

REVISION HISTORY

REV	DESCRIPTION	DATE	APPROVED
A	PRODUCTION		

WIDE BAND LOW NOISE AMPLIFIER 2GHZ~4GHZ

UCL-LNA0204-44-24-S

SPECIFICATIONS

ELECTRICAL

Parameter	Min.	Typ.	Max.	Units
Frequency Range	2		4	GHz
Gain	42	44		dB
Gain Flatness		±0.5	±1.0	dB
Gain Variation Over Temperature(-45°C ~ +85°C)		±1.0	±1.5	dB
Noise Figure		1.8	2.5	dB
Input VSWR		1.5	2.0	: 1
Output VSWR		1.6	2.0	: 1
Output 1dB Compression Point (P1dB)	21	22		dBm
Saturated Output Power (Psat)		26		dBm
Output Third Order Intercept (IP3)		28		dBm
Isolation S12		-55		dB
Supply Current (Idd) (Vcc=+12V)		220	300	mA

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

Absolute Maximum Ratings

Operating Voltage	+15V
RF Input Power(RFIN)	-9dBm

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +12V biasing

Power OFF Procedure

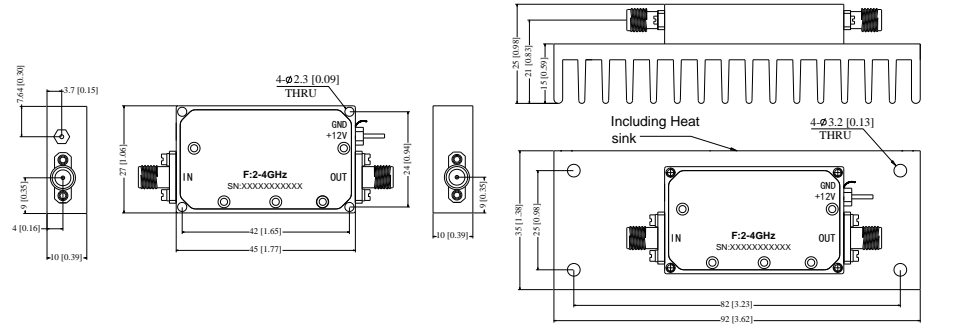
Step 1	Turn off +12V biasing
Step 2	Remove RF connection
Step 3	Remove Ground.

Environmental Specifications

Operational Temperature	-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 35c, 95%RH at 40°C
Shock	20G for 11msec half sine wave,3 axis both directions

Outline Drawing:

All Dimensions in mm (inches)



Universal Cooperate Ltd.

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Edgware,
HA8 9EL The UK

TITLE

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SIZE

A

CAGE CODE

MODEL

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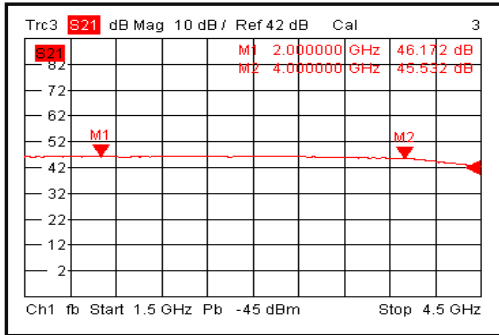
REV

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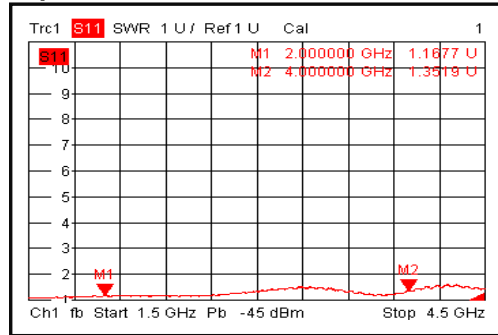
SCALE 1:1

