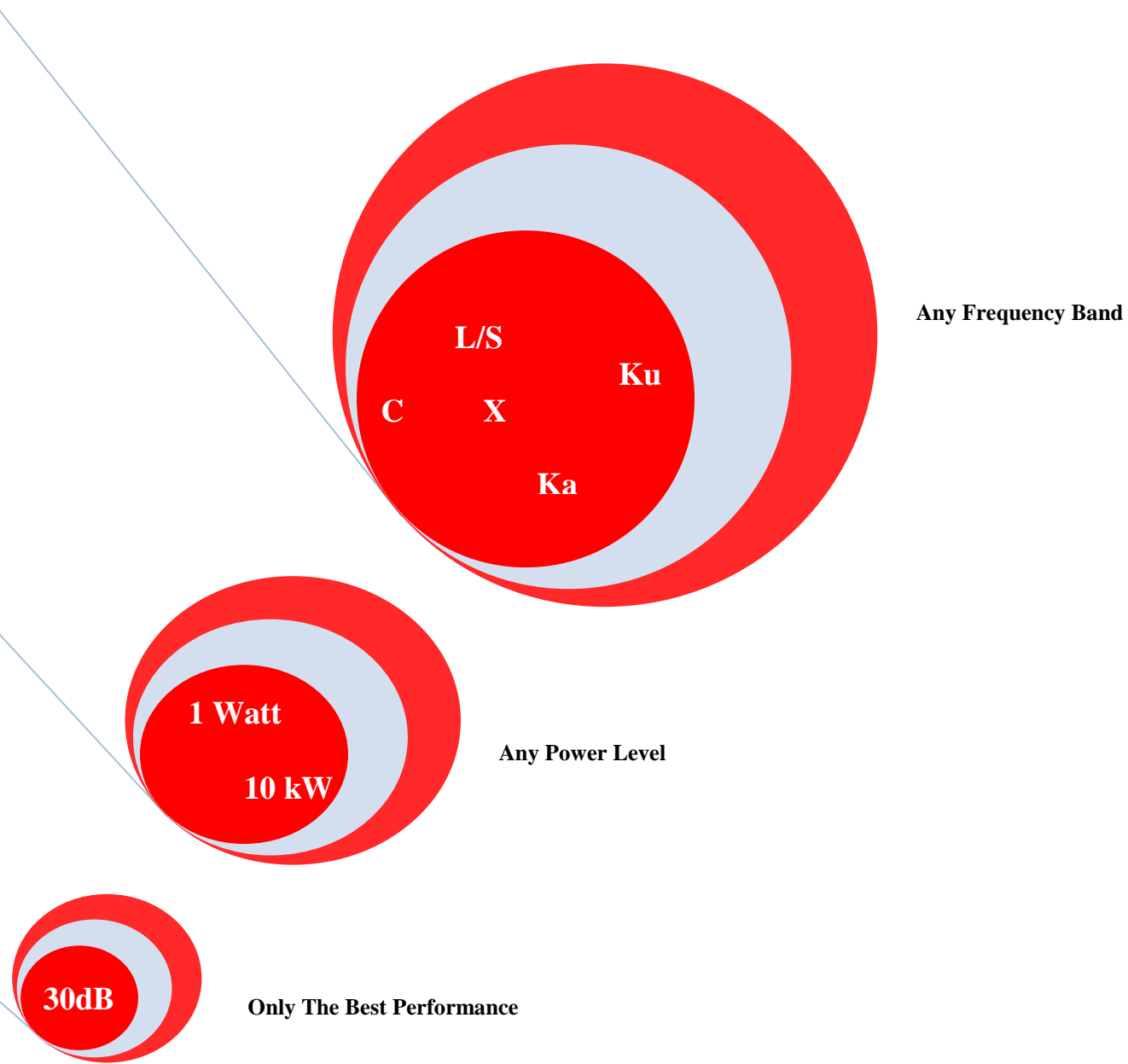




Made in Canada

Unique Broadband Systems Ltd.

