

# High-Power CW Amplifier

## DM-HPKA-20-102



Specifications are subject to change without notice

### Electrical Specifications (+25°C)

Parameter	Value
Frequency	29 to 31 GHz
Small Signal Gain	50 dB min
Gain Var. OverTemp	-0.05 dB/°C typical
Psat @ -5dBm Input	42 dBm min
Psat @ -5dBm Input	20 W typical
P1dB	40 dBm min
Noise Figure	8 dB max
DC Power	20 VDC, 6 A nom at Psat
PAE	15 % typical
VSWR (Input/Output)	2.0:1/1.5:1 nom
Harmonics	-15 dBc typical @ Psat
Spurious	-70 dBc typical
Input Power Handling	15 dBm max
Mismatch Handling	5.0:1 max
Operation	CW
AM-PM Conversion	3°/dB up to 43dBm max

### Mechanical Specifications

Parameter	Value
Size (L x W x H)	3.5" x 4.5" x 0.78"
Connectors (In/Out)	K (f)/K (f)
Sealing	Hermetic
Finish	Grey Paint, Mounting surface Ni finish
Marking	Black per MIL-STD-130
Cooling	External heatsink

### Features

Parameter	Value
DC On/Off	1µs; TTL Logic-Low "0V": ON;
High "5V": OFF	at +90°C
OverTemp Shutdown	at +90°C
Current Monitoring	Included

### Environmental Specifications (by design)

Parameter	Value
Operating Temperature	-40 to +85°C
Storage Temperature	-54 to +85°C
Relative Humidity	IAW MIL-STD-810F, up to 95%
Altitude	up to 30,000 ft
Vibration	MIL-STD-810F, method 514.5, Categories 12, 14, 20
Shock	MIL-STD-202G method 214, condition C
Salt Fog	MIL-STD- 810G method 509.5, 5%, 35C 96 hrs
Fungus	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](mailto:rf.microwave@mrcy.com) or visit [www.mrcy.com/rf](http://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](http://www.mrcy.com)

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