

Product Features

- Frequency from 1559 ~ 1610MHz
- Class AB GaN design
- 50 Ohm Input/Output impedance
- Small size and Light weight
- High reliability and Ruggedness

Applications

- Radar system
- Drone system
- Jamming system



Description

The RRP1516100-50 is designed for Jamming system application frequencies from 1559~1610MHz. This Pallet uses GaN HEMT technology which performs high breakdown voltage, and high efficiency.

Electrical Specifications @ $V_{DC}=32V$, $T_C=45^{\circ}C$, 50 Ω System

PARAMETER	UNIT	MIN	TYP	MAX	SYMBOL
Operating Frequency	MHz	1559	-	1610	f_o
Operating Bandwidth	MHz	-	51	-	BW
Output CW Power	W	100	-	-	P_o
Input CW Power	dBm	-	0	-	P_i
Power Gain	dB	50	-	-	G_P
Gain Flatness	dB	-	-	± 0.5	ΔG_P
Efficiency	%	45	-	-	E_{FF}
Harmonics 1 to N	dBc	10	-	-	H_N
Spurious Level	dBc	60	-	-	Spur
Input VSWR	dB	-	-	2:1	VSWR
Output VSWR	dB	-	-	2:1	VSWR
Operating Voltage	V	-	32	-	V_{DC}
Current Consumption	A	-	8	-	I_{DC}
Current Monitor	V	-	0.8	-	

* Custom design available

Environmental Specifications

PARAMETER	UNIT	RATING	SYMBOL
Operating Case Temperature	°C	-20 ~ 75	T _C
Storage Temperature	°C	-40 ~ 105	T _{STG}
Relative Humidity(Non-condensing)	RH	95	%

Operating Voltages

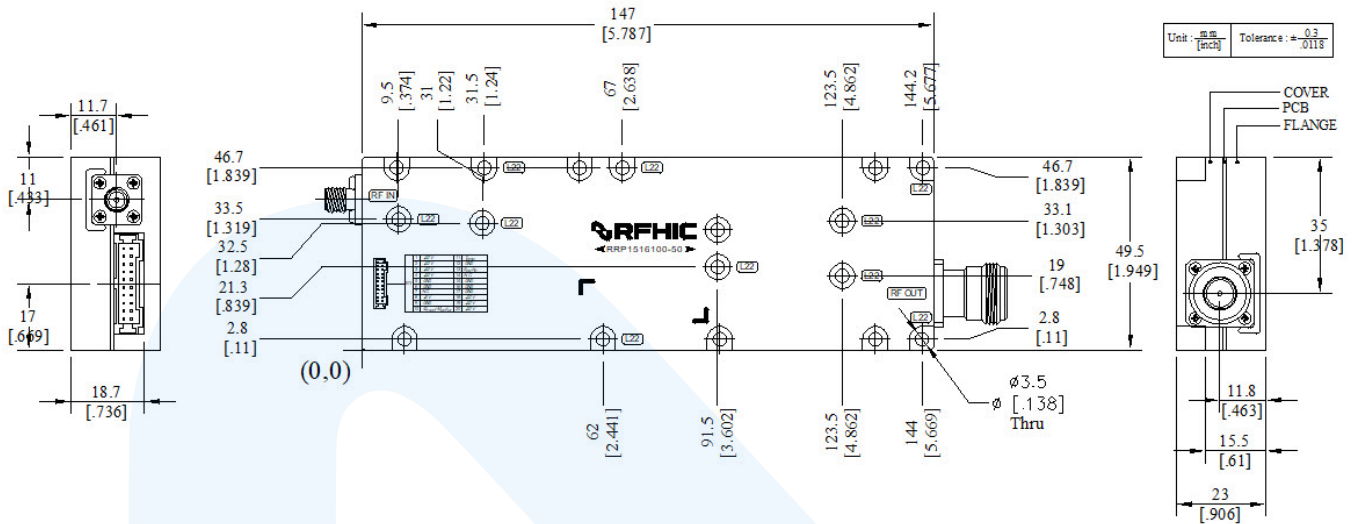
PARAMETER	UNIT	NOMINAL VOLTAGE	VOLTAGE ACCURACY	SYMBOL
Operating Voltage (Main)	V	32	± 2%	V _{DC}
Operating Voltage (Sub)	V	5	± 2%	V _{Sub}
HPA Enable Voltage	V	Low(0V) : PA OFF, High(5V) : PA ON		
Current Monitor Voltage	V	Output Voltage 1V@10A(0.1V/1A)		-
Temperature Monitor Voltage	V	Output Voltage 0.75V@25°C (1°C/0.01V)		-

Mechanical Specifications

PARAMETER	UNIT	TYP
Weight	kg	0.4 (TBD)
Dimension (L x W x H)	mm	147 x 49.5 x 23 (excludes connectors)
RF Connector	-	SMA Female : RF Input
		N-type Female : RF Output
DC Connector	-	T2M-110-01-L-D-RA-WT, Male : Supply
Cooling		External Heat-sink Required (not supplied)

Outline Drawing

* Unit: mm[inch] | Tolerance: ± 0.3 [.012]



Pin Description

Pin No	Description	Pin No	Description
1	+32V	11	Temp Monitor
2	+32V	12	GND
3	+32V	13	HPA Enable
4	+32V	14	N/C
5	GND	15	GND
6	GND	16	GND
7	N/C	17	GND
8	+5V	18	+32V
9	GND	19	+32V
10	Current Monitor	20	+32V

HPA Operating Sequence

HPA Turn On	HPA Turn Off
1. Pin (1,2,3,4,18,19,20) : +32V(V _{DC}) On	1. RF Off
2. Pin 8 : +5V(V _{Sub}) On	2. Pin 3 : HPA Enable(+5V) Off
3. Pin 3 : HPA Enable(+5V) On	3. Pin 8 : +5V(V _{Sub}) Off
4. RF On	4. Pin (1,2,3,4,18,19,20) : +32V(V _{DC}) Off

* It is recommended to follow the sequence of bias application as in the above table. However, there is an internal protection circuit that prevents the possible damages that may be occurred from a different sequence of bias applications.

Revision History

Part Number	Release Date	Version	Modification	Data Sheet Status
RRP1516100-50	July, 2024	0.1	-	Preliminary



Certification

This product is manufactured by a company that is certified for the AS9100D quality management system.

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