DOC FAMILY

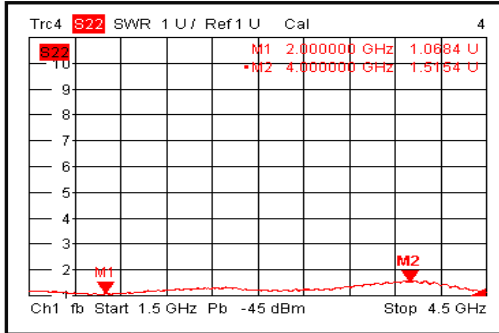
Gain @+25°C



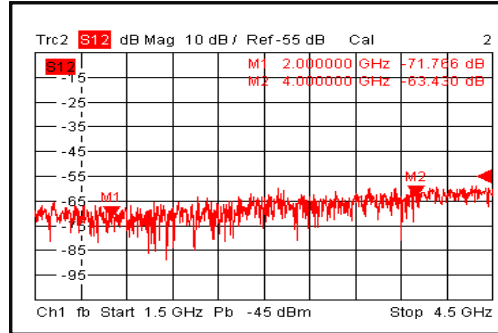
Input VSWR @+25°C



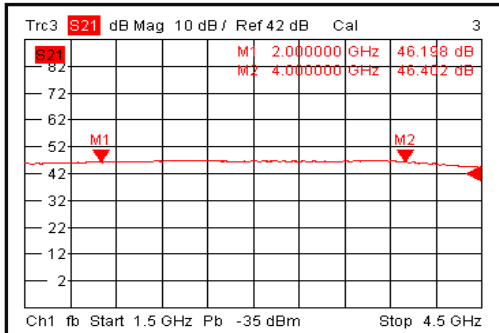
Output VSWR @+25°C



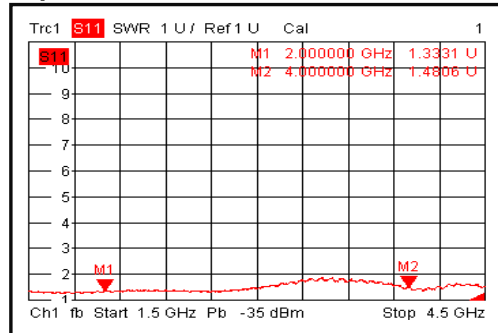
Isolation @+25°C



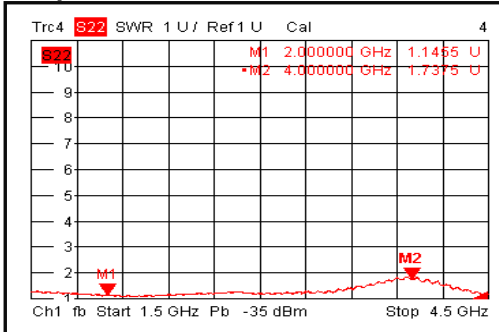
Gain @-45°C



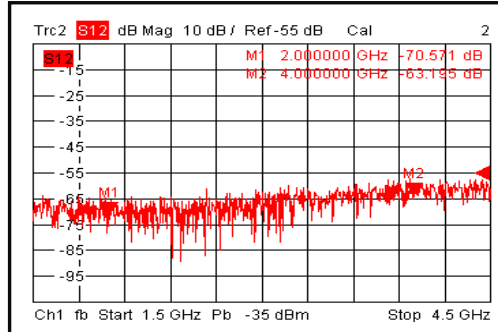
Input VSWR @-45°C



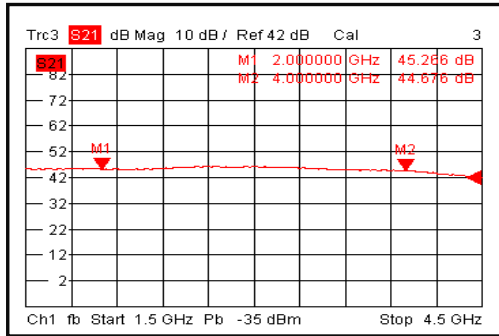
Output VSWR @-45°C



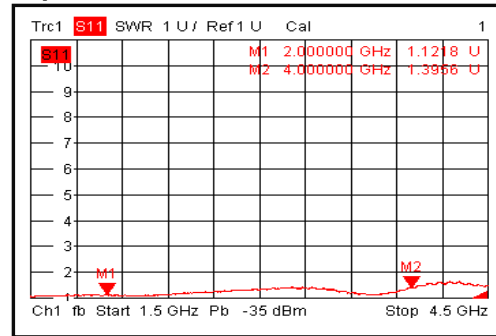
Isolation @-45°C



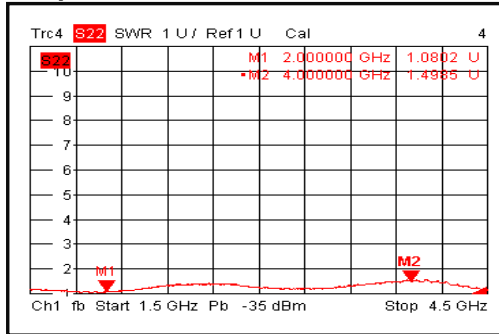
