

2000-18000MHz/5Watt/Module

Model Number: KB20180M37D

The model KB20180M37D is a multi-octave high power amplifier operating between 2 GHz and 18 GHz and offering a wide dynamic range with 5 Watts typical saturated power. The employment of gallium nitride (GaN) and chip-and-wire technology in manufacturing ensures this module state-of-the-art power performance with excellent power-to-volume ratio. It is ideal for multi-octave broadband high power RF C&Ku applications.

FEATURES:

- Broadband & High power
- High Efficiency
- Small Size & Light Weight
- Low Distortion

ELECTRICAL SPECIFICATIONS @ +28.0VDC, 25°C, 50Ω

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	2		18	GHz
RF Output Saturated Power	P _{sat}		5		Watt
Power Gain @P _{sat}	G _p		37		dB
Power Gain Flatness	ΔG _p		±2		dB
Input Return Loss	S ₁₁			-10	dB
2nd Harmonics @2 W	H		-12		dBc
Spurious	Spur		-55		dBc
Switch On/Off@10-90% Time	T _{ON/OFF}		10		μs
In/Output Impedance	Impedance		50		Ω
Operating Voltage	V _{DC}	26	28	30	Volt
DC Current @5W	I _{DD}		2		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	80*80*22[3.2*3.2*0.8]	mm[inch]	Maximum
Weight	0.5[1.1]	kg [lbs]	Maximum
RF Connector Input	SMA, Female		
RF Connector Output	SMA, Female		
DC Interface Connector	D-Sub 9-Pin, Male		
Cooling	External Heatsink Required (Not Supplied)		

ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Min	Typ	Max	Units	Notes
Ambient Temperature	-40		80	°C	Operating case temperature up to +85°C
Non-operating Temperature	-45		85	°C	Storage
Relative Humidity (non-condensing)			95	%	

ABSOLUTE MAXIMUM RATING

Input RF drive level without damage	+5 dBm (Max)
Load VSWR @ P _{OUT} =2 W	10:1 @ all load phase & amplitude for duration of 1 minute; 3:1 @ all load phase & amplitude continuous
Over Temperature	95°C @ heatsink [restored @ 60°C]

*Focus on Your Application****Chengdu KeyLink Wireless Technology Co., Ltd.***

>> 5-2, Huidu Headquarters Park, High-Tech(West) Zone, Chengdu, 611731, P. R. China

>> Phone: +86(28)87870761

>> Fax: +86(28)87883266

>> Email: sales@keylinkmw.com

>> www.keylinkmw.com

Specifications subject to change without notice

Broadband High Power Amplifier Module (SSPA)

Version.1.0_2025.11.03

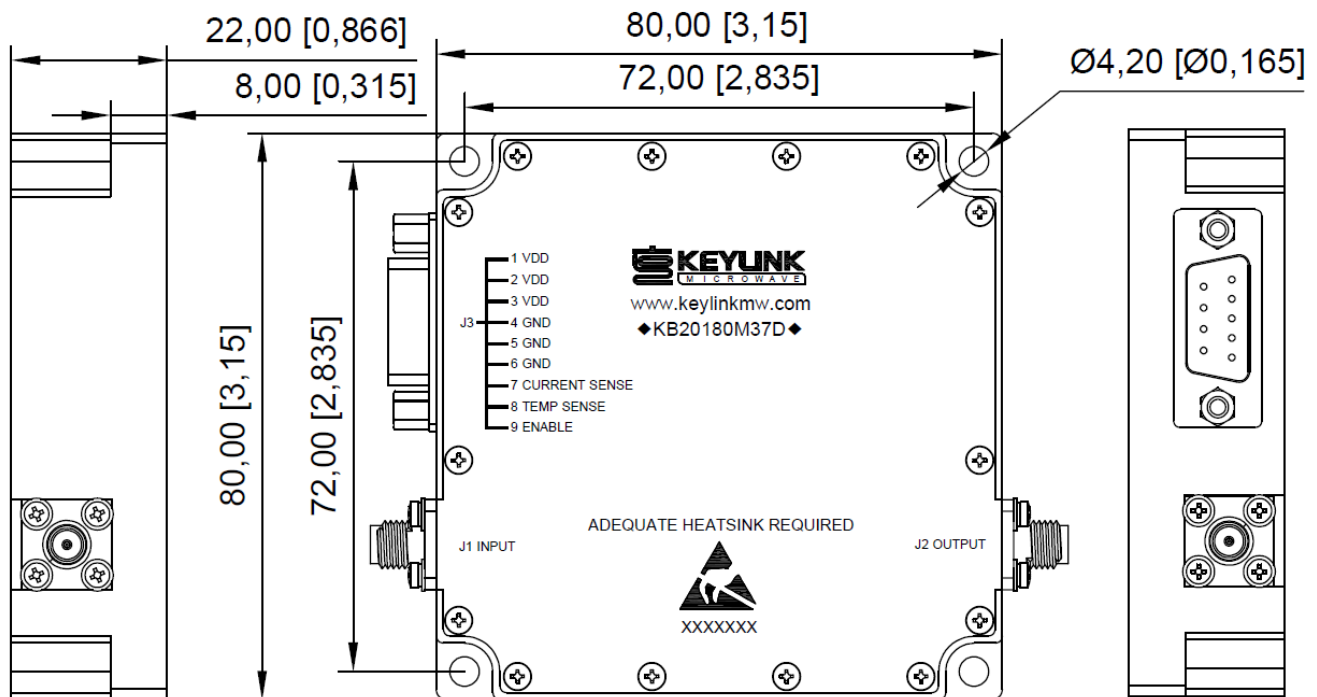
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DC INTERFACE CONNECTOR

