

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
- Power consumption

	40W BUC	80W BUC
	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)

Ka 40W



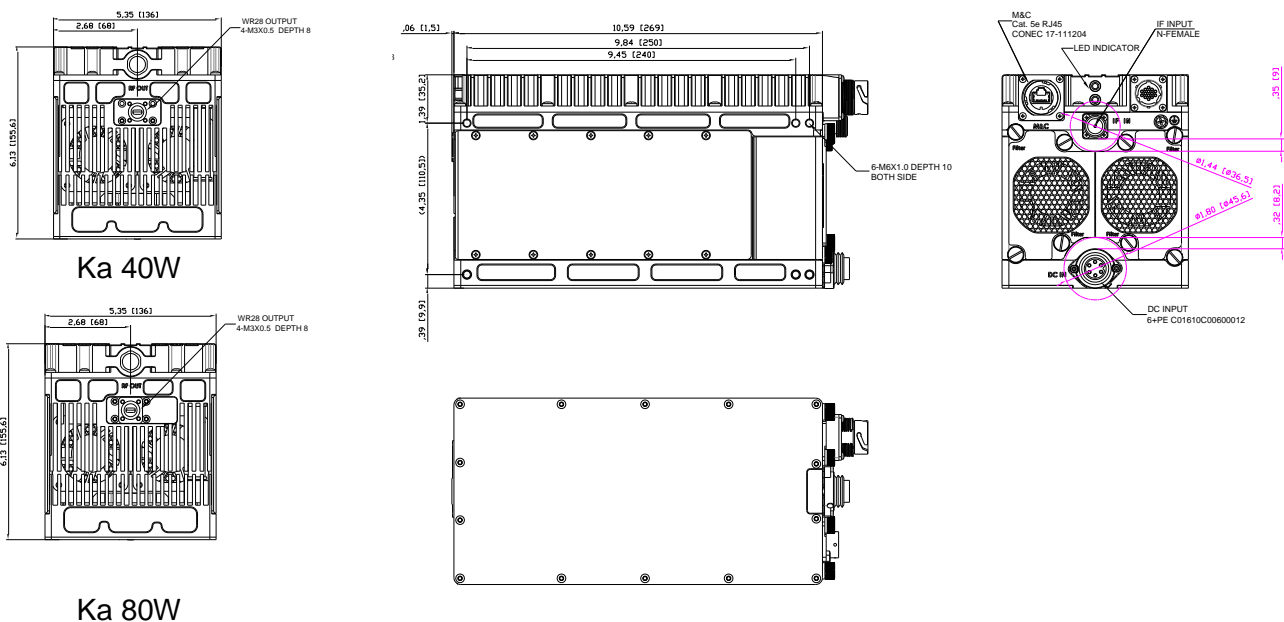
Ka 80W



◆ Typical VSAT Applications

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

◆ Mechanical Diagram (Unit: inch [mm])



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SPECIFICATIONS

RF Specifications

Output Frequency	27.50-31.00 GHz (the detail as below list)		
mPower Network	Band 1	Band 2	Band 3
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
O3b Network	Band 4	Band 5	
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	
External Ref	10 MHz, 0 ± 5 dBm		
Output Power	40W BUC	80W BUC	
Rated/Saturated	46 dBm	49 dBm	
PLin ¹	45 dBm	48 dBm	
PLin ²	44 dBm	47 dBm	
PLin	43 dBm	46 dBm	
Small Signal Gain	67-77 dB		
Gain Variation	1 dB p-p / 36 MHz 3 dB p-p / 500 MHz 4 dB p-p / 1000 MHz		
Gain stability	3 dB p-p		
Gain Adjustment	10 dB (Step: 0.1 dB)		
Phase Noise	-63 dBc / Hz @ 100 Hz -73 dBc / Hz @ 1 KHz -83 dBc / Hz @ 10 KHz -93 dBc / Hz @ 100 KHz		
Output Spurious	-60 dBc		

Notes:

PLin¹: -26 dBc regrowth, 1.5 SR (commercial satellite)

PLin²: -30 dBc regrowth, 1.0 SR (MIL-STD-188-164B, one-carrier)

PLin: <-25 dBc IMD3 (MIL-STD-188-164B, two-carrier)

Power Supply

Input Power	+36 to +60 VDC	
Power Consumption	40W BUC	80W BUC
@ PLin Output	225 W	300 W
@ Rated Output	300 W	450 W

Interfaces

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

Physical Parameters

Size	10.6*5.4*6.1 inches 269*136*156 mm	
Weight	40W BUC	80W BUC
	12.8 lbs	13.2 lbs
	5.8 kg	6 kg
Operating Temperature	-40 to +60°C	
Humidity	0-100% (condensing)	
Altitude	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	
a: Frequency Band	bbb: Output Power
1 = 29.00-30.00 GHz	040 = 40W
2 = 29.50-30.00 GHz	080 = 80W
3 = 30.00-31.00 GHz	cc: 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)	d: OpenBmip
F = 27.50-30.00 GHz (Five-Bands)	P = With openBmip calibration tables
	0 = Without openBmip calibration tables

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