

# Block Up-Converter (BUC)

## Ka-Band 40/80W



### ◆ Company Overview

RevGo designs and manufactures satellite earth station RF from low to high power. RevGo was founded in 2002 with its headquarters in the Washington DC corridor. RevGo's broad VSAT product line is produced to stringent quality standards using an ISO9001:2015 quality system:

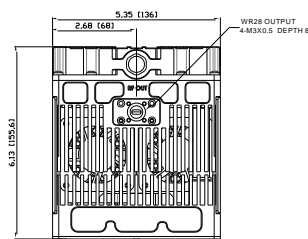
- Block upconverter (BUC)
- Low noise block (LNB)
- Transceiver (Tx/Rx/OMT/filters)
- C-, Ku-, DBS-, Ka-bands
- 2 to 300W output power

### ◆ Product Features

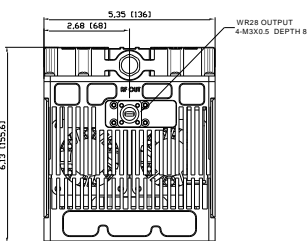
- Five software selectable sub-bands in 27.5-30 GHz frequency range
- Continuously variable
- Power consumption
 

	<b>40W BUC</b>	<b>80W BUC</b>
350W (@46dBm)		450 W (@49 dBm)
225W (@43dBm)		300 W (@47 dBm)
- Compact and light weight 12 lbs / 5.8 kg
- Both products can use "same" antenna system and mounts
- Dual-fans independently removable without causing service interruption
- Low phase noise (exceeds IESS308/309)
- Optimal flatness
- Rugged design for extreme environments (-40 to +60°C)
- M&C with real-time clock, event log, web interface, Open-BMIP (BMIP calibration table is an option)

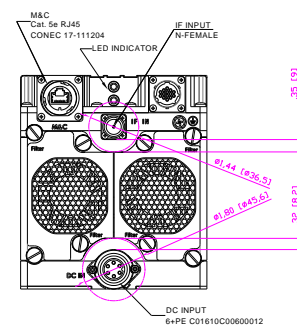
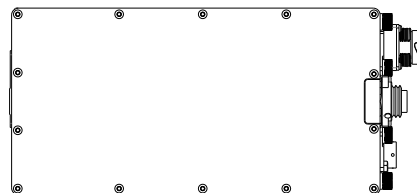
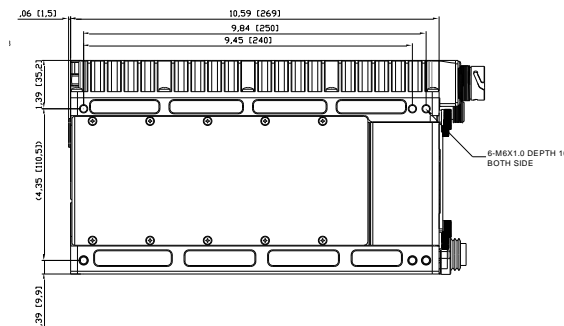
### ◆ Mechanical Diagram (Unit: inch [mm])



Ka 40W



Ka 80W



Ka 40W



Ka 80W



### ◆ Typical VSAT Applications

- Maritime
- 5G Backhaul
- SNG Vehicle
- Terminals
  - Fixed
  - Portable
  - Transportable

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## SPECIFICATIONS

### RF Specifications

<b>Output Frequency</b>	27.50-31.00 GHz (the detail as below list)		
<b>mPower Network</b>	<b>Band 1</b>	<b>Band 2</b>	<b>Band 3</b>
RF Frequency (GHz)	27.50-28.50	28.25-29.25	29.00-30.00
IF Frequency (MHz)	950-1950	950-1950	950-1950
LO Frequency (GHz)	26.55	27.30	28.05
<b>O3b Network</b>	<b>Band 4</b>	<b>Band 5</b>	
RF Frequency (GHz)	27.652-28.388	28.172-29.071	
IF Frequency (MHz)	1052-1788	972-1871	
LO Frequency (GHz)	26.60	27.20	
<b>External Ref</b>	10 MHz, 0 ± 5 dBm		
<b>Output Power</b>	<b>40W</b>	<b>80W</b>	
Rated/Saturated	46 dBm	49 dBm	
PLin <sup>1</sup>	45 dBm	48 dBm	
PLin <sup>2</sup>	44 dBm	47 dBm	
PLin <sup>3</sup>	43 dBm	46 dBm	
<b>Small Signal Gain</b>	67-77 dB		
<b>Gain Variation</b>	1 dB p-p / 36 MHz		
	3 dB p-p / 500 MHz		
	4 dB p-p / 1000 MHz		
<b>Gain stability</b>	3 dB p-p		
<b>Gain Adjustment</b>	10 dB (Step: 0.1 dB)		
<b>Phase Noise</b>	-63 dBc / Hz @ 100 Hz		
	-73 dBc / Hz @ 1 KHz		
	-83 dBc / Hz @ 10 KHz		
	-93 dBc / Hz @ 100 KHz		
<b>Output Spurious</b>	-60 dBc		

