KEONERY

HIGH PERFORMANCE AMPLIFIER MODULE



500 Watt Psat,62 dB Gain, 1550MHz to 1620MHz, High Power High Gain GaN Power Amplifier Module

TECHNICAL DATA SHEET **MDL1P57**

MDL1P57 is a GaN solid-state power amplifier with an operating frequency of 1550MHz to 1620MHz and an output power of 500W. It operates in Class AB mode, with a typical power gain of 62dB and a typical operating efficiency of 50%. An isolator is installed inside the module to enhance the reliability of the amplifier, ensuring maximum output power under various load conditions. The module features RS485 serial port communication control and data monitoring, along with various protection functions. It is suitable for power amplification of continuous wave signals, pulse signals, multi-carrier signals, and broadband digital signals. The bottom of the module is embedded with a copper block for enhanced heat dissipation; when in use, it must be mounted on a suitable heatsink and an appropriate amount of thermal grease should be applied to assist in heat dissipation.

Features

- 1550MHz to 1620MHz Frequency Range
- Psat 520 Watts min
- Small Signal Gain:62 dB typ
- Gain Flatness:±0.5 dB typ
- Output with isolator protection
- Operating efficiency:50% typ
- Over voltage protection function
- Over current protection function
- Over VSWR protection function
- Over temperature protection function
- Forward and reverse power monitoring
- RS-485 communication function

Electrical specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	1550	---	1620	MHz
Psat(CW)	510	530	580	W
Power Gain	62	62.5	65	dB
Out power flatness@Pin=-2dBm	0.2	0.3	0.4	dB
Gain Flatness@Pout=500W	----	±0.5	±0.8	dB
RF Input	----	-5	0	dBm
Gain Adjustment range@0.25dB Step	----	31.75	----	dB
Input VSWR	----	1.6.	2	----
In/Out Impedance	----	50	----	ohm
Harmonic	-30	-35	----	dBc
Spurious	--	-60	----	dBc
Operating Voltage	46	+48	50	V/DC
Operating Current	----	20	23	A
Operating temperature Range	-40	----	+70	℃

