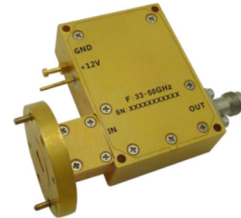




WR22 Low Noise Amplifier 33GHz ~ 50GHz

Features

- Gain: 52dB Typical
- Noise Figure: 2.5dB Typical
- P1dB Output Power: +18dBm Typical
- Supply Voltage: +12V
- 50 Ohm Matched



Typical Applications

- Wireless Infrastructure
- Test and measurement Instrument
- Fiber Optics

RF Microwave & VSAT

5G communication

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	33		40	40		50	GHz
Gain	48	52		39	50		dB
Gain Flatness		±2.0			±2.0		dB
Gain Variation Over Temperature (-40°C~+85°C)		±3.0			±3.0		dB
Noise Figure		2.5			2.5		dB
Input Return loss		8			7		dB
Output Return loss		10			8		dB
Output Power for 1 dB Compression (P1dB)	15	19			15		dBm
Saturated Output Power (Psat)		20			17		dBm
Output Third Order Intercept (OIP3)		24			22		dBm
Isolation S12		-60			-60		dB
Supply Current (Vcc=+12V)		300	400		300	400	mA

Weight	2.0 Max. ounces	Impedance	50ohms
Input / Output Connectors	Input WR22 Round / 2.4mm Female Output	Material	Aluminum
Finish	Glod Plated	Package Sealing	Epoxy Sealed (Standard)
			Hermetically Sealed (Option with extra charge)



