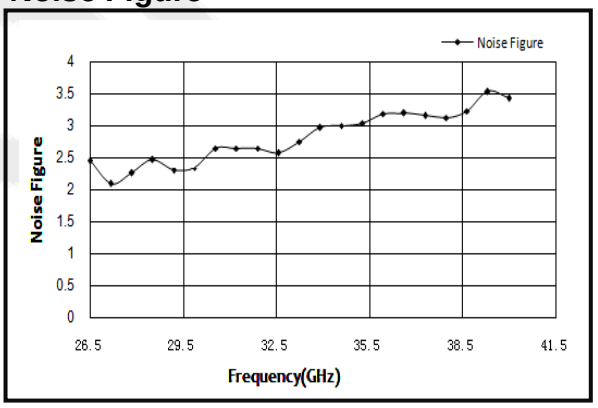
P1dB vs. Frequency



Output Third Order Intercept (IP3)



Noise Figure



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