



iMat Specification

문서 제목	iMat Specifications iMat1310L
문서 번호	200-M1310L-1711
적용 품번	200-iMat1310L-0100-S
Rev No.	0.1



이 문서는 (주)플라소스의 RF Matching Network 제품 iMat1310L series에 대한 사양 자료입니다. 이 문서 및 문서에 포함된 내용은 예고 없이 변경될 수 있습니다. iMat1310L series는 13.56MHz, 최대 600W의 RF 전력을 사용하는 플라즈마의 Impedance를 50Ω 특성 Impedance에 자동으로 매칭시켜 주는 장비입니다.

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문서 이력

Rev No.	날짜	변경 내용
0.0	2016. 01. 20.	개정판 발행
0.1	2017.11.21.	6. Interlock Switch Circuit Specifications추가

1. Physical Specifications

Size	280mm(W) x 130mm(H) x 370mm(D) Dimensions for case only (not including connectors, fans, or brackets)
Weight	Approx. 7kg
Case	Aluminum (clear chromate finish)
RF Input Connector	50Ω coaxial, Type N-Connector(female)
RF Output Connector	N-Type(female)
Mains Input Connector	Compatible with IEC-60320
Serial interface	RS232 (DUB-9Pin-female) 19,200bps
A/D Sub interface	AD (DUB-9Pin-male), Interlock
Probe (Option)	Vdc Detector, Vpk Detector

- Dimensions;
모든 치수는 밀리미터(mm) 기준입니다.