#### Notes:

- PLin<sup>1</sup>**: -26 dBc regrowth, 1.5 SR (commercial satellite)  
**PLin<sup>2</sup>**: -30 dBc regrowth, 1.0 SR (MIL-STD-188-164B, one-carrier)  
**PLin<sup>3</sup>**: <-25 dBc IMD3 (MIL-STD-188-164B, two-carrier)

### Power Supply

<b>Input Power</b>	+36 to +60 VDC	
<b>Power Consumption</b>	<b>40W</b>	<b>80W</b>
@ PLin <sup>3</sup> Output	225 W	300 W
@ Rated Output	300 W	450 W

### Interfaces

<b>RF Output Connector</b>	WR28-G (Grooved)
<b>RF Output VSWR</b>	1.25:1
<b>IF Connector</b>	N-Type Female
<b>IF Input VSWR</b>	1.5:1
<b>Power Connector</b>	AMPHENOL C01610C00600012
<b>M&amp;C Connector</b>	RJ45
<b>Alarm Status Indicator</b>	LED (Yellow/Red)

### Physical Parameters

<b>Size</b>	10.2*5.4*6.1 inches	
	269*136*156 mm	
<b>Weight</b>	<b>40W</b>	<b>80W</b>
	12.8 lbs	13.2 lbs
	5.8 kg	6 kg
<b>Operating Temperature</b>	-40 to +60°C	
<b>Humidity</b>	0-100% (condensing)	
<b>Altitude</b>	0-10,000 feet ASL	

### FREQUENCY LIST

BUC FREQ BAND ID	BUC TX RF FREQ GHz	BUC IF FREQ MHz	BUC LO FREQ GHz
4 =	Band 1=29.00 – 30.0	950 – 1950	28.05
	Band 2=30.00 – 31.0	950 – 1950	29.05
T =	Band 1=27.50 – 28.50	950 – 1950	26.55
	Band 2=28.25 – 29.25	950 – 1950	27.30
	Band 3=29.00 – 30.00	950 – 1950	28.05
Q =	Band 1=27.50 – 28.50	950 – 1950	26.55
	Band 2=28.25 – 29.25	950 – 1950	27.30
	Band 3=29.00 – 30.00	950 – 1950	28.05
	Band 4= 30.00 – 31.00	950 – 1950	29.05
F =	Band 1=27.50 – 28.50	950 – 1950	26.55
	Band 2=28.25 – 29.25	950 – 1950	27.30
	Band 3=29.00 – 30.00	950 – 1950	28.05
	Band 4=27.652 – 28.388	1052 – 1788	26.60
	Band 5=28.172 – 29.071	972 – 1871	27.20

### Part Number / Ordering information.

RGUC-Aabbb-48ccN-Md	
<b>a:</b> Frequency Band	<b>bbb:</b> Output Power
1 = 29.00-30.00 GHz	040 = 40W
2 = 29.50-30.00 GHz	080 = 80W
3 = 30.00-31.00 GHz	<b>cc:</b> M&C Interface
4 = 29.00-31.00 GHz (Dual-Bands)	NE = Ethernet
T = 27.50-30.00 GHz (Three-Bands)	RE = Eth & RS485/232
Q = 27.50-31.00 GHz (Four-Bands)	<b>d:</b> OpenBmip
F = 27.50-30.00 GHz (Five-Bands)	P = With openBmip calibration tables
	0 = Without openBmip calibration tables

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