Narrowband RF Power Amplifier

CRF-PA-400M440M-200W

Frequency Range
400 – 440 MHz

Rated Output Power
200 W

Connector
Input: SMA-F
Output: N-F

Package Size
200 × 158 × 25 mm

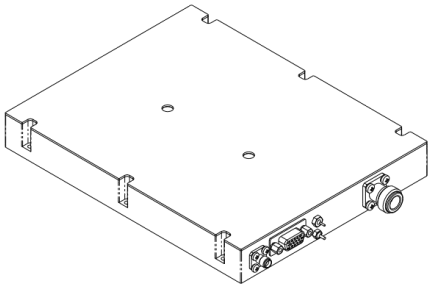
Electrical Characteristics

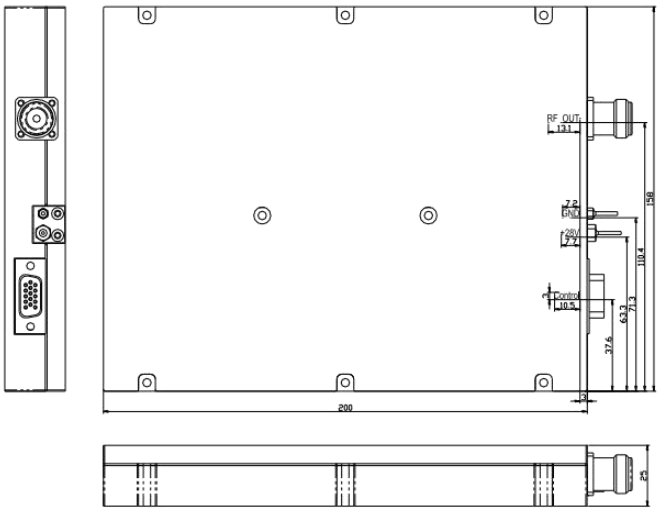
Test conditions: 50Ω system, unless otherwise specified.

Parameter	Min	Typ	Max	Units	Model
Frequency Range		400 – 440 MHz			
Gain	49	51	53	dB	CRF-PA-400M440M-200W-M
Gain Adjustment Range		20		dB	CRF-PA-400M440M-200W-M
Gain Adjustment Step Size		0.5		dB	CRF-PA-400M440M-200W-M
Noise Figure			20	dB	CRF-PA-400M440M-200W-M
Input VSWR			1.5		CRF-PA-400M440M-200W-M
Spurious		-60		dBc	CRF-PA-400M440M-200W-M
Harmonics (2nd, 3rd)	-10			dBc	CRF-PA-400M440M-200W-M
Frequency Stepping	10			Hz	CRF-PA-400M440M-200W-V
Frequency Adjustment Range	380		480	MHz	CRF-PA-400M440M-200W-V
Bandwidth Adjustment Range	20		80	MHz	CRF-PA-400M440M-200W-V
Output Power (Psat)	160	200		W	
Supply Voltage	24	28	32	V	
Operating Current		30	36	A	
PA Enable/Disable Time			100	μs	
RF Connectors In/Out		Input: SMA-KFD46 Output: N-F			Input:（M Version Only） Output: (V/M Version)
Dimensions		200 × 158 × 25 mm			
Weight			1.4	kg	
Operating Temperature	-40		+60	℃	
Storage Temperature	-55		+85	℃	

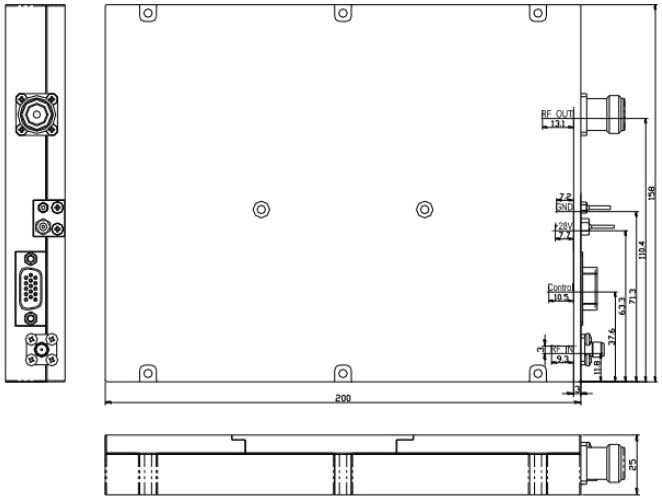
Mechanical Outline

Complete outline drawing shown below for clear integration reference.





CRF-PA-400M440M-200W-V Outline Drawing



CRF-PA-400M440M-200W-M Outline Drawing

Model	**Package Size**	**Weight**
CRF-PA-400M440M-200W	200 × 158 × 25 mm	≤ 1.4 kg
Connector Reference RF IN: SMA-KFD46（M Version Only） RF OUT:N-F (V/M Version) Control: D-Sub 15-Pin Female	**Power / Cooling** Supply: 24–32 V (28 V nominal) Cooling: External Heat Sink	**Release Note** Mechanical drawing is kept visible for easier dimensional review and connector location confirmation.

Applications RF testing / communication interference / system integration	**Customization** Custom frequency bands, connectors, control interfaces and integration details are available. CorelixRF engineering team can provide feasibility reviews within 48 hours.

DC / Control Interface

PIN#	Description	Specification
Grounding Post	GND	Ground Return
Pull-core Capacitance	VDD	Supply Voltage:+24V~32V,+28V Nominal
1	RS485 (-) [note1] [note2]	Serial Communication Bus
2	Voltage Alarm [note1]	Alarm(5V), the amplifier shut down when the voltage exceeds 32V,the status will be locked.
3	Current Alarm [note1]	Alarm(5V), the amplifier shut down when the current exceeds 31A.,the status will be locked.
5	Attenuator setting [note1]	Voltage input in the range of 0.5-3.0VDC, 0.5VDC corresponds with minimum attenuation, 3.0VDC is maximum attenuation.
6	Alarm Reset	If the alarm has been triggered,input an external pulse signal to reset it
7	Pr	Reversed RF Power Indicator (0~3V)
8	RS485 (+) [note1] [note2]	Serial Communication Bus
10	Pf	Forward RF Power Indicator (0~3V)
11	PA_EN	PA on :0V or Floating PA off :Input 3.3V or 5V
12	TA [note1]	Alarm(5V), when the temperature exceeds 80℃ ±5℃ and the amplifier shutdown
13	VA [note1]	Alarm(5V), When the output port of the amplifier is open or short, the amplifier will shutdown.
14	Tc [note1]	Analog voltage relative to Unit's Temperature @ 10mV/℃ (0.50Voffset); (Vmeasured-0.50)/0.01=X℃, Example: (1.00V-0.50)/0.01= 50℃
4,9,15	NC	

[note1]：This function is optional, please specify when ordering.

[note2]：This function is optional, please specify when ordering.

The RS485 master-slave communication function can be used to monitor the operational parameters of the power amplifie module, such as voltage, current, output power, and standing wave, and it can also be used to set the control parameters of the power amplifier in real time, such as power amplifier on/off, gain adjustment, power adjustment, and alarm reset.

Compliance / Quality Framework

RoHS Compliant	CE / FCC	ISO 9001	GJB 9001C

Test data and pattern files can be supplied for project review where applicable.