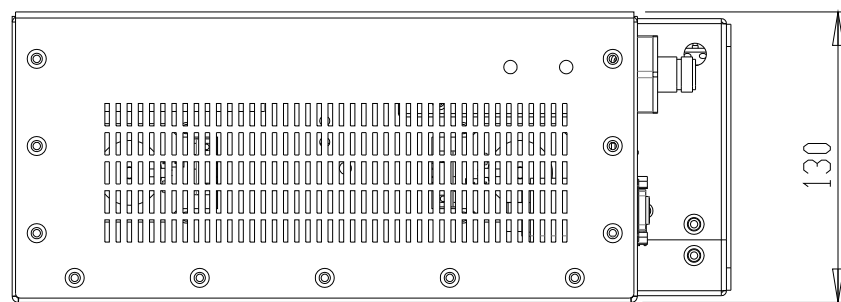


Fig. 1 Front view

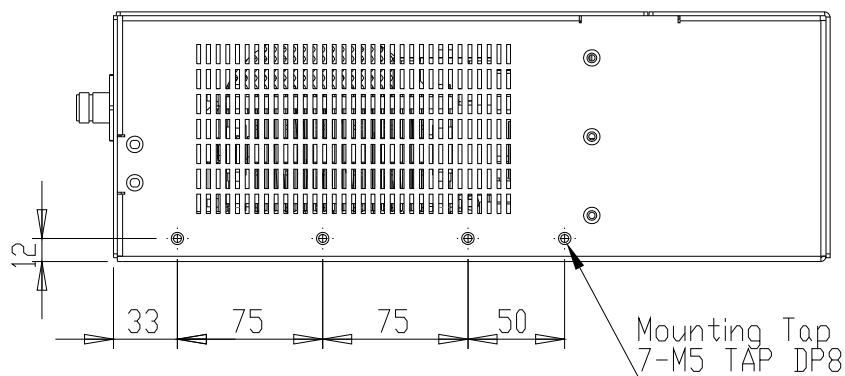


Fig. 2 Side (left) view

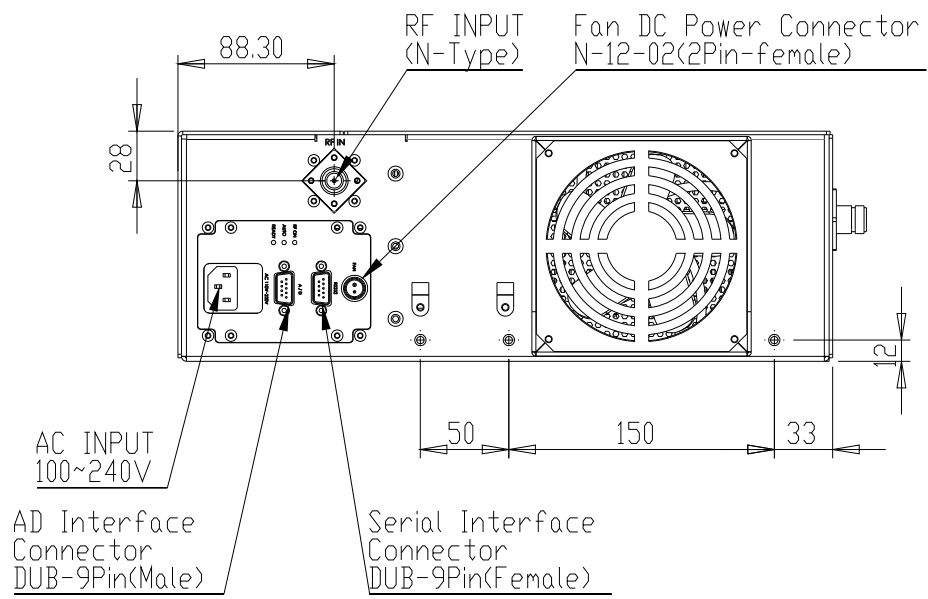


Fig. 3 Side (right) view

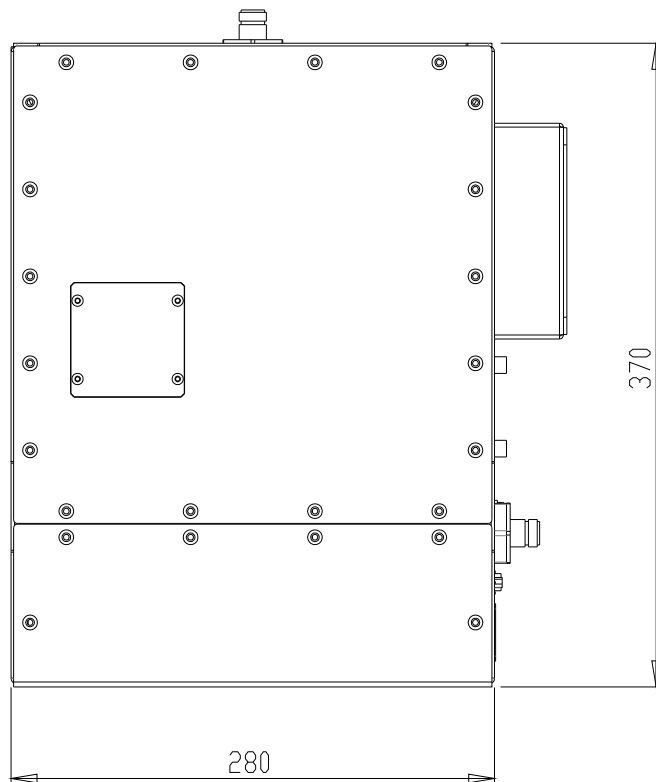


Fig. 4 Top view

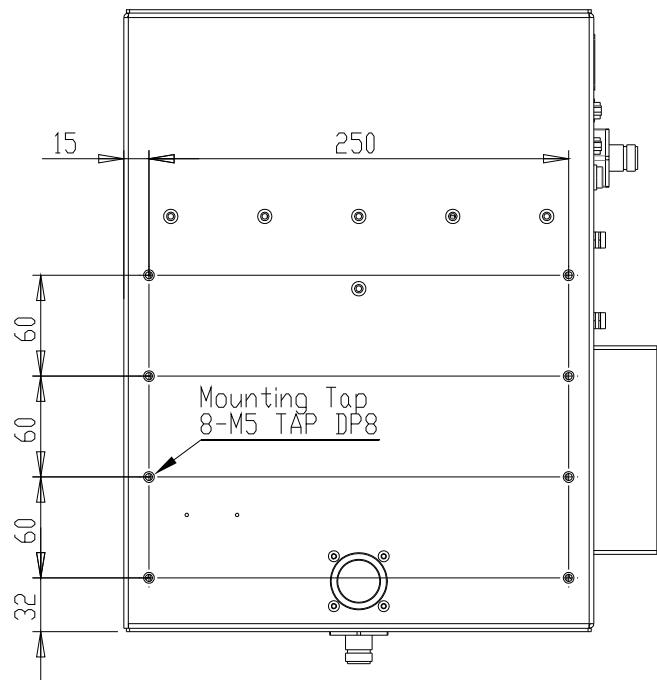


Fig. 5 Bottom view

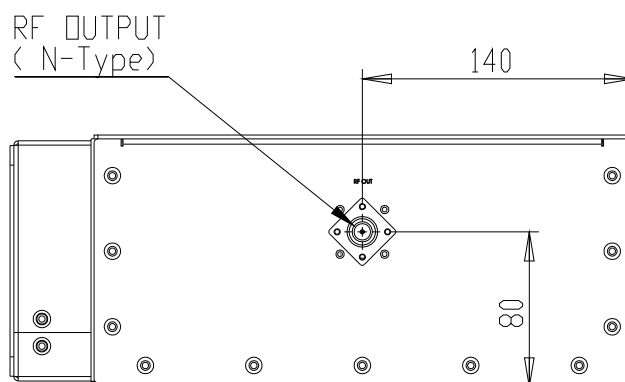


Fig. 6 Rear view

2. Electrical Specifications

200-M1310L-1711

AC Input Power	1Φ x 100VAC~240VAC ,50-60[Hz]
Power Consumption	Nominal 60W
Serial communication	Standard RS-232, 19,200bps
Interlock	Switch closes when top cover was secured. ,