200 Watt, Ku-Band Module



200 Watt, Ku-Band, Module

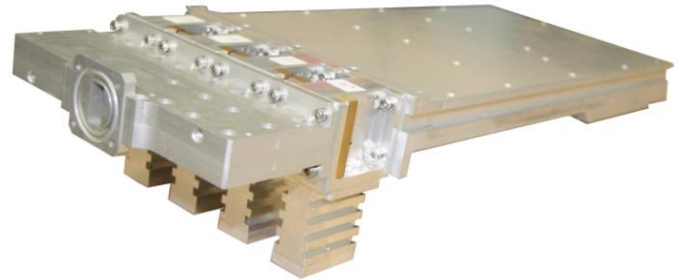
Model: DMPA2000KUB

Product Features

- Solid State Design
- Excellent output VSWR protection
- Local & Remote Gain Adjustment
- Mode of Operation ALC/Fixed
- Direct Power Settings in dBm/watts through MNC
- Temperature Gain Compensation
- Output sample monitoring port
- Built-in HPA controller with RS 485, RS 232, CAN BUS and Ethernet.
- Internal Controller handles PWM external fans.



With HeatSink



Without HeatSink

Frequency Bands

Regular Band of operation: 14-14.5 GHz

(Extended) Ku-Band: 13.75– 14.5 GHz. Also available 12.75-13.25GHz sub-band

Product Description

Unique Broadband Systems' DMPA2000KUB is a 200W Solid State Power module built using GaN technology.

An internal voltage variable attenuator allows 15 dB of continuous gain adjustment. A digital temperature compensation system regulates the RF signal level within a +/-1.0 dB window over the entire operating temperature/frequency range. Every GaN output transistor is fully protected against potentially harmful reflected power due to antenna mismatches.

Excellent performance, high efficiency and long term MTBF are achieved through using superior mechanical and thermal designs. Our matured manufacturing process ensures the highest quality of all physical components and optimized performance to meet the most rigorous industry standards and clients' demands. At the same time, our ISO 9001 Quality assurance program leads to the superior performance and reliability in the long-run.

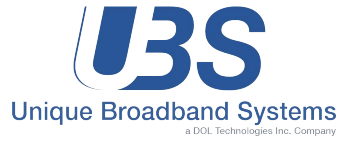
(Specifications are subject to change without notice)

200 Watt, Ku-Band, Power Module

Product Specifications

Electrical Specifications		
Operating Frequency		13750 MHz – 14500 MHz
Output Power	P-Saturated	200 Watt (53 dBm minimum)
	P-Linear (IM3 \leq -25dBc)	80Watt (49 dBm)
Gain Parameters	Linear Gain Flatness (power gain) ⁱ	\pm 1.5 dB
	Linear Gain	65 dB min
	Power Gain	60 dB min
	Per 40 MHz	\pm 0.3 dB
	Over Temperature (0°C to +55°C)	\pm 1.0 dB
Internal Attenuator	Adjustment Range	Up to 15 dB with 0.1 resolution
3rd Order Intermodulation (IM3)	Two tone, 5 MHz apart, @ rated P-Linear	-25 dBc
AM/PM Conversion	@ rated P-Linear	3.5 %/dB max.
Spurious	@ rated P-Linear	-60 dBc max.
2nd Order Harmonics	@ rated P-Linear	-60 dBc max.
Noise Power Density	RX-Band	-150 dBW/4 KHz
	TX-Band	-75 dBW/4 KHz
Group Delay (per 40 MHz segments)	Linear	0.01 ns/MHz
	Parabolic	0.003 ns/MHz ²
	Ripple	1.0 ns p-p
Residual AM Noise	0 - 10 KHz	-45 dBc
	10 KHz - 500 KHz	-60 dBc
	500 KHz - 1 MHz	-80 dBc
RMS RF Power Detector	Range	20 dB
	Accuracy	\pm 0.5
VSWR	Input	1.30:1
	Output	1.30:1
Noise Figure		10dB max.
Mechanical Parameters		
Size and Weight		46.7x17.2x9.2(cm), 4.5 kg (without heatsink)
Input RF Connector		SMA Female
Output RF Connector		WR75G
Output RF Sample Port		N type Female
RS 232		D-Sub 25
RS 485		D-Sub 25
Ethernet		RJ45
External Airflow Requirements		Contact manufacturer
Environmental Specifications		
Operating Temperature		0°C to +50°C
Storage Temperature		-40°C to +85°C
Humidity		+5% to 95% non-Condensing
Altitude		3000M above sea level
Power Requirements		
Power Supply		24V DC – 36Amps / 12V DC – 16 Amps

(Specifications are subject to change without notice)



