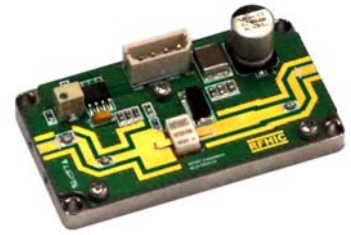


Product Features

- 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
- 10W typical Psat

Application

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



Description

The RUP15010-10 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		10		Watt
Output Power @ P3dB G.C.P	P _{3dB}		5		Watt
Small Signal Gain	SSG	10	14		dB
Small Signal Gain Flatness	ΔG		± 1.5	± 2.0	dB
Input VSWR	S11			8.5 : 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		1.0	1.5	Amp
Supply Current @ P _{3dB}	IDD		0.7	1.0	Amp

* Please DO NOT ENTER RF INPUT POWER OVER +37dBm. (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

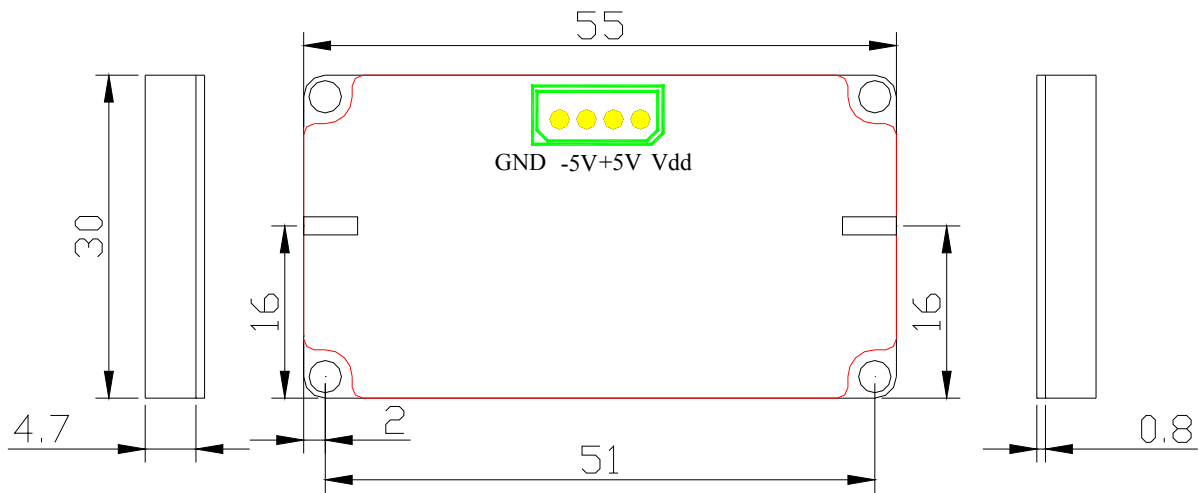
Mechanical Specifications

PARAMETER	Value	Units	Limits
Dimensions (L x W x H)	55.0 x 30.0 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 Voltage
2	Ref.	+5V Op-Amp Operate Voltage
3	Vgs.	-5V Gate Voltage
4	GND.	Ground

Outline Drawing



Typical Performance Chart @ 25°C

RFHIC RUP15010-10 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	39.83	9.62	0.54	61.83	41.05	12.74	0.62	63.23
600	39.66	9.25	0.55	55.76	40.42	11.02	0.57	56.31
700	39.86	9.68	0.58	58.67	40.60	11.48	0.60	65.41
800	38.96	7.87	0.60	45.43	42.10	16.22	0.97	44.51
900	39.82	9.59	0.69	46.58	41.19	13.15	0.77	41.84
1000	40.43	11.04	0.73	52.99	41.31	13.52	0.79	56.40
1100	37.81	6.04	0.61	34.08	42.09	16.18	1.04	38.16
1200	36.87	4.86	0.64	25.52	41.04	12.71	1.06	35.28
1300	38.98	7.91	0.74	37.47	41.07	12.79	0.90	48.51
1400	35.97	3.95	0.58	23.54	41.95	15.67	1.11	43.87
1500	36.78	4.76	0.65	24.79	42.83	19.19	1.46	33.83
1600	37.73	5.93	0.70	29.51	41.88	15.42	1.20	41.66
1700	37.7	5.89	0.64	31.81	42.46	17.62	1.11	47.60
1800	39.8	9.55	0.79	41.63	42.62	18.28	1.09	51.28
1900	40.94	12.42	0.85	50.96	42.37	17.26	1.02	56.45
2000	40.75	11.89	0.80	51.38	42.09	16.18	0.91	56.16
2100	40.84	12.13	0.83	50.78	41.58	14.39	0.88	53.07
2200	40.81	12.05	0.78	53.97	41.76	15.00	0.79	61.82
2300	40.78	11.97	0.76	54.48	41.50	14.13	0.73	59.98
2400	40.79	11.99	0.74	55.84	41.08	12.82	0.73	58.57
2500	41.39	13.77	0.74	63.98	41.26	13.37	0.71	63.12

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Typical Performance Chart @ 25°C