3. Performance Specifications

RF frequency	13.56MHz ±5%
Input impedance	50Ω
Circuit type	Standard-L type (see Fig. 7)
Tuning range	C1: 30~520pF, nominal 520pF (±10%) C2: 30~280pF, nominal 280pF (±10%)
Reflect power guarantee	Within 3% of forward power
Load voltage	Max. 2kVs
Nominal RF Current	10A
Nominal RF Power	600W

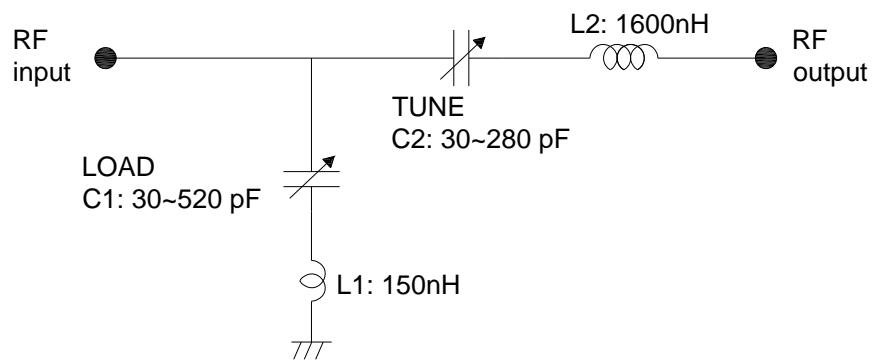


Fig. 7 Circuit diagram of 200-iMat1310L

Matcher		Measure (Impedance)
Load (%)	Tune (%)	
100	100	1.05-j80.89
0	0	19.78+j181.27
0	100	55.20-j72.55
100	0	0.39+j178.73

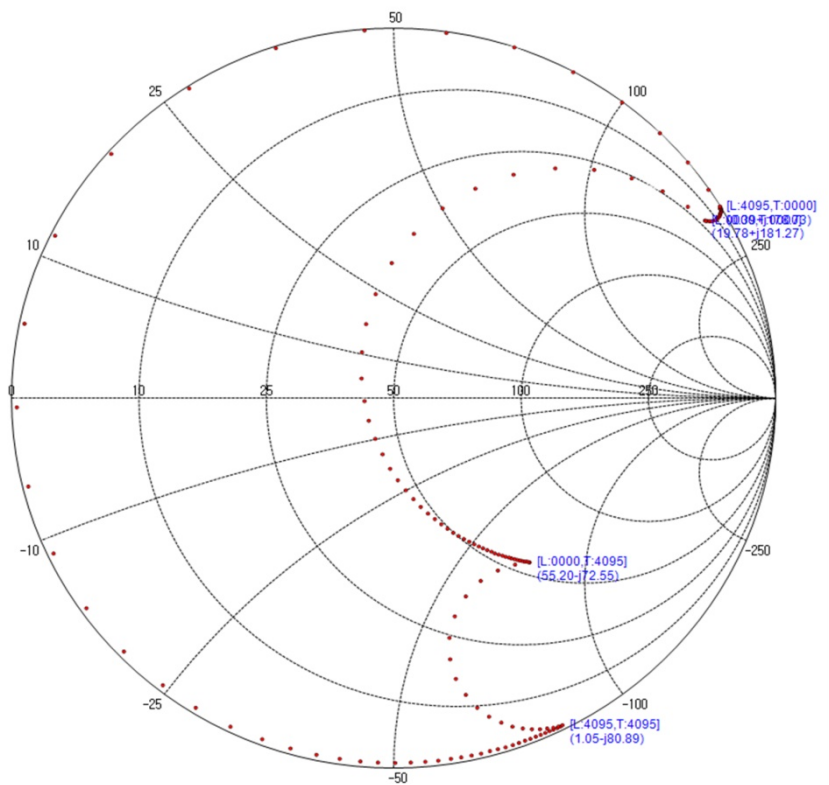


Fig. 8 Estimated matching of 200-iMat1310L

A/D Sub Interface 9Pin Assign

Connector		9Pin D-subminiature male
Pin No.	Signal Name	Description
1	Not used	
2	Not used	
3	Not used	
4		Interlock
5		Interlock
6	Not used	
7	0V ~ 10V	DC Bias voltage (0V ~ 2000V)-Option
8	0V ~ 10V	RF Peak voltage (0V ~ 2000V)-Option
9	GND	Common ground

Serial Interface 9Pin Assign

Connector		9Pin D-subminiature female
Pin No.	Signal Name	Description
1	Reserved	
2	RS-232C TXD	RS-232C Transmission Data Output
3	RS-232C RXD	RS-232C Receive Data Input
4	Reserved	
5	RS-232C GND	RS-232C Signal Ground
6	Reserved	
7	Reserved	
8	Reserved	
9	Reserved	

- Connector Pin: 2.3.5Pin 만 사용하십시오.
- Protocol 사용자 매뉴얼을 참조하십시오.

5. Environment Specifications

Ambient temperature	Operating: 10°C ~ +35°C
Humidity	20~90 % relative, non-condensing
Cooling	Forced air; air flow 94CFM (1 fan)

6. Interlock Switch Circuit Specifications

