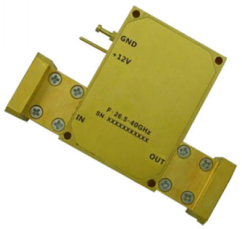
WR28 Low Noise Amplifier
26.5GHz ~ 40GHz



Features

- Gain: 48dB Typical
- Noise Figure: 3.0dB Typical
- P1dB Output Power: +21dB m Typical
- Supply Voltage: +12V
- 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	26.5		32	32		40	GHz
Gain	45	48		40	45		dB
Gain Flatness		±2.0			±3.0		dB
Gain Variation Over Temperature (-40ºC~+85ºC)		±2.0			±3.0		dB
Noise Figure		3.0	4.0		3.5	4.5	dB
Input VSWR		2.0			2.2		: 1
Output VSWR		2.0			2.2		: 1
Output Power for 1 dB Compression (P1dB)	18	21		16	19		dBm
Saturated Output Power (Psat)		23			20		dBm
Output Third Order Intercept (OIP3)		26			23.5		dBm
Isolation S12		-60			-60		dB
Supply Current (Idd) (Vcc=+12V)		420	500		420	500	mA

Weight	2.3 ounces (Max.)	Impedance	50ohms
Input / Output Connectors	WR28	Material	Aluminum
Finish	Gold Plated	Package Sealing	Epoxy Sealing

Absolute Maximum Ratings

Operating Voltage	+15V
RF Input Power (RFIN)	-20dBm

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

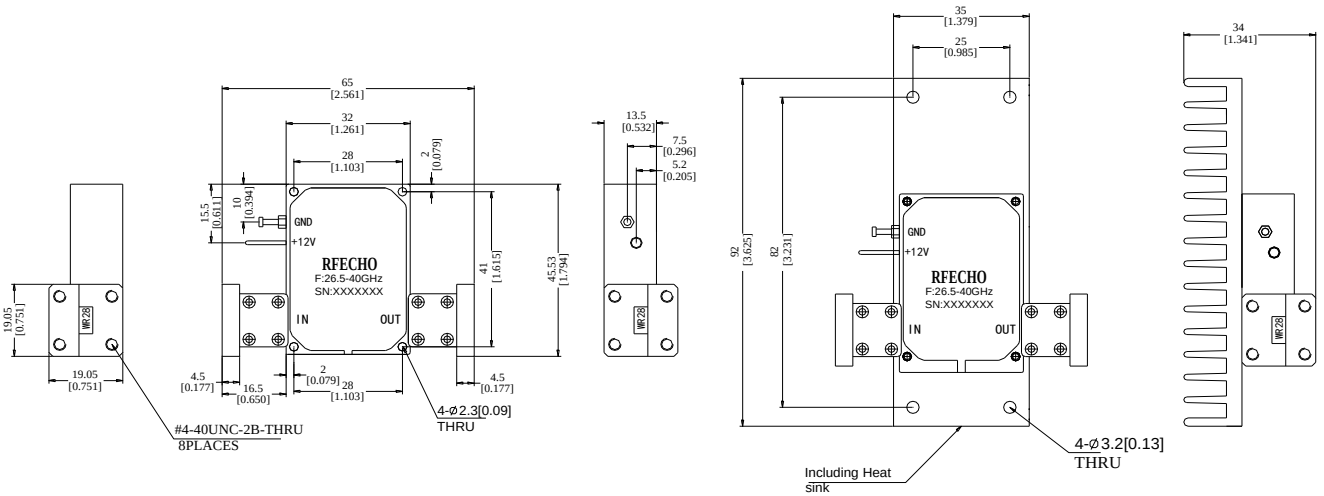
Environmental Specifications

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

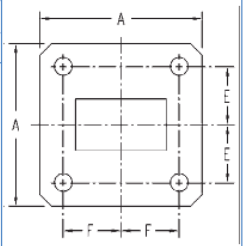
Outline Drawing:

All Dimensions in mm (inches)
Tolerances ±0.1 (0.004) (Excl Heat Sink)

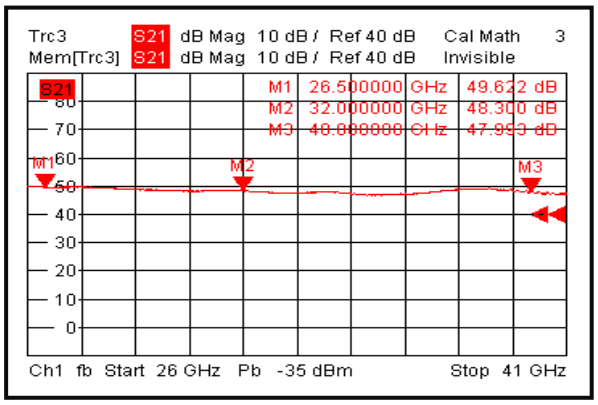
Heat Sink required during operation(Sold Separately)