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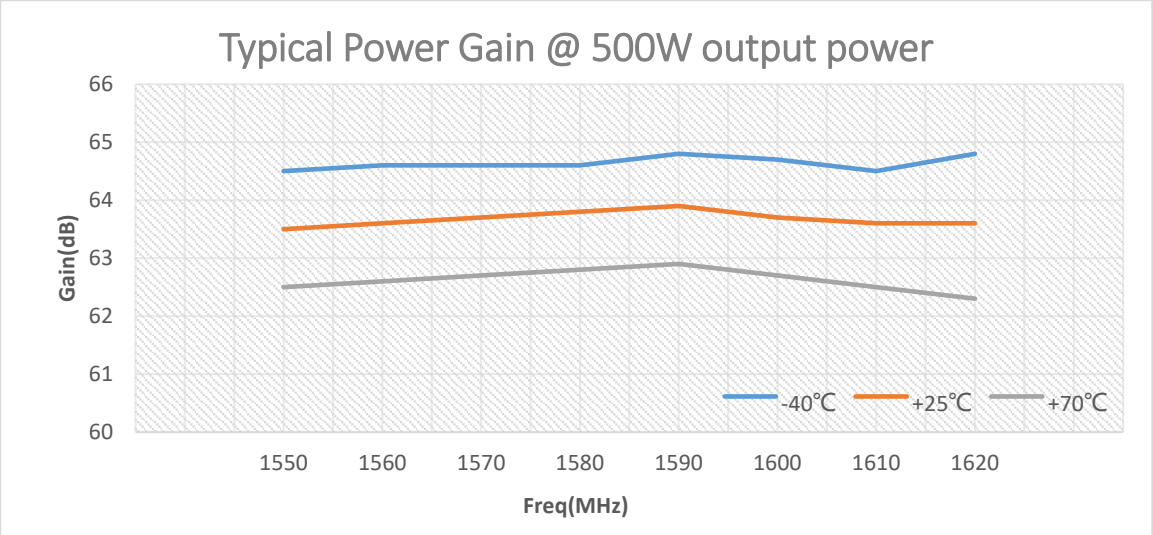
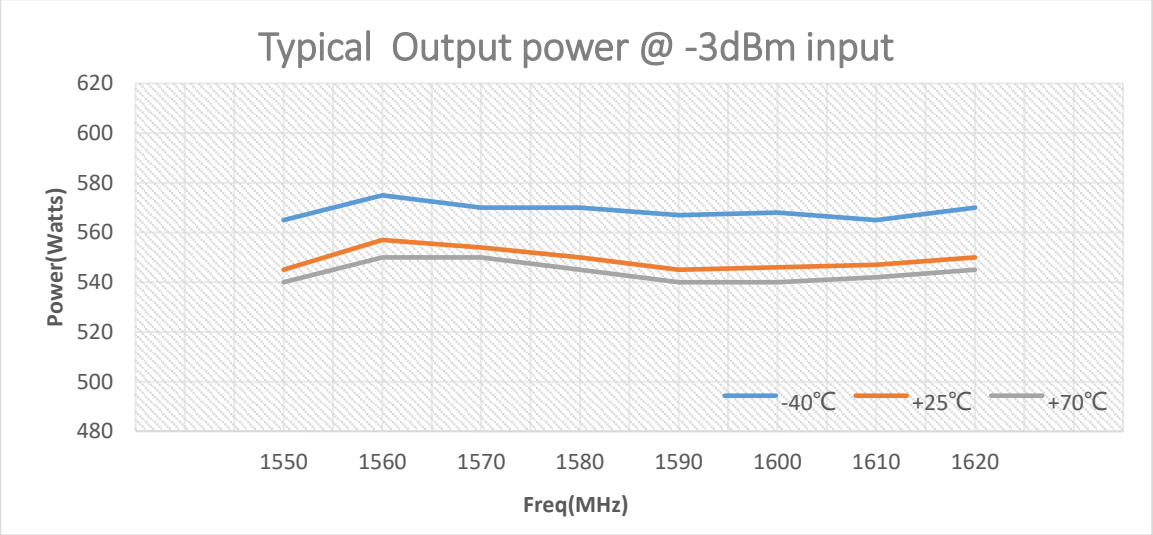
Mechanical Parameters

Dimensions	200*100*25mm (L*W*H)
Weight	1.05 Kg
RF IN Connector	SMA-K-Female
RF OUT Connector	N-K- Female
Power and control connectors	D-SUB(7W2)

Typical Performance data





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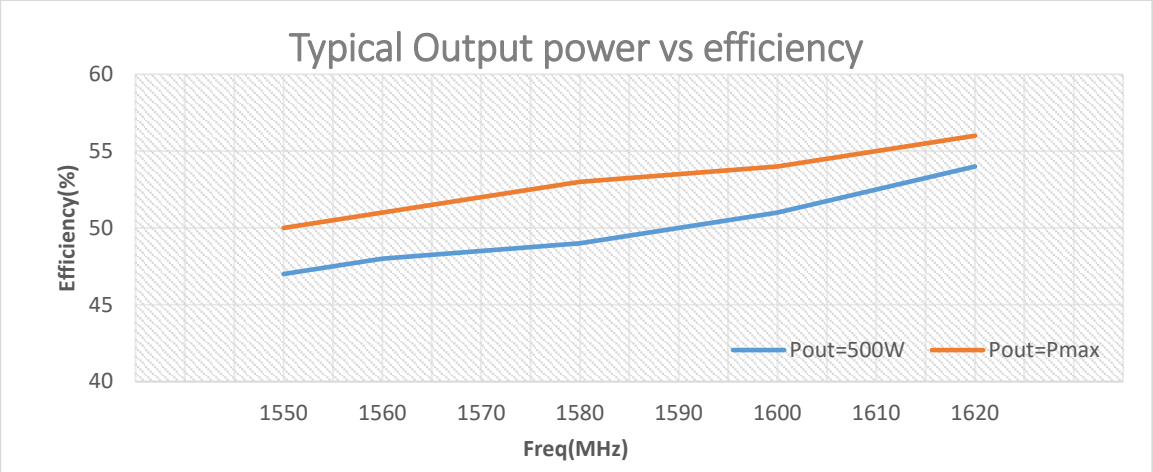