Absolute Maximum Ratings

Operating Voltage	+15V
RF Input Power (RFIN)	0dBm

Biassing 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

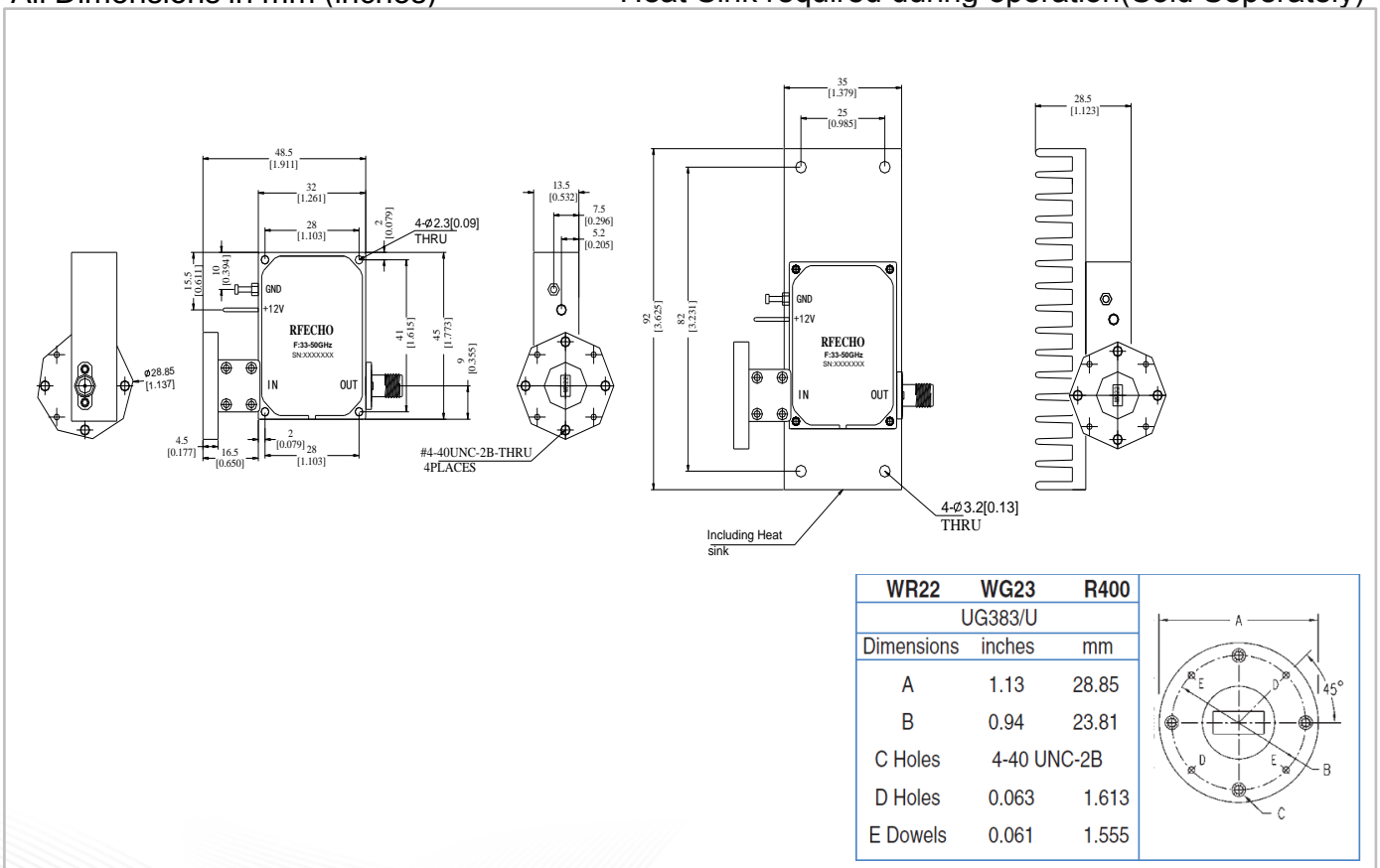
Environmental Specifications

Operational Temperature	-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:

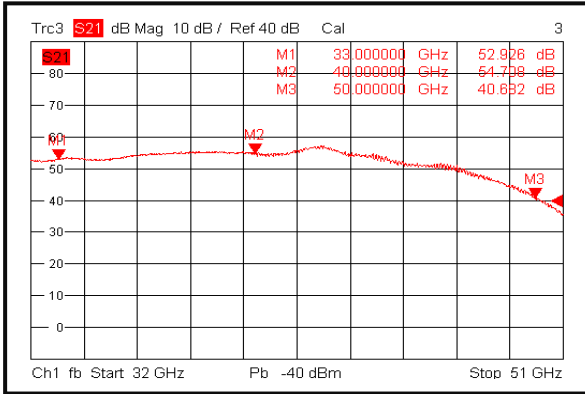
All Dimensions in mm (inches)

Heat Sink required during operation(Sold Separately)

