GeoSat Microwave

- *Compact and energy efficient*
- *Solid State Reliability*
- *Easy System Integration*
- *Thermally Efficient*
- *Low Thermal Noise*
- *Frequency agile design covers complete frequency band*
- *Superior Harmonic and Spurious Suppression*
- *3 Year GeoSat Product Warranty*

12W Linear Ka-Band Block Up-Converter (BUC)

Model: GB41KAL931

CE

Section	Item	Specification
Power Requirement	Voltage	+48VDC (prime), +28VDC, 90 - 264VAC @50/60 Hz
	Power Consumption	235W Prime Power at 12 W Linear Output Power
RF Characteristics	Frequency	29.0 - 31.0 GHz (single model covers frequency range)
	Psat	20 Watts (Typical)
	Output Power P-Linear	12 Watts
IF Characteristics	Frequency Range	1000-2000 MHz; 950-1450 MHz; 950-1950 MHz
	Impedance	50 Ohms
	Input VSWR	1.5:1 Max
	Input Level	-10 dBm Nominal
Interface:	IF Input	N-Female
	Reference Input	Multiplexed with IF Input
	RF Output	WR 28
	Monitor & Control I/0	RS-485 or Ethernet (SNMP/HTTP)
	Ethernet Connector	Weatherproof RJ-45
	Serial Monitor & Control Connector	Mil-Circ- Bayonet
	Power Connector	Mil-Circ- Bayonet
External Reference:	Frequency	10 MHz
	Frequency Stability	Per Mil-Std-188-115
	Input Level	-10 to +10 dBm

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Section	Item	Specification
Transfer Characteristics	Type	Single Conversion
	Frequency Sense	Non-inversion
	Gain	55 dB +/-2 dB
	Gain Flatness @ Maximum Gain ▼	
	Over RF Output band:	± 2 dB. Max.
	Over any 125 MHz segment	±0.50 dB Max.
	Over any 40 MHz segment	±0.3 dB Max.
	Gain Adjustment Range	30 dB. Min.
	Mute	-60 dB relative to P-Linear
	Gain Variation over operational temp	±2.0 dB max.
	Gain Step Size	0.25 dB max.
	Group Delay variation	3.5 nsec over 36 MHz Meets Mil-Std 188-164B
	Third Order IMD @ P-Linear	With two output carriers @ 40.8dBm total output power: -25 dBc referenced to total output power, Max.
	Output Noise Density TX	-75 dBm/Hz
	Output Noise Density in RX Band	-157 dBm/Hz
	Spurious	-60 dBc max.
	Harmonics	-60 dBc max. measured at P-Linear
	Spectral Regrowth	-30 dBc at P-Linear, QPSK, 5 Ms/s, Alpha=30% at 1 x symbol rate away from the carrier.
	Phase Noise ▼	
	100Hz	-32 dBc/Hz max.
	100Hz	-63 dBc/Hz max.
	1kHz	-72 dBc/Hz max.
	10kHz	-82 dBc/Hz max.
	100kHz	-92 dBc/Hz max.
	1mHz	-112 dBc/Hz max.
	10mHz	-122 dBc/Hz max.
	Output VSWR	1.3:1 Max Infinite @ 5 Watts
	Max Load VSWR (no damage)	Infinite @ 12 Watts Linear Output Power
Environmental:	Operating Temperature Range	-40°C to +60°C
	Storage Temperature Range	-40°C to + 85°C
	Humidity	100% Condensing
	Altitude	10K ft.
	Vibration	MIL-STD-810G
	Shock	MIL-STD-810G
Physical	Size	(LxWxH): 7.8” x6.7” x 5.4”
	Weight	14 lbs.
	FAN	Field Replaceable