

Preliminary
Pulse Amp Pallet
RRP56570R5-28



Product Features

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

Applications

- Radar system



Description

The RRP56570R5-28 is designed for Radar system application frequencies from 5.6 ~ 5.7GHz. This module uses GaN HEMT technology which performs high breakdown voltage.

Electrical Specifications @ $V_{DS1}=50V$, $V_{DS2}=6V$, $T=25^{\circ}C$, 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	0.5	0.6	-	P_O
Input Pulse Power	dBm	-	0	-	P_I
Power Gain	dB	-	28	-	G_P
Gain Flatness	dB	-	-	± 0.5	ΔG_P
Duty Cycle	%	-	5	10	DC
Pulse Width	us	1	50	100	PW
Amplitude Pulse Droop	dB	-	0.5	1.0	Droop
Harmonics 1 to N	dBc	30	-	-	H_N
Spurious Level	dBc	70	-	-	Spur
Rise Time	ns	-	-	100	t_r
Fall Time	ns	-	-	100	t_f
Input VSWR	dB	-	-	1.5:1	VSWR
Output VSWR	dB	-	-	1.5:1	VSWR
Switching Time	us	-	-	0.5	t_{sw}
Phase Deviation	$^{\circ}$	-15	-	+15	$\Delta\phi$

* Test Pulse conditions = 100us, 10%

* Custom design available

Absolute Maximum Ratings

PARAMETER	UNIT	RATING	SYMBOL
Operating Flange Temperature	°C	-20 ~ 85	T _C
Storage Temperature	°C	-40 ~ 125	T _{STG}

Operating Voltages

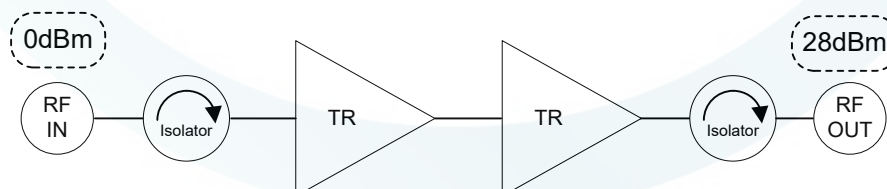
PARAMETER	UNIT	NOMINAL VOLTAGE	VOLTAGE ACCURACY	SYMBOL
Drain-Source Voltage	V	50	± 2%	V _{DS1}
Drain-Source Sub Voltage	V	6	± 2%	V _{DS2}
Temp Monitor Voltage	V	0.75V@25°C (1°C/0.01V)		
Pulse On/Off Control Voltage	V	TTL Low(0V) : PA OFF, TTL High(5V) : PA ON		

Power Supply

PARAMETER	UNIT	MIN	TYP	MAX	SYMBOL
Drain-Source Current(AVG)	A	-	0.05	-	I _{DS1}
Drain-Source Sub Current(AVG)	A	-	0.01	-	I _{DS2}

