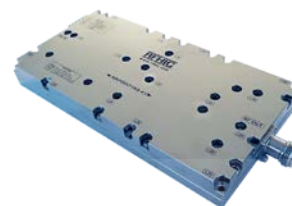


Product Features

- Frequency from 5.6 ~ 5.7GHz
- GaN HEMT
- 50 Ohm Input/Output impedance
- High efficiency

Applications

- Radar system



Description

The RRP56571K0-41 is designed for Radar system application frequencies from 5.6 ~ 5.7GHz.

This module uses GaN HEMT technology which performs high breakdown voltage, wide bandwidth and high efficiency.

Electrical Specifications @ $V_{DS1}=50V$, $V_{DS2}=12V$ $T=25^{\circ}C$, 50 Ω System

PARAMETER	UNIT	MIN	TYP	MAX	SYMBOL
Operating Frequency	MHz	5600	-	5700	f_O
Operating Bandwidth	MHz	-	100	-	BW
Output Pulse Power	W	1000	1200	-	P_O
Input Pulse Power	dBm	-	20	25	P_I
Power Gain	dB	40	41	-	G_P
Gain Flatness	dB	-	-	± 0.5	ΔG_P
Duty Cycle	%	-	-	10	DC
Pulse Width	us	-	-	200	PW
Efficiency	%	30	35	-	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 Time	ns	-	-	100	t_r
Fall Time	ns	-	-	100	t_f
Input VSWR	dB	-	-	2.0:1	VSWR
Output VSWR	dB	-	-	1.5:1	VSWR
Switching Time	us	-	0.1	-	t_{sw}
Phase Deviation	$^{\circ}$	-20	-	20	$\Delta\phi$

* Test Pulse conditions = 100us, 10%

* Above electrical specifications is measured by connecting electrolytic condenser 6,800uF to DC. Please make sure that electrolytic condenser is connected properly while testing the module.

* Custom design available

Absolute Maximum Ratings

PARAMETER	UNIT	RATING	SYMBOL
Operating Junction Temperature	$^{\circ}C$	225	T_J
Operating Flange Temperature	$^{\circ}C$	-20 ~ 85	T_C
Storage Temperature	$^{\circ}C$	-40 ~ 125	T_{STG}

Operating Voltages

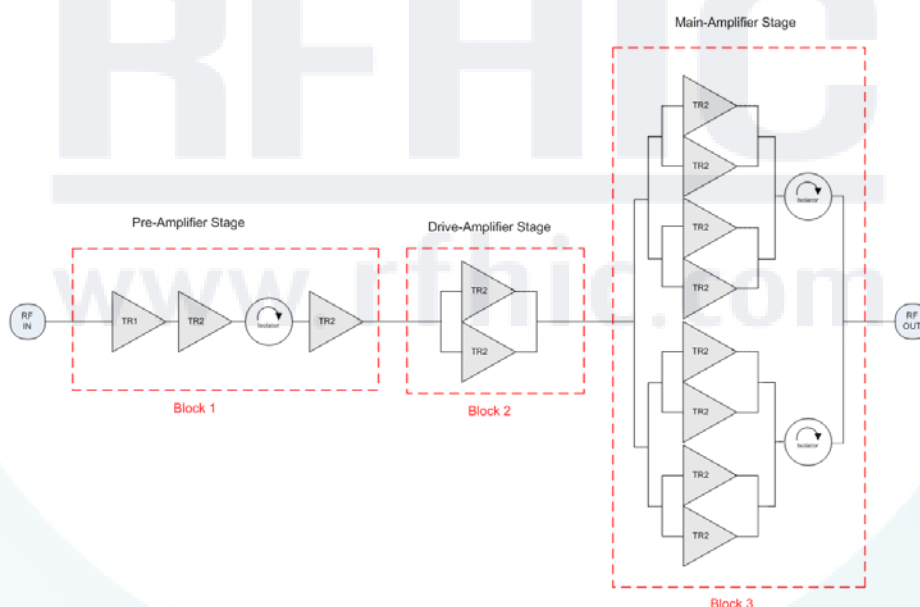
PARAMETER	UNIT	NOMINAL VOLTAGE	VOLTAGE ACCURACY	SYMBOL
Drain-Source Voltage	V	50	± 2%	V _{DS1}
Drain-Source Sub Voltage	V	10	± 2%	V _{DS2}
On/Off Control Voltage	V	TTL Low(0V) : PA OFF, TTL High(5V) : PA ON		
Peak Monitor Voltage	V	1.5V@60dBm (dB/30mV)		
Temp Monitor Voltage	V	0.75V@25°C (1°C/0.01V)		

