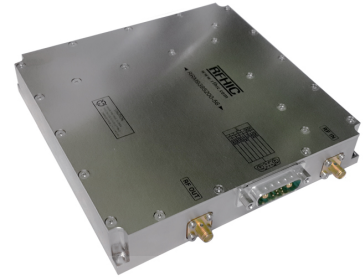


Product Features

- Frequency from 9.3 ~ 9.7GHz
- GaN HEMT
- 50 Ohm Input/Output Impedance
- High Efficiency

Applications

- Marine Radar System
- Weather Radar System
- Surveillance Radar System



Description

The RRM9397200-56A is designed for Radar system application frequencies from 9.3 ~ 9.7GHz. This module uses GaN HEMT technology which performs high breakdown voltage, wide bandwidth, and high efficiency.

Electrical Specifications @ $V_{DS} = 50V, T = 25^{\circ}C, 50\Omega$ System

PARAMETER	UNIT	MIN	TYP	MAX	SYMBOL
Operating Frequency	MHz	9300	-	9700	f_o
Operating Bandwidth	MHz	-	400	-	BW
Output Pulse Power	W	200	-	-	P_o
Input Pulse Power	dBm	-3	-	0	P_i
Power Gain	dB	-	56	-	G_P
Gain Flatness	dB	-	-	± 1.0	ΔG_P
Duty Cycle	%	-	-	10	DC
Pulse Width	us	-	-	100	PW
PAE	%	18	20	-	E_{ff}
Amplitude Pulse Droop	dB	-	0.5	1.0	Droop
Harmonics 1 to N	dBc	40	-	-	H_N
Spurious Level	dBc	60	-	-	Spur
Rise/Fall Time	ns	-	-	50	t_r / t_f
Off State Isolation	dBc	100	-	-	Off Iso
Input VSWR	dB	-	-	2:1	VSWR
Output VSWR	dB	-	-	2:1	VSWR
Switching Time	ns	-	250	300	t_{sw}
Phase Deviation	°	-20	-	20	$\Delta\phi$

* Test Pulse conditions = 100us, 10%

* Custom design available

Absolute Maximum Ratings

PARAMETER	UNIT	RATING	SYMBOL
Operating Junction Temperature	°C	225	T _J
Operating Flange Temperature	°C	-30 ~ 75	T _C
Storage Temperature	°C	-50 ~ 125	T _{STG}

Operating Voltages

PARAMETER	UNIT	NOMINAL VOLTAGE	VOLTAGE ACCURACY	SYMBOL
Drain-Source Voltage	V	50	± 5%	V _{DS1}
Drain-Source Sub Voltage	V	5.6	± 5%	V _{DS2}
SSPA On/Off Control Voltage	V	TTL Low(0V) : SSPA OFF, TTL High(5V) : SSPA ON		V _{DC1}
Pulse On/Off Control Voltage	V	TTL Low(0V) : Pulse OFF, TTL High(5V) : Pulse ON		V _{DC2}

Power Supply

PARAMETER	UNIT	MIN	TYP	MAX	SYMBOL
Drain-Source Current(AVG)	A	-	2.0	2.5	I _{DS1}
Drain-Source Sub Current(AVG)	A	-	0.5	1.0	I _{DS2}

* Duty Cycle 10%, Pulse Width 100us

Revision History

Part Number	Release Date	Version	Modification	Data Sheet Status
RRM9397200-56A	2020.09.07	0.1	-	Preliminary



RFHIC Corporation reserves the right to make changes to any products herein or to discontinue any product at any time without notice. While product specifications have been thoroughly examined for reliability, RFHIC Corporation strongly recommends buyers to verify that the information they are using is accurate before ordering. RFHIC Corporation does not assume any liability for the suitability of its products for any particular purpose, and disclaims any and all liability, including without limitation consequential or incidental damages. RFHIC products are not intended for use in life support equipment or application where malfunction of the product can be expected to result in personal injury or death. Buyer uses or sells such products for any such unintended or unauthorized application, buyer shall indemnify, protect and hold RFHIC Corporation and its directors, officers, stockholders, employees, representatives and distributors harmless against any and all claims arising out of such unauthorized use.

Sales, inquiries and support should be directed to the local authorized geographic distributor for RFHIC Corporation. For customers in the US, please contact the US Sales Team at 919-677-8780. For all other inquiries, please contact the International Sales Team at 82-31-8069-3036.