

Preliminary
Wideband Amp Pallet
RWP0425100-50



Product Features

- Frequency from 400 ~ 2500MHz
- Class AB GaN design
- Instantaneous wide bandwidth
- 50 Ohm Input/Output impedance
- Small size and Light weight
- High reliability and Ruggedness



Description

The RWP0425100-50 is designed for general purpose. Operating frequency range is from 400~2500MHz. Gallium Nitride on SiC Technology is used and attached on a copper sub carrier. Improved thermal handling by patented technology.

Electrical Specifications @ V_{DC}=36V, T_C=40°C, 50Ω System

PARAMETER	UNIT	MIN	TYP	MAX	SYMBOL
Operating Frequency	MHz	400	-	2500	F _O
Operating Bandwidth	MHz	-	2100	-	BW
Peak Output Power @ CW Signal	400~500MHz	60	80		P _{SAT}
	500~700MHz	80	100		
	700~2500MHz	100	120		
Input For Rated Output Power	dBm	-	0	-	P _{IN}
Maximum Input Power @Without Damage	dBm	-	-	15	P _{IN, MAX}
Power Gain @Input Power 0dBm, 500~2500MHz	dB	-	51	-	G _P
Gain Flatness @Input Power 0dBm, 500~2500MHz	dB	-	-	±2.5	ΔG _P
Efficiency @Input Power 0dBm	%	-	35	-	E _{FF}
Harmonics 1 to N @ Output Power	60W(400~500MHz)	dBc	10		H _N
	80W(500~700MHz)				
	100W(700~2500MHz)				
Spurious Level @ Input Power 0dBm	dBc	60	-	-	Spur
Input VSWR @ HPA On	:1	-	-	2:1	VSWR
Switching On/Off Time	us		1	4	T _{SW}
Operating Voltage	V	-	36	-	V _{DC}
Quiescent Current	A		4.2		I _{DQ}
Current Consumption @input Power 0dBm	A	-	9.1	12.5	I _{DC}

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Environmental Specifications

PARAMETER	UNIT	RATING	SYMBOL
Operating Case Temperature	°C	-30 ~ 80	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	V	36	± 2%	V _{DC}
HPA Enable Voltage	V	TTL Low(0V) : PA OFF, TTL High(5V) : PA ON		
Current Monitor Voltage	V	Output Voltage 2V@10A(0.2V/1A)		
Temp Monitor Voltage	V	Output Voltage 0.75V@25°C (1°C/0.01V)		

Mechanical Specifications

PARAMETER	UNIT	TYP
Mass	kg	0.93
Dimension	mm	185 x 100 x 24 (Without Connectors)
RF Connector	-	SMA Female : RF Input
		N Female : RF Output
DC Connector	-	D-Sub 7-Pin(7W2), Male : Supply
Cooling		External Heat-sink Required

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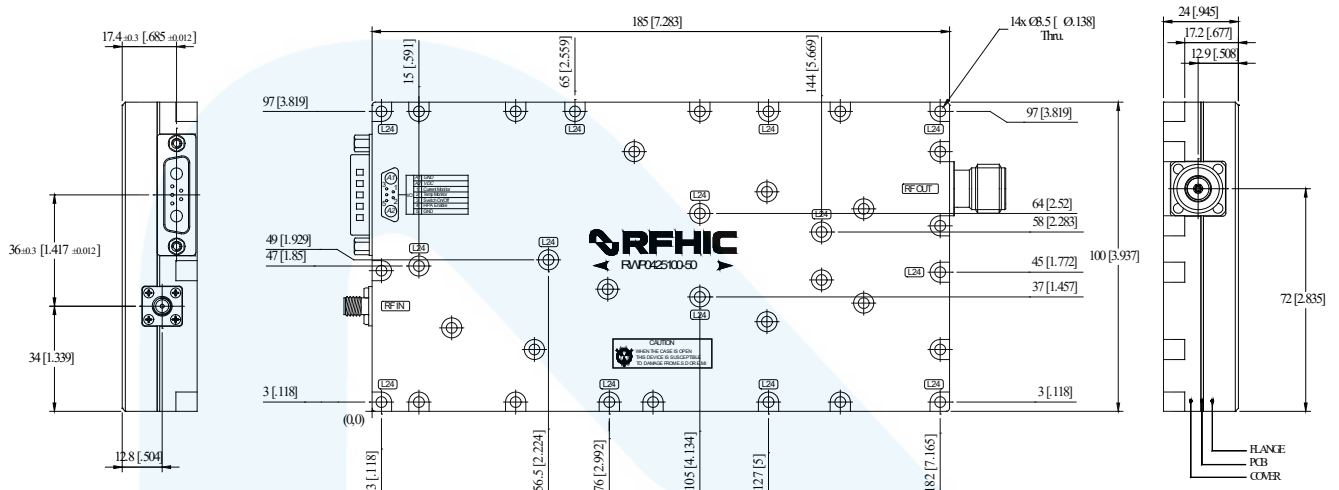
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Outline Drawing

* Unit: mm[inch] | Tolerance ± 0.2 [.0078]



Pin Description

Pin No	Description	Pin No	Description
A1	GND	1	Current Monitor
A2	VDC(+36V)	2	Temp Monitor
		3	Switch On/Off
		4	HPA Enable
		5	GND

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Typical Performance @ $V_{DC}=36V, T_C=40^{\circ}C$

Frequency	Small Gain @ Pin -20dBm	Psat @ Pin 0dBm		P3dB	Current @ Pin 0dBm	Efficiency @ Pin 0dBm	Harmonics 1 to N @ Pout
		[dBm]	[W]				60W(400~500MHz) 80W(500~700MHz) 100W(700~2500MHz)
[MHz]	[dB]	[dBm]	[W]	[dBm]	[A]	[%]	[dBc]
400	59.7	49.1	81	47	5.1	44.3	12
500	59.7	49.9	98	47	6.0	45.2	12
600	60.0	49.8	95	47	8.8	30.1	20
700	60.8	51.2	132	47	10.8	33.9	22
800	60.7	51.8	151	47	11.3	37.2	21
900	60.7	51.7	148	47	10.5	39.1	24
1000	61.5	51.6	145	49	9.0	44.6	29
1100	61.8	50.9	123	49	7.1	48.1	19
1200	60.8	50.9	123	49	8.3	41.2	16
1300	60.1	51.0	126	49	8.8	39.7	21
1400	60.1	51.1	129	48	10.6	33.8	30
1500	60.5	50.5	112	48	10.3	30.3	23
1600	60.8	51.0	126	48	10.3	34.0	22
1700	60.1	51.0	126	49	9.5	36.8	31
1800	60.7	51.0	126	49	8.1	43.2	16
1900	61.5	50.9	123	49	7.2	47.5	30
2000	62.0	51.2	132	50	7.6	48.2	35
2100	62.1	51.4	138	50	8.6	44.6	40
2200	61.6	51.5	141	49	9.7	40.5	45
2300	60.6	51.4	138	48	10.0	38.3	50
2400	60.6	51.3	135	49	9.9	37.8	40
2500	62.4	50.8	120	49	9.0	37.1	37

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Revision History

Part Number	Release Date	Version	Modification	Data Sheet Status
RWP0425100-50	2026.04.03	0.1	-	Preliminary



Certification

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

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