KEYLINK MICROWAVE

Narrowband High Power Amplifier Module (SSPA)

Version.1.0_2024.10.02

2200-2500MHz/200Watt/Module

Model Number: KN2350M53A

The model KN2350M53A is a narrow-band high power amplifier operating between 2200MHz and 2500MHz with 200 Watts typical saturated power. The employment of LDMOS 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 jamming, EMC, test and measurement applications.

FEATURES:

- Small Size and Light Weight
- Narrowband and High Power
- 50 Ohms Input and Output Matched
- Built-in Control and Protection Circuits

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

Parameter	Symbol	Minimum	Typical	Maximum	Units
Operating Frequency	BW	2200		2500	MHz
RF Output Power @**Pin=0dBm**	Psat	150	200		Watt
Power Gain	Gp		28		dB
Power Gain Flatness	ΔGp		±1.5		dB
Input Return Loss	S_{11}			-10	dB
Harmonics @150W	H		-15		dBc
Spurious Signals	Spur		-55		dBc
In/Output Impedance	Impedance		50		Ω
Operating Voltage	V_{DC}	24	28	32	Volt
DC Current @200W	I_{DD}		24		Amp
Switching Time @1kHz TTL	$T_{on/off}$		5		uSec

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	170x130x30 [6.69x5.12x1.18]	mm [inch]	Maximum
Weight	2 [4.4]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	Type-N, Female		
DC Interface Connector	Hybrid, D-Sub 7 Pin, Male		
Cooling	External Heatsink (Not Supplied)		

ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Minimum	Typical	Maximum	Units	Notes
Operating Temperature	-40		60	°C	
Non-operating Temperature	-45		65	°C	Storage
Relative Humidity (non-condensing)			95	%	

Absolute Maximum Rating

Input RF drive level without damage	**+10**dBm (Max)
Load VSWR @ P_{OUT}=100W	∞ @ all load phase & amplitude for duration of 3 minutes; 3:1 @ all load phase & amplitude continuous
Thermal Overload	85°C @ heatsink [restored @ 60°C]

Focus on Your Application

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Specifications subject to change without notice

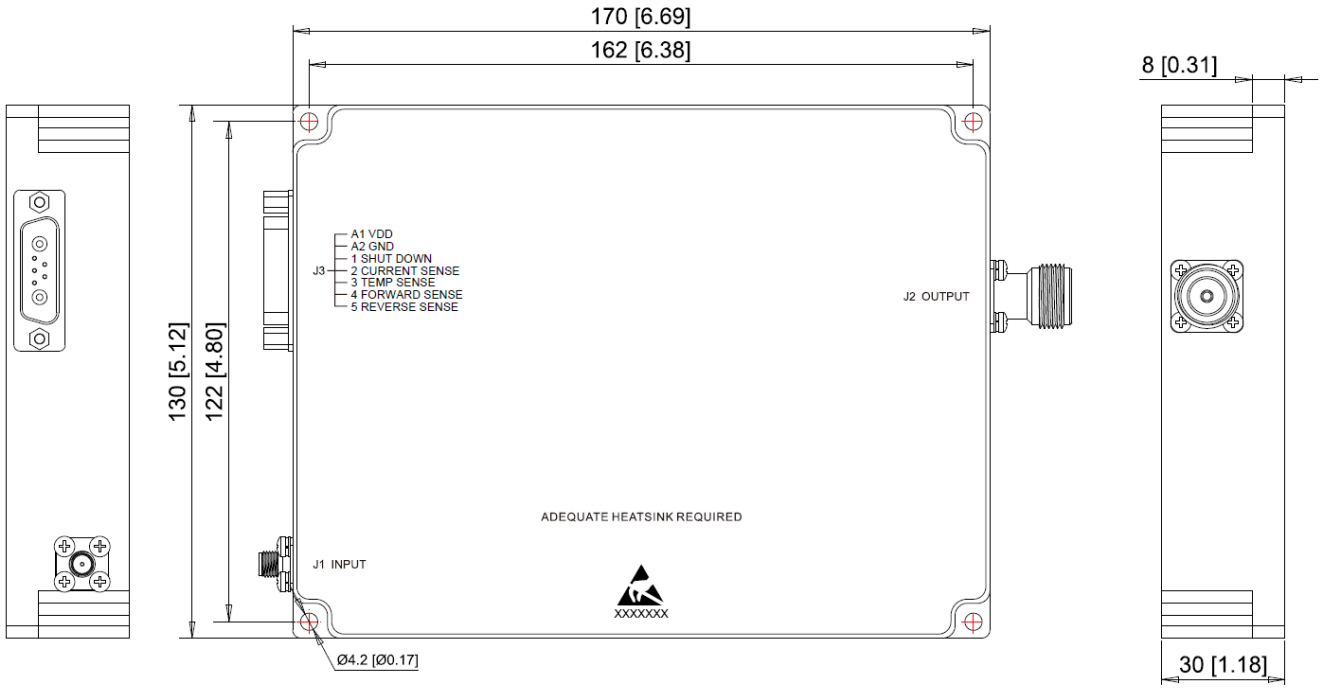
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DC INTERFACE CONNECTOR