Pin #	Description	Specifications
1, 2, 3	VDD	28VDC
4, 5, 6	GND	Ground
7	CURRENT SENSE	Analog voltage relative to IDD @ 300mV per Ampere
8	TEMP SENSE	Analog voltage relative to Module's Temperature @ 0.5V+10 mV/°C
9	ENABLE	Amplifier Enable: TTL Logic High (3.3V~5V) (Internally Pulled-Low)

OUTLINE DRAWING (All dimensions in mm)



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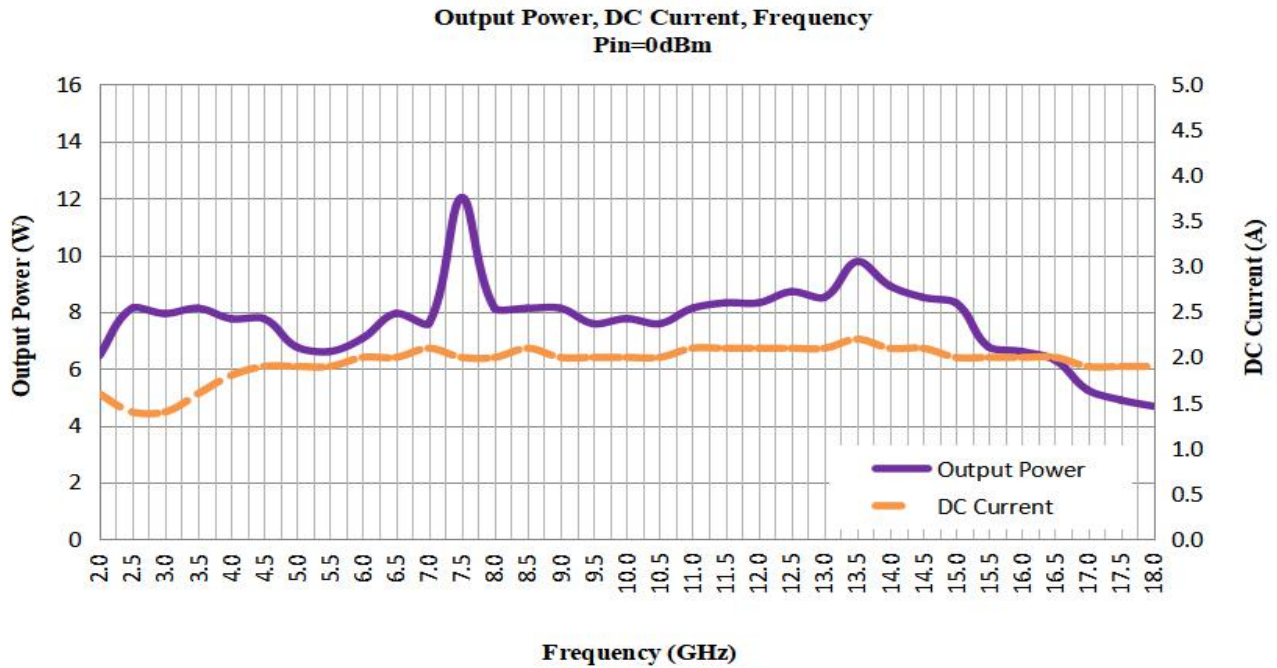
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TYPICAL PERFORMANCE PLOTS(FOR REFERENCE ONLY)



Note: Adequate heatsink required.

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