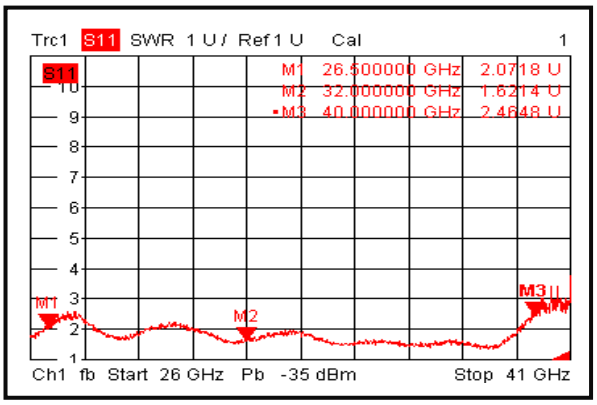
WR28	WG22	R320
	UG599/U	
Dimensions	inches	mm
A	0.75	19.05
E	0.265	6.73
F	0.250	6.35
Hole Dia.	0.116	2.98



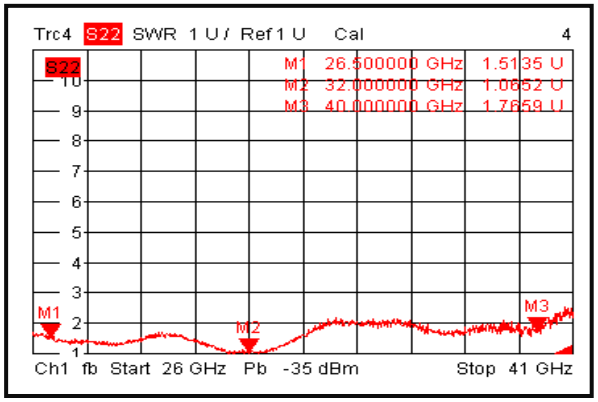
Gain @+25℃



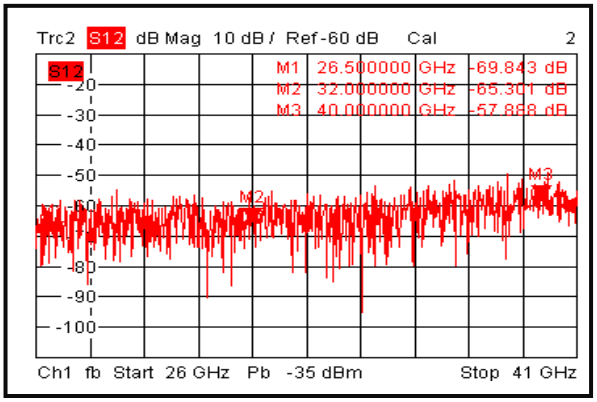
Input VSWR @+25℃



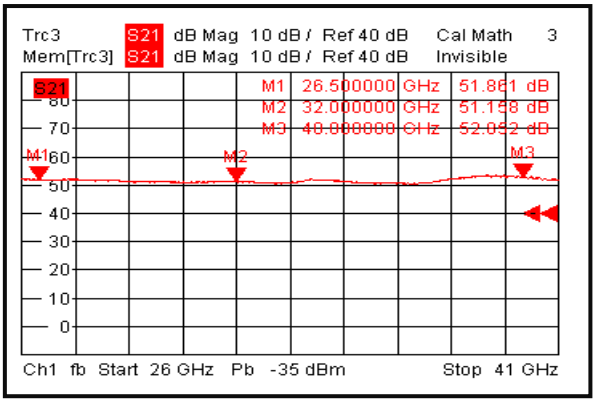
Output VSWR @+25℃



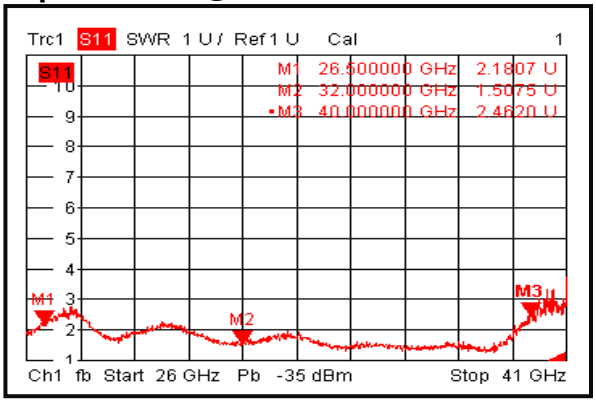