Ku Band Power Module Utility

Select a Target: **POWERMODULE (COM41:38400:0)** Refresh All Connect

Auto Refresh Refresh Time Seconds: 0.4 Exit

Calibration Parameters

PA Calibration Serial Num: 1234567890 FW Num: 1.35

Temp Cal Error Gain Cal Error UNMUTE MUTE

MODE: Calibration Start Data Logging Set Values

LUT Select: Gain DAC Load LUT From File Save LUT To Device

Temp DAC [10mV/C]: 224 PlateTemp: 22.43 [C] +100 +10 +1 -100 -10 -1

Current DAC [25mV/A]: 0 Att DAC: 1138 [mV]

Idx	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
t	11.51	17.87	21.18	25.56	30.53	35.33	40.65	45.46	50.50	55.70	60.16	65.03	70.27	75.05											
DAC	1480	1518	1533	1572	1616	1660	1717	1765	1781	1815	1850	1889	1931	1975											

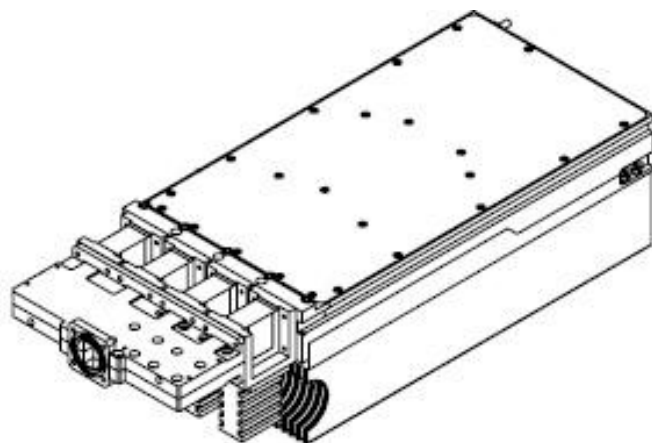
Idx	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Gain	saved	saved	saved	saved	saved	saved	saved	saved	saved	saved	saved	saved	-15.38	-16.40	-17.35	-18.20	-19.00	-19.70	-20.45	-22.90					
DAC	saved	saved	saved	saved	saved	saved	saved	saved	saved	saved	saved	saved	1000	900	800	700	600	500	400	0					

t Plate: 22.4 t Board: 42.0 t MCU: 52.7

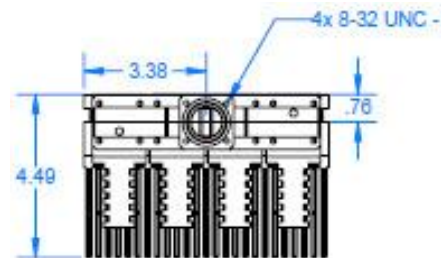
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	GaAs	GaN	Sum
0.10	0.08	0.10	0.09	0.03	0.05	0.04	0.04	0.06	0.04	0.00	0.03	0.37	0.30	0.67

Example 1: GUI

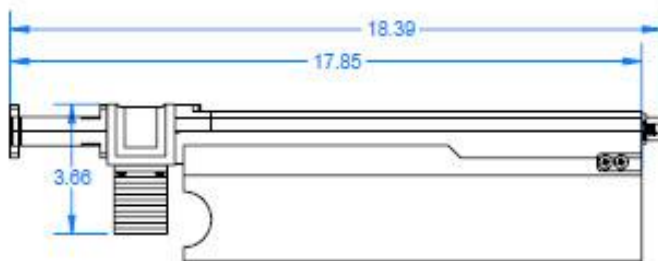
(Specifications are subject to change without notice)



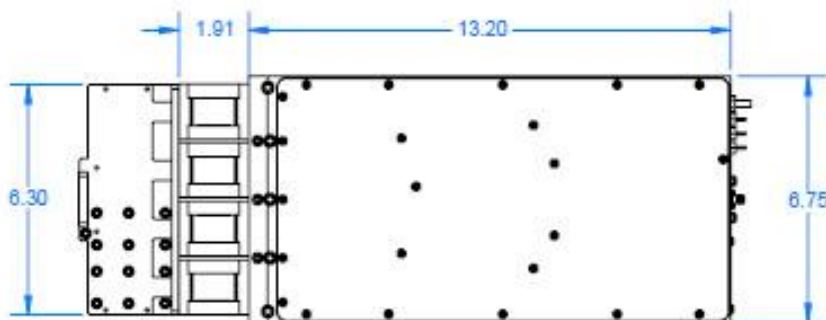
Picture1: Ku Band Module



Picture2: Ku Band Module Front View



Picture3: Ku Band Module Side View



Picture4: Ku Band Module Top View

Part Number Configuration

(Specifications are subject to change without notice)



Part Number Configuration