* Duty Cycle 10%, Pulse Width 100us, Pout 0.6W

Block diagram



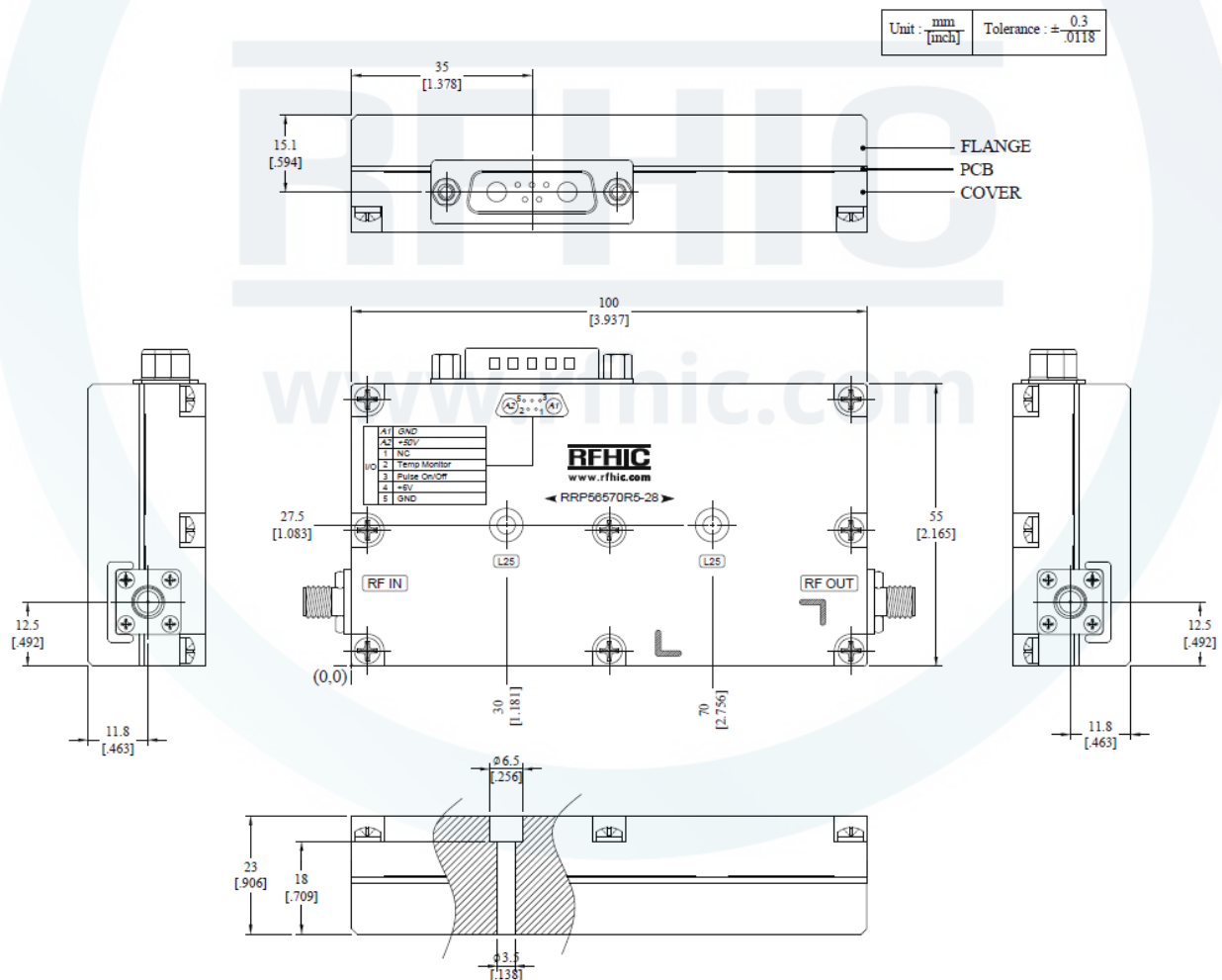
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Mechanical Specifications

PARAMETER	UNIT	TYP
Mass	kg	0.4(TBD)
Dimension	mm	100x55x23(TBD)
RF Connector	-	SMA Female : RF Input
		SMA Female : RF Output
DC Connector	-	7W2 Combo Connector : Supply and Control

Outline Drawing



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Pin Description

Supply : 7W2 Combo Connector			
Pin No	Description	Pin No	Description
A1	GND	1	N.C
A2	V _{DS1} (+50V)	2	Temp Monitor
		3	Pulse On/Off
		4	V _{DS2} (+6V)
		5	GND



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Revision History

Part Number	Release Date	Version	Modification	Data Sheet Status
RRP56570R5-28	2017.07.17	0.1	-	Preliminary
RRP56570R5-28	2017.11.01	0.2	Modified Spec. & Format	Preliminary
RRP56570R5-28	2021.01.18	0.3	Modified PCB silk & CASE	Preliminary
-	-	-	-	-

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Certification

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

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