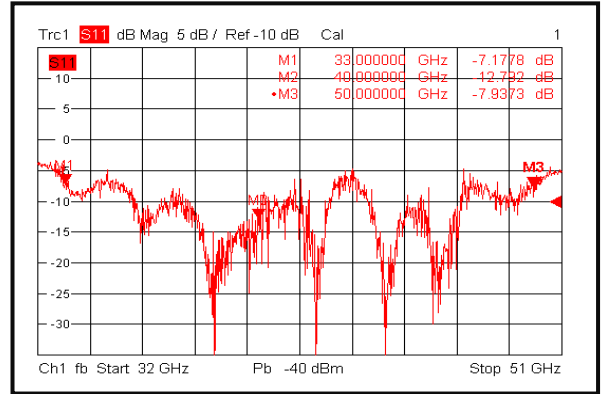




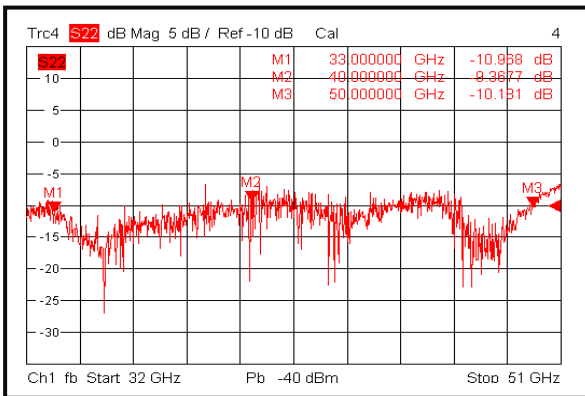
Gain @+25°C



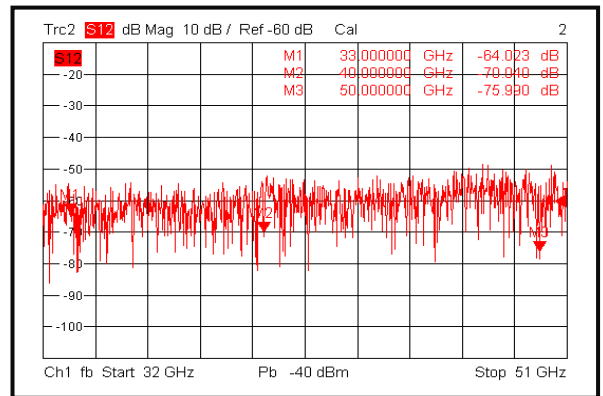
Input Return loss @+25°C



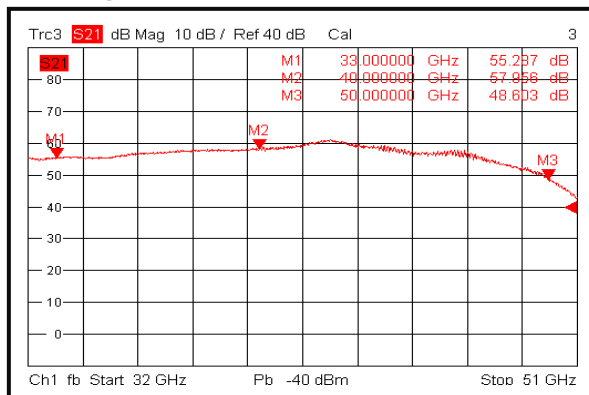
Output Return loss @+25°C



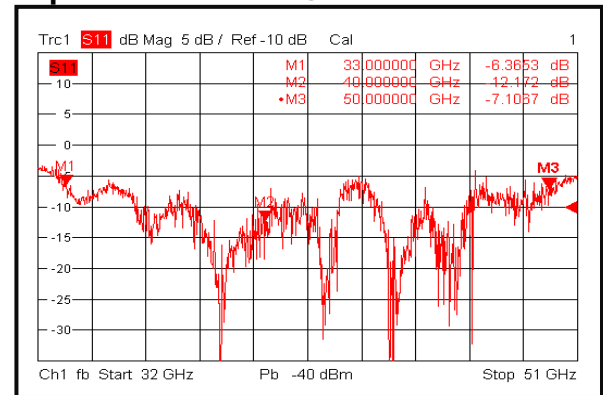
Isolation @+25°C



Gain @-40°C

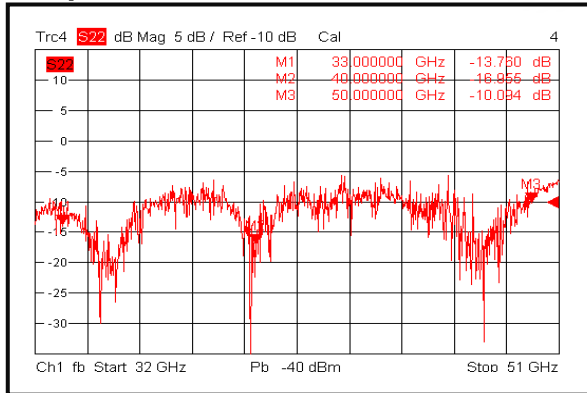


