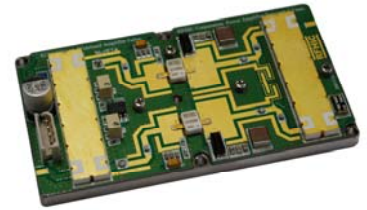


Product Features

- Solid-state linear amplifier design
- GaN on SiC HEMT
- Small and light weight
- Wide Band Operation 500~2500MHz
- 50 Ohm Input/Output impedance matched
- Highly reliable and rugged design
- Harsh environmental condition
- High efficiency
- 30W typical Psat

Application

- Broadband communication
- Broadcasting
- General purpose RF amplifier
- Linear applications in the L/S Frequency Bands



Description

The RUP15030-10 is designed for RF system application frequencies from 500MHz to 2.5GHz.

This Pallet Amplifier uses GaN on SiC HEMT technology which performs high breakdown voltage, high linearity, wide bandwidth and high efficiency.

Electrical Specifications @ VDD=+28VDC, T=25°C, 50Ω System

PARAMETER	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	500		2500	MHz
Output Power CW	Psat	20	30		Watt
Output Power @ P3dB G.C.P	P _{3dB}	5	15		Watt
Small Signal Gain	SSG	8	10		dB
Small Signal Gain Flatness	ΔG		± 1.5	± 2.0	dB
Input VSWR	S11		2.0:1	2.5:1	-
Harmonics @ P1dB G.C.P	H			-10	dBc
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage	VDC	27	28	30	Volt
Supply Current @ P _{sat}	IDD		4	5	Amp
Supply Current @ P _{3dB}	IDD		2.5	3.5	Amp

* Please DO NOT ENTER RF INPUT POWER OVER +39dBm. (to prevent the main from damaging)

Environmental Characteristics

PARAMETER	Symbol	Min	Typ	Max	Unit
Operating Case Temperature	T _c	0		+70	°C
Storage Temperature	T _s	-40		+85	°C

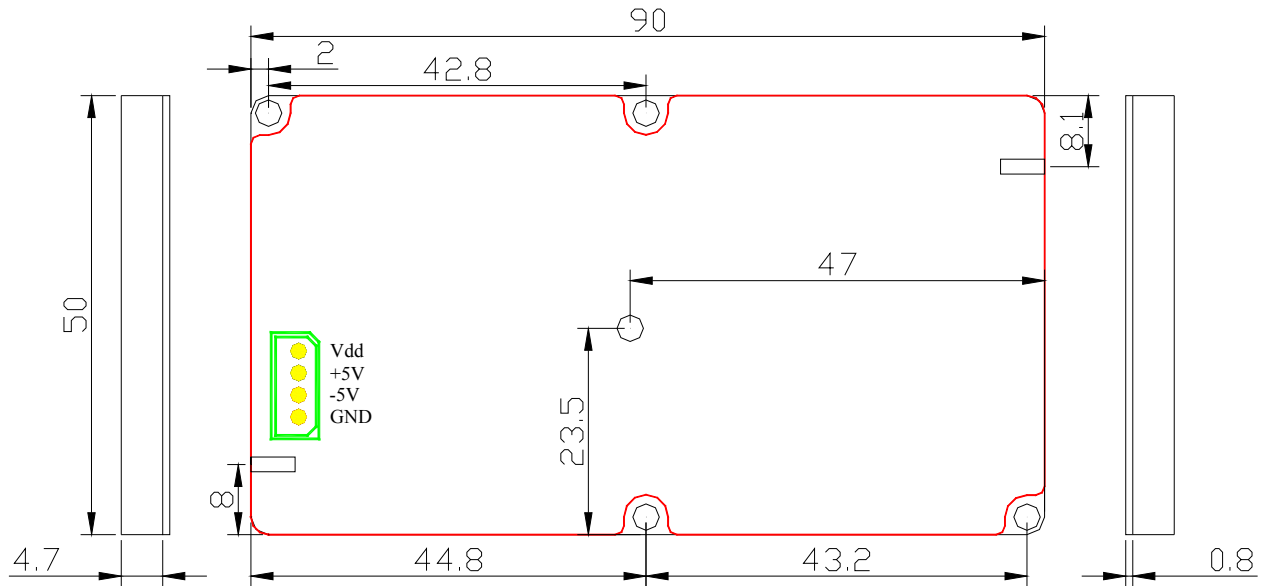
Mechanical Specifications

PARAMETER	Value	Units	Limits
Dimensions (L x W x H)	90.0 x 50.0 x 16.0	mm	Max
RF Connectors In/Out	SMA Female		
Cooling	External Heat sink + airflow		

Interface Connectors

Pin #	Description	Specifications
1	Vdd.	+28 Drain to Source Voltage
2	Ref.	+5V op-Amp Operate Voltage
3	Vgs.	-5V Gate to Source Voltage
4	GND.	Ground

Outline Drawing



Typical Performance Chart @ 25°C

RFHIC RUP15030-10 Test Result								
Freq. [MHz]	P3 Output Power, Current, Efficiency				P _{sat} Output Power, Current, Efficiency			
	Output [dBm]	Output [Watt]	Current [A]	Efficiency [%]	Output [dBm]	Output [Watt]	Current [A]	Efficiency [%]
500	43.68	23.33	1.89	36.83	46.69	46.67	2.51	59.79
600	41.59	14.42	1.65	29.20	45.02	31.77	1.89	52.46
700	41.60	14.45	1.61	29.61	44.36	27.29	1.81	43.66
800	41.56	14.32	1.86	25.25	44.74	29.79	2.38	33.39
900	41.74	14.93	2.23	22.00	45.26	33.57	2.81	33.10
1000	40.81	12.05	2.27	17.38	45.74	37.50	3.58	28.14
1100	39.00	7.94	2.03	13.01	46.01	39.90	4.09	26.41
1200	37.95	6.24	1.83	11.54	45.93	39.17	3.91	29.48
1300	39.73	9.40	2.24	14.02	46.36	43.25	4.00	31.07
1400	39.96	9.91	2.25	14.74	46.54	45.08	3.76	31.16
1500	40.83	12.11	2.51	16.06	46.77	47.53	4.76	30.01
1600	40.08	10.19	2.39	14.03	46.56	45.29	4.85	25.73
1700	41.78	15.07	2.64	18.78	46.61	45.81	4.47	27.62
1800	40.94	12.42	2.37	17.34	46.56	45.29	4.45	29.63
1900	42.82	19.14	2.67	23.75	46.87	48.64	4.12	35.02
2000	44.82	30.34	2.92	34.75	47.33	54.08	3.67	44.91
2100	45.90	38.90	2.82	46.53	47.47	55.85	3.24	54.84
2200	45.83	38.28	2.64	48.60	47.05	50.70	2.96	53.35
2300	45.61	36.39	2.73	44.19	47.00	50.12	3.10	48.88
2400	44.87	30.69	2.78	36.49	47.00	50.12	3.42	42.75
2500	44.98	31.48	3.04	33.70	46.74	47.21	3.74	36.19

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Typical Performance Chart @ 25°C

