

GaN Power Amplifier

DM-HPKU-40-104



Specifications are subject to change without notice

Electrical Specifications (+25°C)

Parameter	Value
Frequency	14.4 to 15.35 GHz
Small Signal Gain	53 dB min
Gain Flatness	1.5 dB min
Output Power Var. OverTemp	-0.1 dB per 10°C typical
Psat @ -5dBm Input	44 dBm min
Psat @ -5dBm Input	30 W typical
Noise Figure	8 dB max
DC Power	28 VDC, 6 A nom at Psat
PAE	15 % typical
VSWR (Input/Output)	2.0:1/2.0:1 nom
Harmonics	-15 dBc typical @ Psat
Spurious	-70 dBc typical
Input Power Handling	5 dBm max
Mismatch Handling	5.0:1 max
Operation	CW

Features

DC On/Off
 1µs; TTL Logic-Low "0V": ON; High "5V": OFF
 Over Temp Shutdown at +85°C
 Current Monitoring Included

Mechanical Specifications

Parameter	Value
Size (L x W x H)	2.5" x 2.75" x 0.45"
Connectors (In/Out)	SMA (f)/SMA (f)
Sealing	Hermetic
Finish	Grey Paint, Mounting surface Ni finish
Marking	Black per MIL-STD-130
Cooling	External heatsink

Environmental Specifications (by design)

Parameter	Value
Operating Temperature	-40 to +70°C
Storage Temperature	-54 to +85°C
Relative Humidity	IAW MIL-STD-810F, up to 95%
Altitude	up to 30,000 ft
Vibration	IAW MIL-STD-810F, Method 514.5, Table 514.5-I, Categories 12, 13, 14, 20
Shock	IAW MIL-STD-202G method 214, condition C
Salt Fog	5%, +35°C 96 hrs IAW MIL-STD-810G method 509.5
Fungus	IAW MIL-STD-810G method 508.6

Need More Help? Need a Variant of This Product?

Contact Mercury's RF & Microwave engineering team at rf.microwave@mrcy.com or visit www.mrcy.com/rf for a detailed listing of RF and Microwave products.



Corporate Headquarters • 50 Minuteman Road • Andover, MA 01810 USA • (978) 967-1401 • (866) 627-6951 • Fax (978) 256-3599 • www.mrcy.com

6950.01E-0821-SS-DM-HPKU-40-104-amp

Sensor Pin Voltages

PIN #	Pin Name	Description
1	+28V	6 A total nominal at Psat
2	+28V	6 A total nominal at Psat
3	+28V RTN	6 A total nominal at Psat
4	+28V RTN	6 A total nominal at Psat
5	ANALOG/DIGITAL RTN	
6	ANALOG CURRENT SENSOR	$0.5 \text{ V/A} \times I_{DC} \text{ (A)}$
7	OVER-CURRENT BIT	+5V TTL, LOGIC HIGH = OVER CURRENT, LOGIC LOW = COMPLIANT CURRENT
8	BLANKING TTL	+5V TTL, LOGIC HIGH = AMP OFF, LOGIC LOW = AMP ON
9	+28V	6 A total nominal at Psat
10	+28V	6 A total nominal at Psat
11	+28V RTN	6 A total nominal at Psat
12	+28V RTN	6 A total nominal at Psat
13	N/C	
14	ANALOG TEMP SENSOR	$\text{Temp (}^\circ\text{C)} * 0.01 \text{ V/}^\circ\text{C} + 2.73 \text{ V}$
15	OVER-TEMP FAULT	+5V TTL, LOGIC HIGH = OVER TEMP, LOGIC LOW = OPERATING TEMP RANGE

Need More Help? Need a Variant of This Product?

Contact Mercury's RF & Microwave engineering team at rf.microwave@mrcy.com or visit www.mrcy.com/rf for a detailed listing of RF and Microwave products.