Input Return loss @-40°C

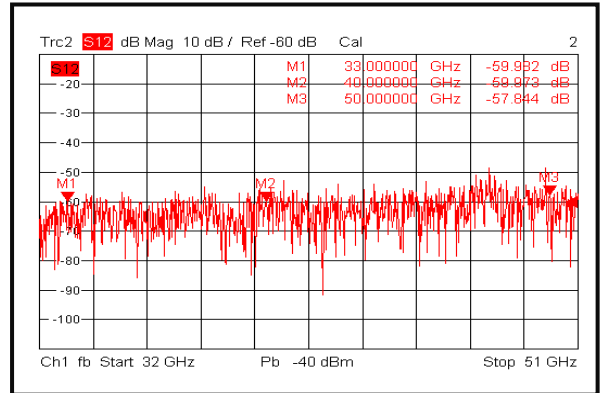




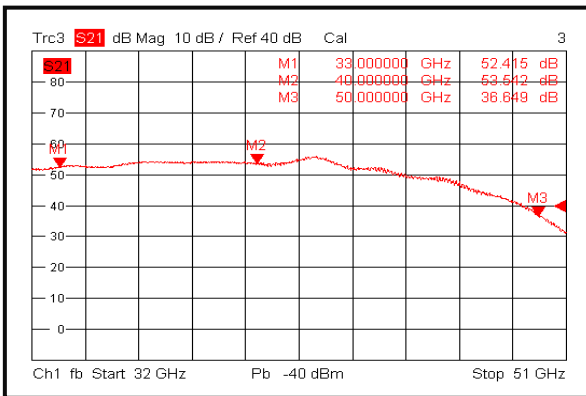
Output Return loss @-40°C



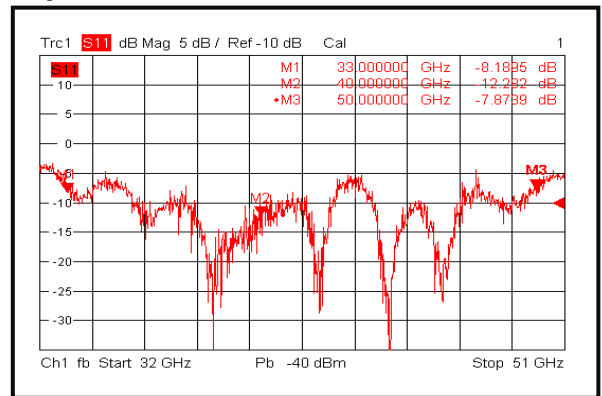
Isolation @-40°C



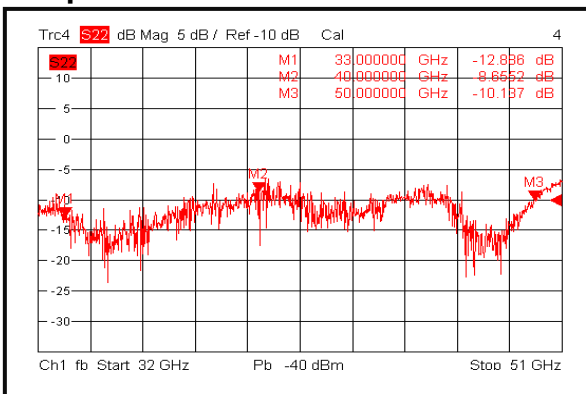
Gain @+85°C



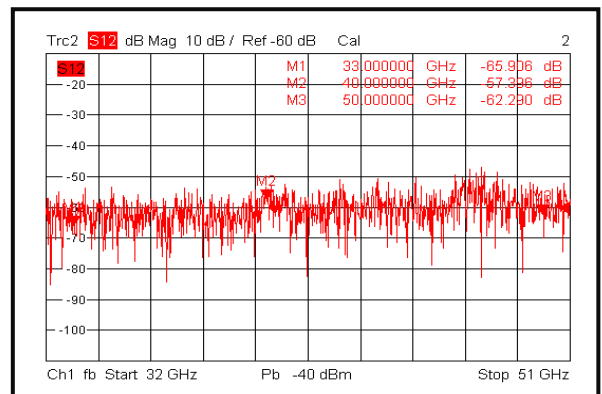
Input Return loss @+85°C



Output Return loss @+85°C

