

# V2 Microwave

## Thor Series BUC's

C - band GaAs BUC's  
20W - 500W



## Thor BUC Superiority

The V2 Microwave Series of BUCs are designed for fixed, mobile and flyaway applications. They consist of outdoor power amplifiers with built-in upconverters using GaAs technology. The lightweight, compact design allows for portability as well as various mounting configurations.

Each model has full monitoring and control capabilities to allow the operator the peace of mind that the unit is fully operational. For added protection, each BUC has built-in redundancy to allow the optional upgrade to a 1:1 or 1:2 system in the field.

## Features

- High efficiency and low power consumption
- Monitor and Control
- Redundancy Ready
- Lightweight, compact design
- Rugged, weatherproof outdoor housing
- M&C Mil-Spec connector to allow for RS485, RS242 and Ethernet
- Protection against frequency sync failure and parameter drift due to temperature change
- Gain Control in 0.1 dB steps
- Quick Delivery

## Options

- Various frequency bands
- Output power options from 20 to 500 watts
- Redundancy - 1:1 or 1:2
- Built-in 10 MHz reference signal generator
- 48 VDC (low power) or 110/220 VAC power
- Mounting Brackets

## SPECIFICATIONS

<b>Linear Gain</b>	70 dB Nominal	<b>Output Spurious</b>	-55 dBc max
<b>Gain Control</b>	20 dB nominal in 0.1 dB steps	<b>Spectral Re-growth</b>	-30dBc @Plinear
<b>Gain Stability Over Temp</b>	± 2.0 dB max	<b>Third order IMD (2 equal tones 5MHz apart)</b>	-25 dBc, with 2 equal carriers at 3dB total power back off from rated power (PSat -3dB)
<b>Gain Variation at Fixed Temp</b>	Over Full Band ± 2.0 dB Over 40 MHz ± 0.5 dB	<b>10MHz Reference</b>	0 dBm ± 5.0 dB
<b>Input Impedance</b>	50 Ohms		
<b>Output VSWR</b>	1.50:1		

## RF OUTPUT

	PSat
<b>20 W</b>	43 dBm
<b>30 W</b>	45 dBm
<b>40 W</b>	46 dBm
<b>60 W</b>	48 dBm
<b>80 W</b>	49 dBm
<b>100 W</b>	50 dBm
<b>120 W</b>	50.7 dBm
<b>200 W</b>	53 dBm
<b>250 W</b>	54 dBm
<b>400 W</b>	56 dBm
<b>500 W</b>	57 dBm

## POWER CONSUMPTION

(at rated power)
150 W
175 W
200 W
250 W
450 W
475 W
500 W
1300 W
1300 W
2500 W
2500 W

## POWER REQUIREMENT OPTIONS

110 / 220 VAC	or	+36 to +72 VDC
110 / 220 VAC	or	+36 to +72 VDC
110 / 220 VAC	or	+36 to +72 VDC
110 / 220 VAC	or	+36 to +72 VDC
110 / 220 VAC		
110 / 220 VAC		
220 VAC		
220 VAC		
220 VAC		
220 VAC		

## PHASE NOISE

@ <b>100 Hz</b>	-63 dBc/Hz
@ <b>1 KHz</b>	-73 dBc/Hz
@ <b>10 KHz</b>	-83 dBc/Hz
@ <b>100 KHz</b>	-93 dBc/Hz
@ <b>1 MHz</b>	-103 dBc/Hz
@ <b>10 MHz</b>	-113 dBc/Hz

## INTERFACE

<b>RF Output</b>	Waveguide, CPR 137G (Grooved)
<b>IF Input</b>	N-Type Female, 50 Ohms
<b>Connectors</b>	
	DC : MS3102R14S-9P
	AC : MS3102R14S-7P
	M&C: MS3112E1419P
	Redundancy: MS3112E14-15P (Optional)

## FREQUENCY BANDS

	Output Frequency	Input Frequency	LO Frequency
<b>Low C</b>	5.725 – 6.425 GHz	975 – 1675 MHz	4.75 GHz
<b>Standard C</b>	5.85 – 6.425 GHz	950 – 1525 MHz	4.90 GHz
<b>Extended C</b>	5.85 – 6.725 GHz	950 – 1825 MHz	4.90 GHz

## MECHANICAL

COOLING	FORCED AIR
<b>20W-60W</b>	8.0 x 5.0 x 6.0 in (203 x 127 x 152 mm) 8 lbs (3.65 kg)
<b>80W-120W</b>	7.36 x 7.75 x 12.5 in (187 x 197 x 318 mm) 30 lbs (13.61 kg)
<b>200W-250W</b>	5.48 x 11.75 x 19.25 in (139 x 299 x 489 mm) 58 lbs (26.31 kg)
<b>400W-500W</b>	7.68 x 16.00 x 22.25 in (195 x 406 x 565 mm) 110 lbs (50.90 kg)

## ENVIRONMENTAL

<b>Temperature Range (ambient)</b>	
<b>Operating</b>	-40 deg C to + 55 deg C
<b>Storage</b>	-40 deg C to + 75 deg C
<b>Humidity</b>	0 to 100% (condensing)
<b>Altitude</b>	10,000 ft ASL



3 Year Warranty

C-BAND\_GaAs  
Specifications are subject to change without notice