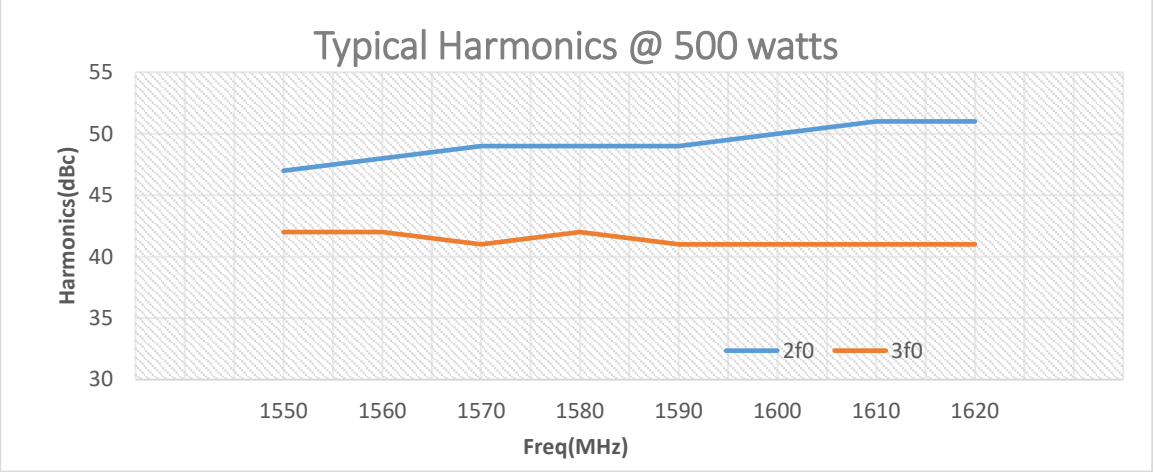

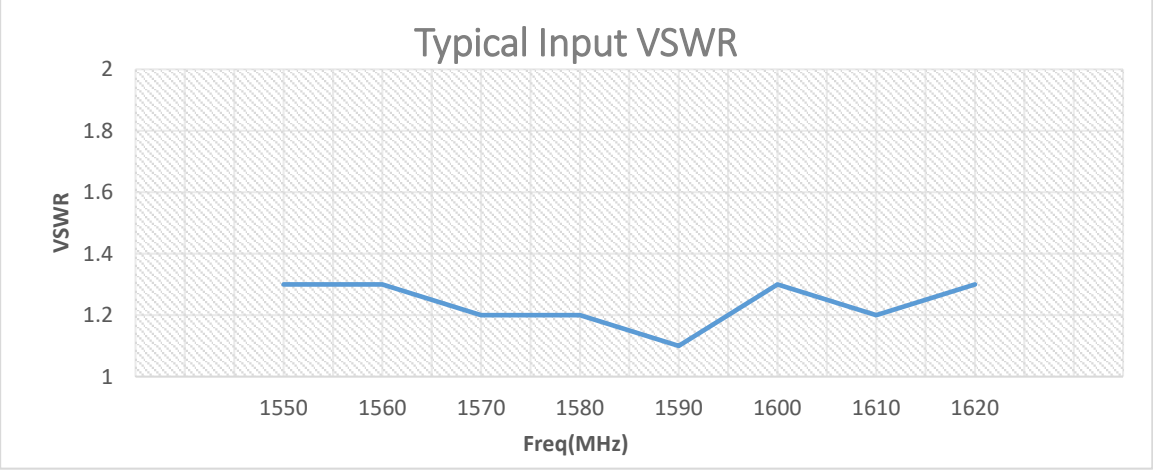

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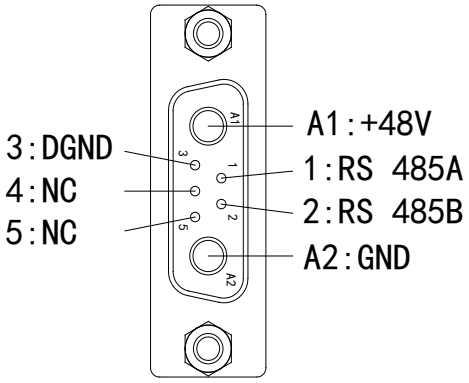
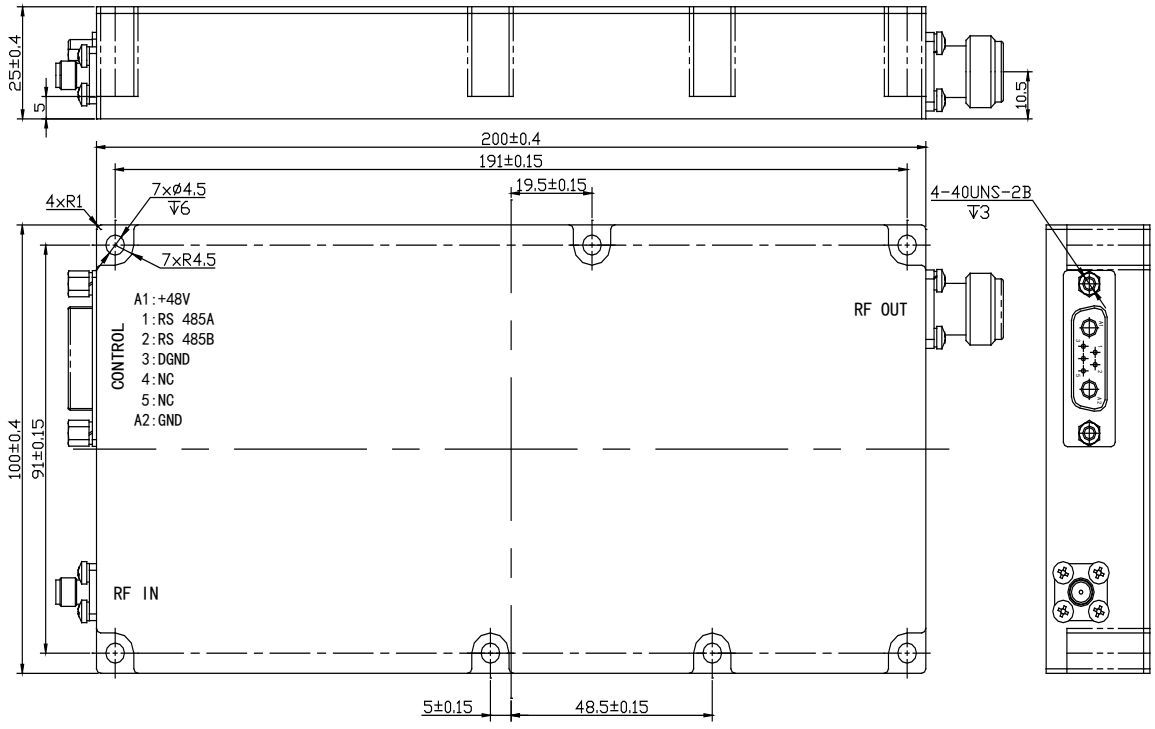
Control interface definition

Parameter	Model	Pin Number	Definition
Power and Control	D-SUB(7W2)	A1	+48VDC
		A2	GND
		1	RS 485A
		2	RS 485B
		3	DGND
		4、5	NC



Product dimensions



Note: The amplifier is factory-defaulted to the OFF state, and its power-on and power-off must be controlled by sending commands through the RS485 serial port; the accompanying software communication protocol is provided in the attachment. If external port control for the amplifier's enable function is required, you can further communicate with the manufacturer or supplier to add this feature.