Power Supply

PARAMETER	UNIT	MIN	TYP	MAX	SYMBOL
Drain-Source Current(AVG)	A	-	8.0	10	I _{DS1}
Drain-Source Sub Current(AVG)	A	-	0.15	0.3	I _{DS2}

* Duty Cycle 10%, Pulse Width 100us

Block diagram

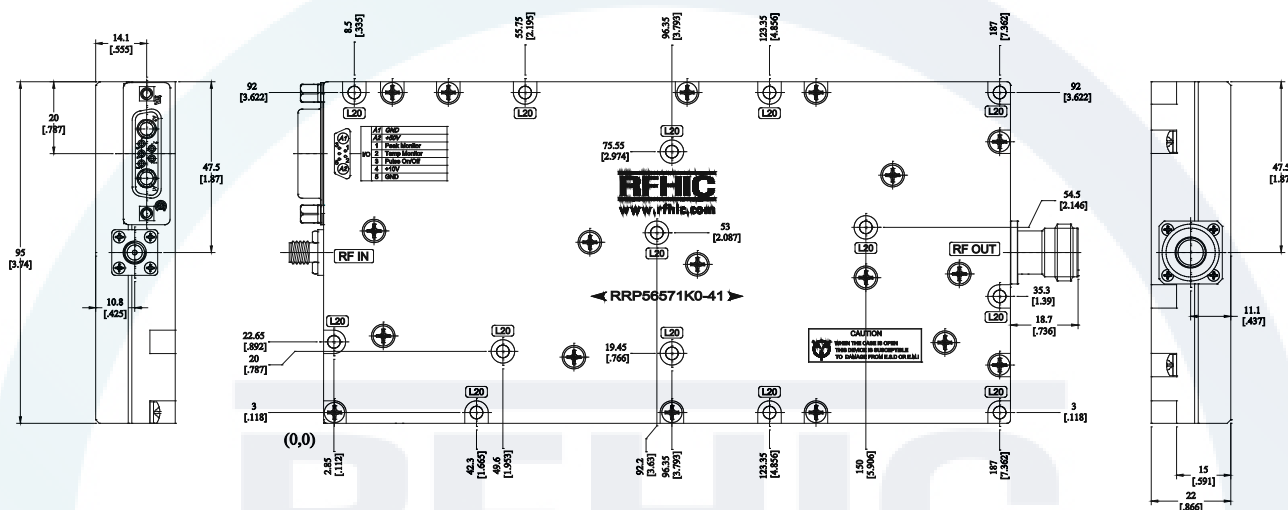


Mechanical Specifications

PARAMETER	UNIT	TYP
Mass	kg	-
Dimension	mm	190 x 95 x 22
RF Connector	-	SMA Female : RF Input
		N Female : RF Output
DC Connector	-	7W2 Combo Connector : Supply

Outline Drawing

* Unit: mm[inch] | Tolerance ± 0.2 [.008]



Pin Description

Supply : 7W2 Combo Connector			
Pin No	Description	Pin No	Description
A1	GND	1	Peak Monitor
A2	V _{DS1} (+50V)	2	Temp Monitor
-	-	3	Pulse On/Off
-	-	4	+10V
-	-	5	GND

Revision History

Part Number	Release Date	Version	Modification	Data Sheet Status
RRP56571K0-41	2015.9.22	0.2	-	Preliminary
RRP56571K0-41	2015.3.10	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 919-655-1121. For all other inquiries, please contact the International Sales Team at 82-31-250-5078.