Pin #	Description	Specifications
A1	VDD	28VDC
A2	GND	Ground
1	SHUT DOWN	Amplifier Disable: TTL Logic High (3.3V) (Internally Pulled-Low)
2	CURRENT SENSE	Analog voltage relative to IDD @ 100mV per Ampere
3	TEMP SENSE	Analog voltage relative to Module's Temperature @ 10 mV/°C
4	FORWARD SENSE	Analog voltage relative to forward power level
5	REVERSE SENSE	Analog voltage relative to reflected power level

OUTLINE DRAWING (All dimensions in mm [inch])



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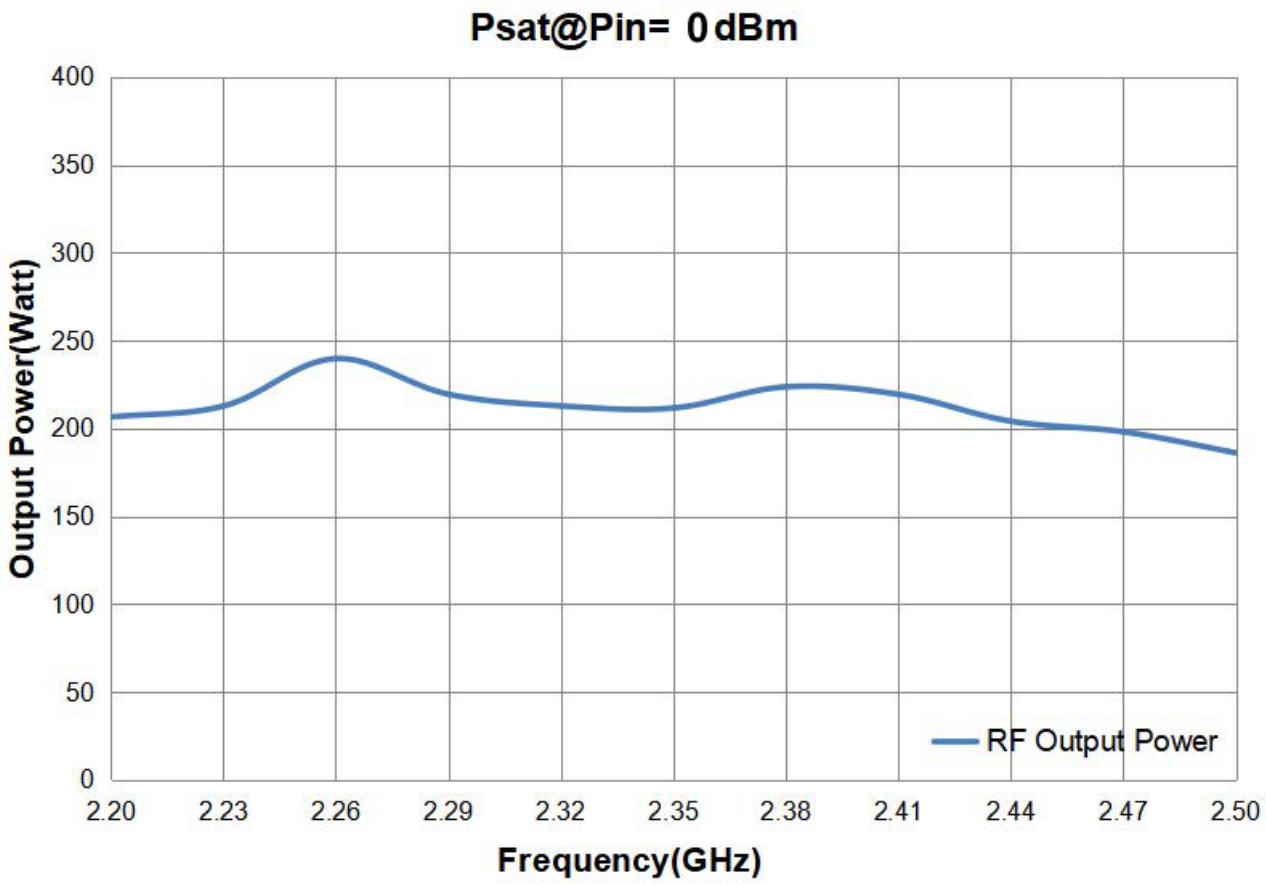
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TYPICAL PERFORMANCE PLOTS (For reference only)



Note: Adequate heatsink required.

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