Isolation @+25℃



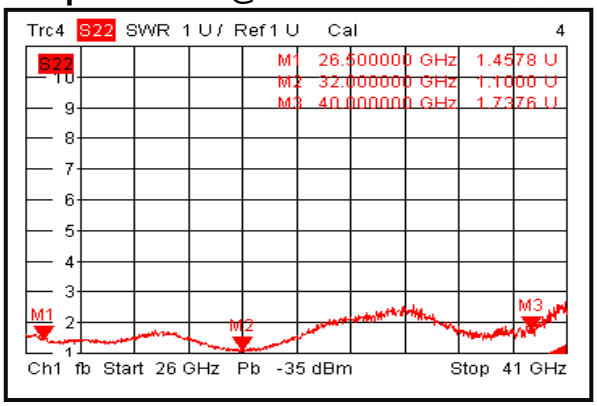
Gain @-40℃



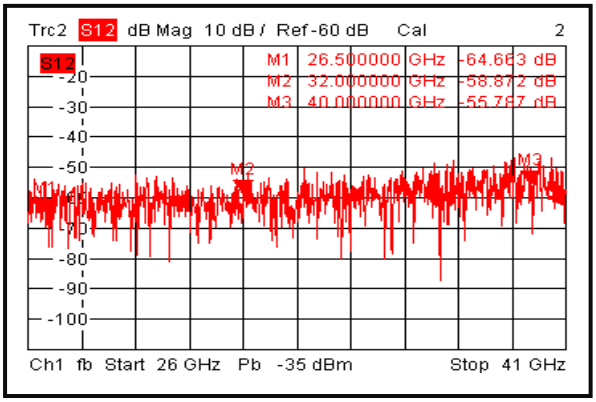
Input VSWR @-40℃



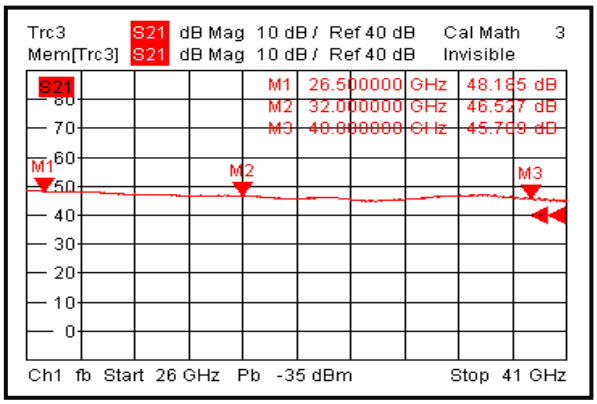
Output VSWR @-40℃



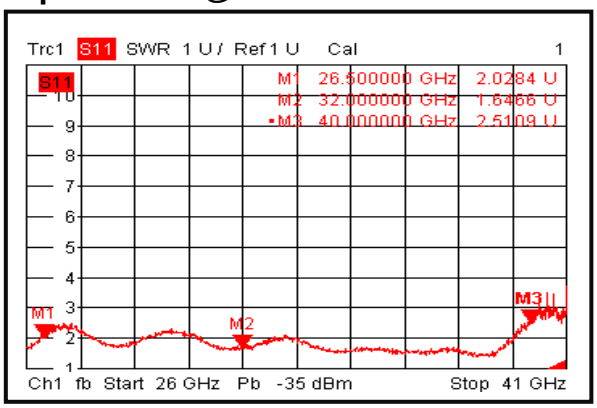
Isolation @-40℃



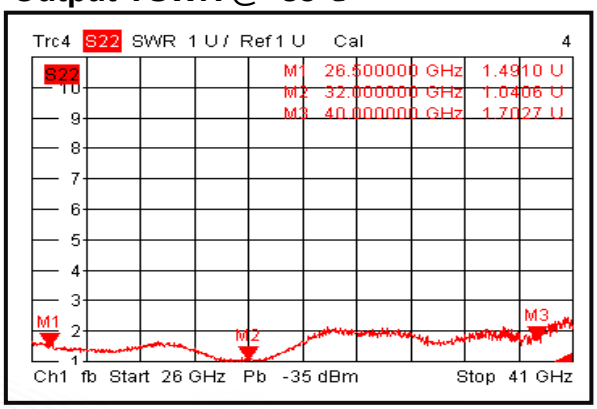
Gain @+85℃



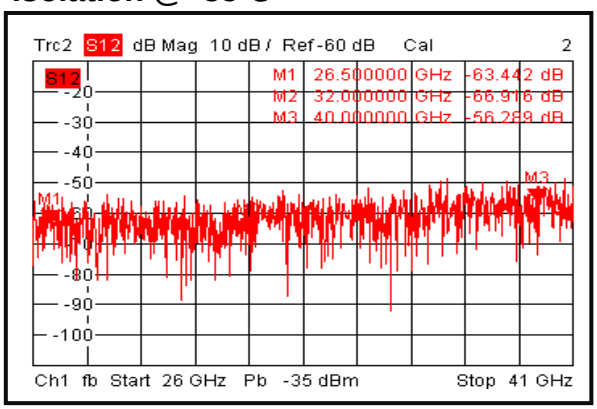