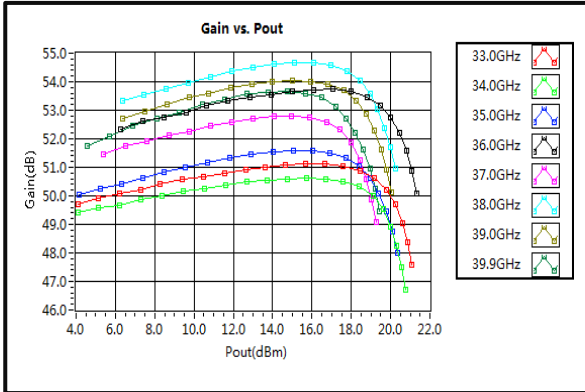


Isolation @+85°C

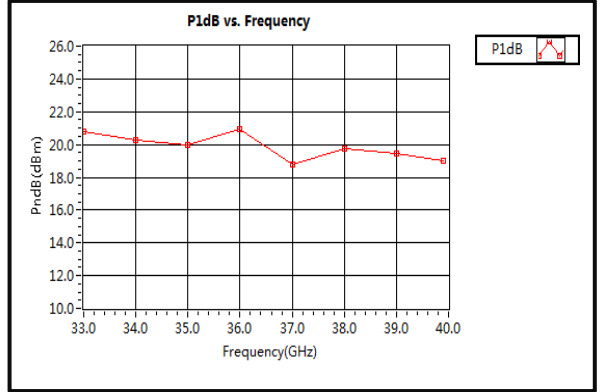




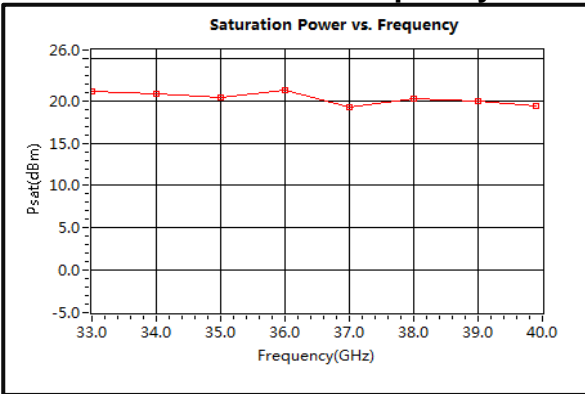
Gain vs. Output Power



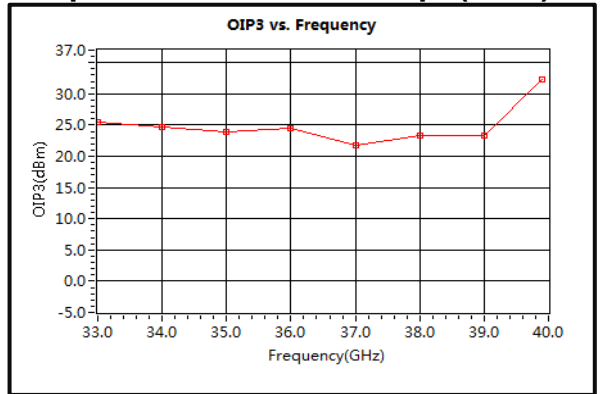
P1dB vs. Frequency



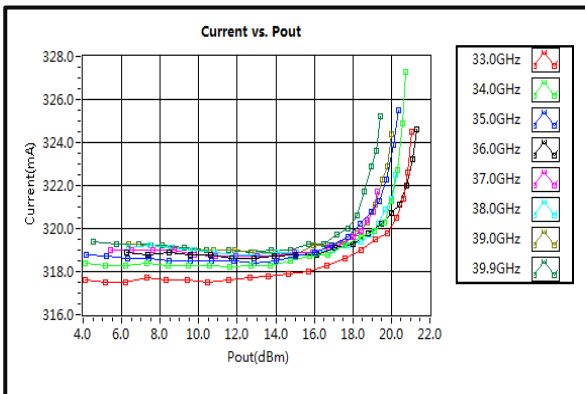
Saturation Power vs. Frequency



Output Third Order Intercept (OIP3)



Current



Noise Figure

