

GaN Power Amplifier DM-HPKA-20-102

Electrical Specifications (+25°C)

PARAMETER	UNITS
Frequency	29 to 31 GHz
Small Signal Gain	50 dB min
Gain Var. Over Temp	-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	UNITS
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	UNITS
DC On/Off	1µs; TTL Logic-Low "0V": ON; High "5V": OFF
Over Temp Shutdown	at +90°C
Current Monitoring	Included

Environmental Specifications (by design)

PARAMETER	UNITS
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

Classification

ECCN: 3A001.b.4.b.4

Test Data

Gain, P1dB, Psat, AM-PM, VSWR, DC Power at +25°C