Input VSWR @+85℃



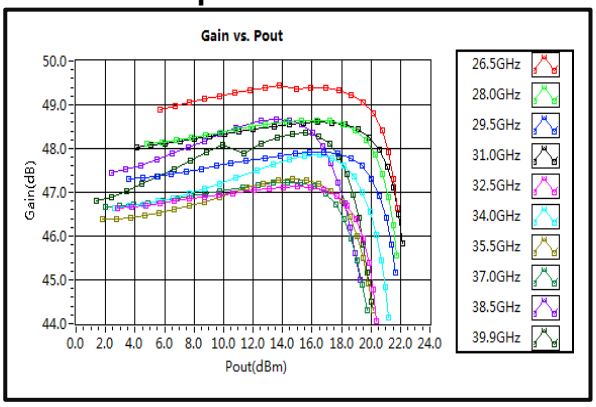
Output VSWR @+85℃



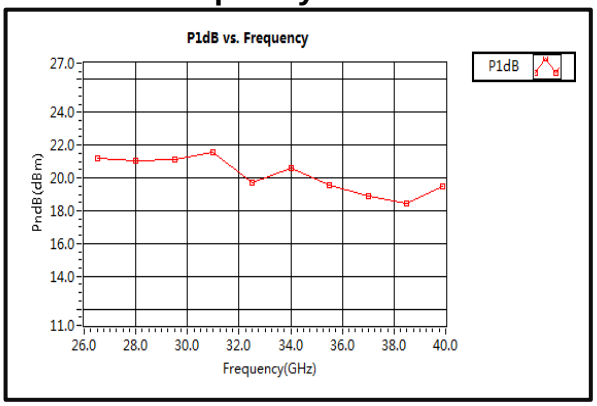
Isolation @+85℃



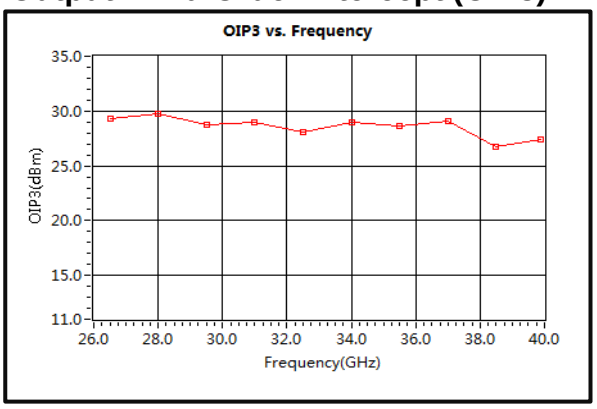
Gain vs. Output Power



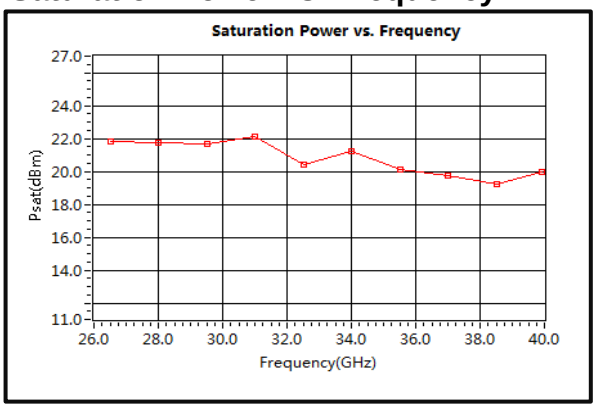
P1dB vs. Frequency



Output Third Order Intercept (OIP3)



Saturation Power vs. Frequency



Noise Figure