

**Product Features**

- GaN on SiC Technology
- High Efficiency
- 50 Ohm Input/Output Impedance

**Application**

- S-Band Radar



**Description**

- RFMR29-SFEM-200-400A is T/R Module (Transmitter/Receiver Module) operating at 2.7-3.1GHz performing 200W output power.
- Circulator provides duplexer function and has a built in Limiter Diode which protects receiver.
- Integral Bias sequence circuit.

**Electrical Specifications @ Ta=25°C, 50Ω System**

PARAMETER	UNIT	MIN	TYP	MAX	SYMBOL
Frequency	GHz	2.7	-	3.1	F
Peak Output Power	W	200	-	-	P <sub>OUT</sub>
Transmit input Power	dBm	-	-6	-	P <sub>IN</sub>
Pulse width	us	-	-	100	Pw
Duty Cycle	%	-	-	10	Dc
Pulse droop	dB	-	-	1.0	Droop
Pulse Rise & Fall time	ns	-	-	100	Tr / Tf
Transmit Harmonics 1 to N	dBc	30	-	-	H <sub>N</sub>
TX Input & RX Input Return Loss	dB	-	-	-12	RL
Receiver Gain	dB	-	28	-	Gr
RX Gain Flatness	dBp-p	-	-	1.0	Gf
RX Noise Figure	dB	-	-	3.0	N
Receiver output 1dB compression	dBm	+10	-	-	Rp1
Tx/Rx switching time	ns	-	-	300	Ts
Efficiency	%	37	-	-	E <sub>ff</sub>
Operating Voltage	-	DC +47V, DC+5.0V			V

**Environmental Specifications**

Operating Flange Temperature	-10°C to +50°C
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**Mechanical Specifications**

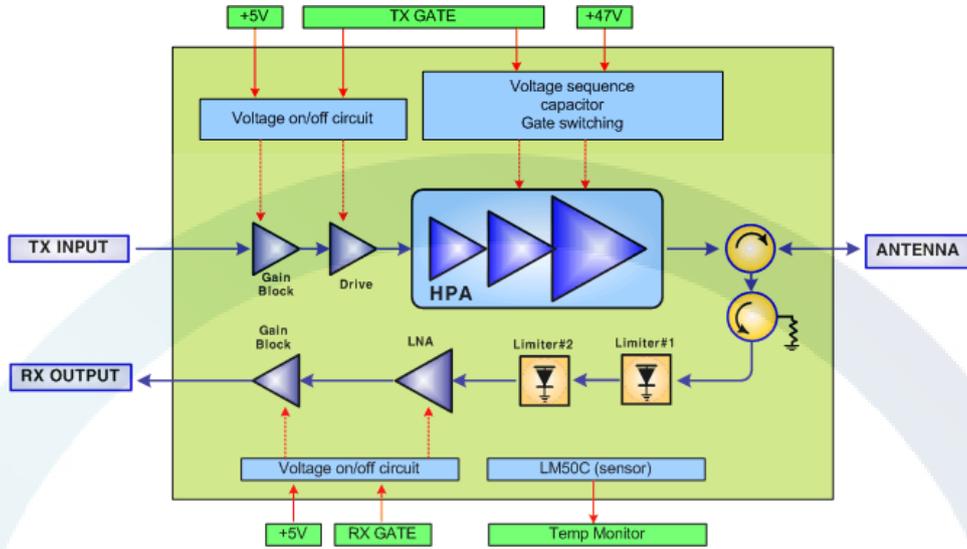
Physiacle Dimension ( W × D × H )	165mm X 56mm X 18mm
DC & Control signal Connector	T2M-107-01-L-D-RA-WT
RF Connector	SMA Connector (Female)

**Interface**

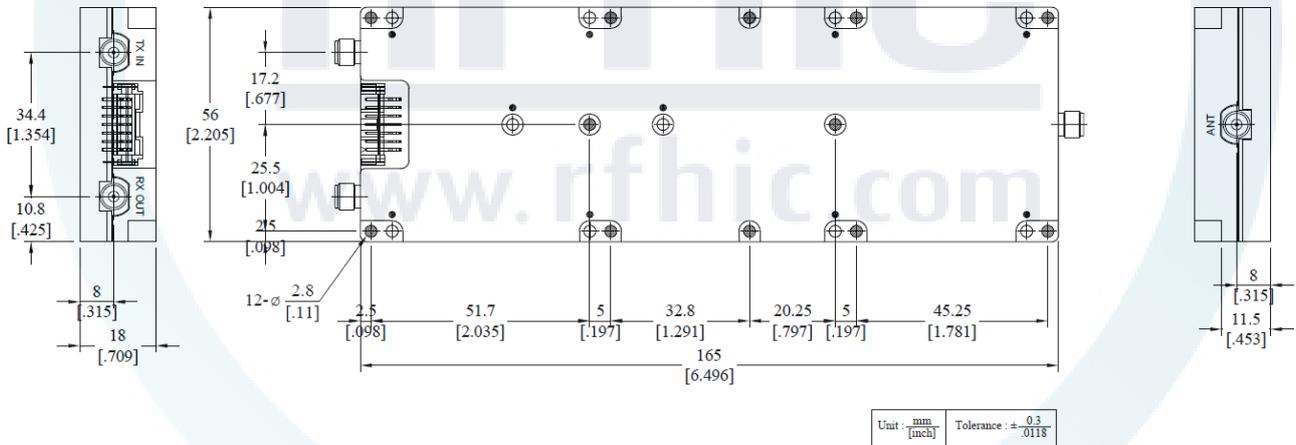
No	Function	Description
1	DC +47V	HPA Drain Voltage
2	DC +47V	HPA Drain Voltage
3	DC +47V	HPA Drain Voltage
4	DC +47V	HPA Drain Voltage
5	GND	Ground
6	GND	Ground
7	GND	Ground
8	GND	Ground
9	TX Path Enable	TX Path Control(TTL) Low : Off, High : On
10	RX Path Enable	RX Path Control(TTL) Low : On, High : Off
11	Drain Voltage Enable	Drain Voltage Control(TTL) Low : Off, High : On
12	Temp Sensor	0.25V ~ 1.2V (-25°C ~ +70°C)
13	DC +5V	Drive Amp Voltage
14	GND	Ground

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**Block Diagram**



**Drawing**



**Revision History**

Part Number	Release Date	Version	Modification	Data Sheet Status
RFMR29-SFEM-200-400A	2017.10.20	0.1	-	Preliminary



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