Gain @+85°C



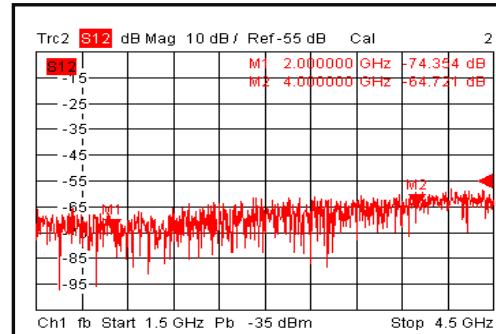
Input VSWR @+85°C



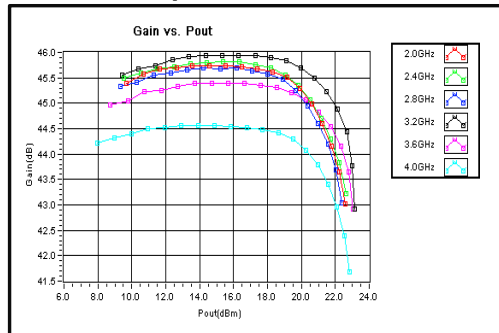
Output VSWR @+85°C



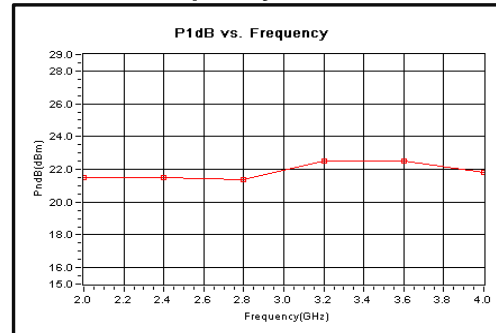
Isolation @+85°C



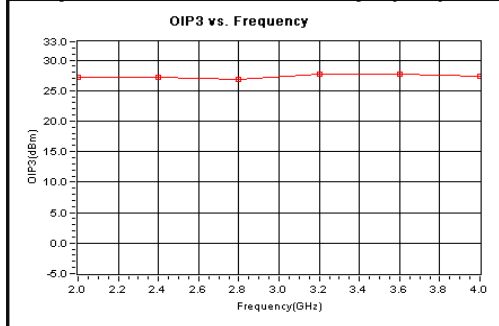
Gain vs. Output Power



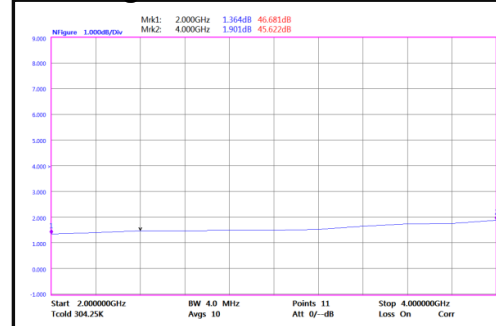
P1dB vs. Frequency



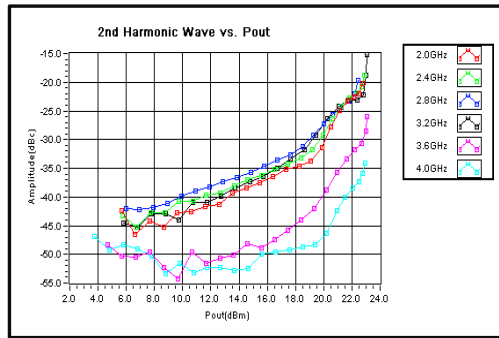
Output Third Order Intercept (IP3)



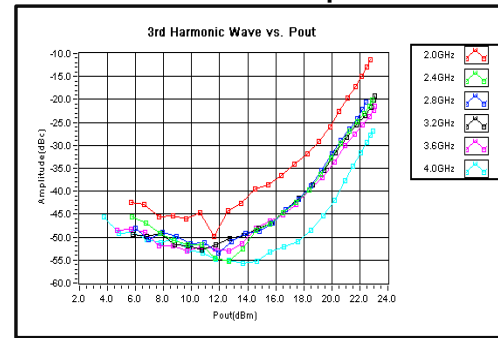
Noise Figure



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power

