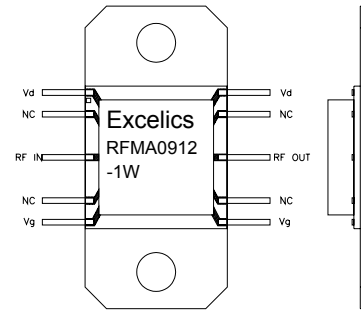


### FEATURES

- 9.50 – 11.70GHz Operating Frequency Range
- 30.0dBm Output Power at 1dB Compression
- 31.0 dB Typical Power Gain @ 1dB Gain Compression
- -41dBc Typical OIM3 @ each tone Pout 19.0dBm



Different Packages Are Available



**Caution! ESD sensitive device.**

### APPLICATIONS

- Point-to-point and point-to-multipoint radio
- Military Radar Systems

### ELECTRICAL CHARACTERISTICS (T<sub>a</sub> = 25 °C, 50 ohm, V<sub>dd</sub>=7V, V<sub>gg</sub>=-5V)

SYMBOL	PARAMETER/TEST CONDITIONS	MIN	TYP	MAX	UNITS
F	Operating Frequency Range	9.5		11.7	GHz
P <sub>1dB</sub>	Output Power at 1dB Gain Compression	29	30		dBm
G <sub>1dB</sub>	Gain @1dB gain compression	28	31		dB
OIMD3	Output 3 <sup>rd</sup> Order Intermodulation Distortion @Δf=10MHz, Each Tone Pout 19dBm	-38	-41		dBc
Input RL	Input Return Loss		-10	-8	dB
Output RL	Output Return Loss		-6		dB
I <sub>dd</sub>	Drain Current		900	1050	mA
V <sub>dd</sub>	Drain Supply Voltage		7	8	V
V <sub>gg</sub>	Gate Supply Voltage		-5		V
R <sub>th</sub>	Thermal Resistance (Au-Sn Eutectic Attach)		7	7.5	°C/W
T <sub>b</sub>	Operating Base Plate Temperature	- 30		+ 80	°C

### MAXIMUM RATINGS AT 25°C

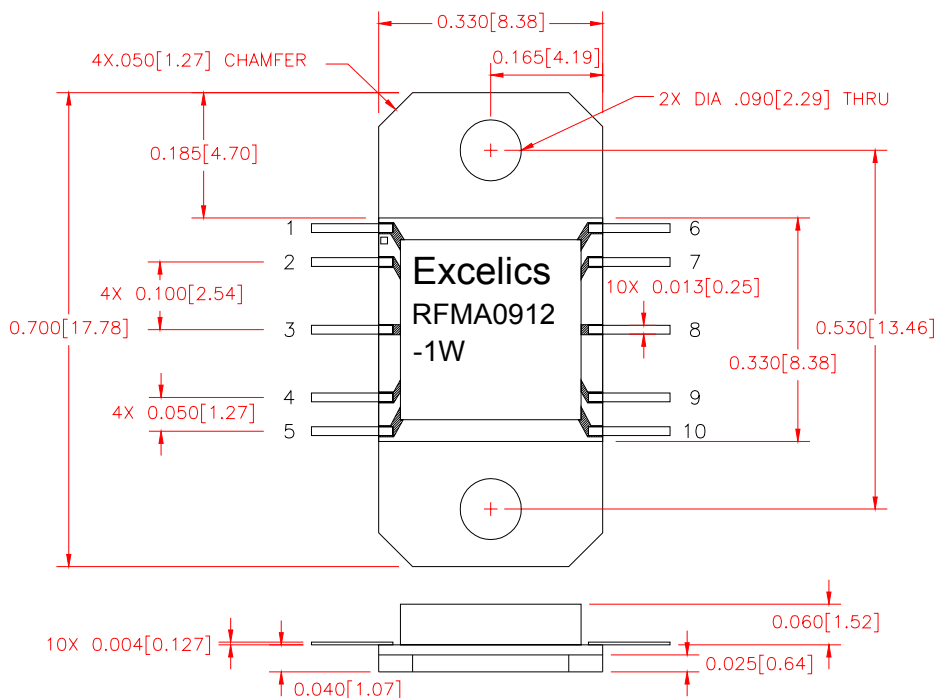
SYMBOL	CHARACTERISTIC	ABSOLUTE	CONTINUOUS <sup>1,2</sup>
V <sub>dd</sub>	Drain Supply Voltage	12V	8V
V <sub>gg</sub>	Gate Supply Voltage	-8V	-3 V
I <sub>dd</sub>	Drain Current	I <sub>dss</sub>	1.9A
I <sub>gg</sub>	Gate Current	132mA	22 mA
P <sub>IN</sub>	Input Power	20dBm	@ 3dB compression
T <sub>CH</sub>	Channel Temperature	175°C	150°C
T <sub>STG</sub>	Storage Temperature	-65/175°C	-65/150°C
P <sub>T</sub>	Total Power Dissipation	15.0W	12.6W

1. Operating the device beyond any of the above rating may result in permanent damage.

2. Bias conditions must also satisfy the following equation  $V_{dd} \cdot I_{dd} < (T_{CH} - T_{HS}) / R_{TH}$ , where T<sub>HS</sub> = ambient temperature

Specifications are subject to change without notice.

### 01 Package Outline



All dimensions in inches [mm]

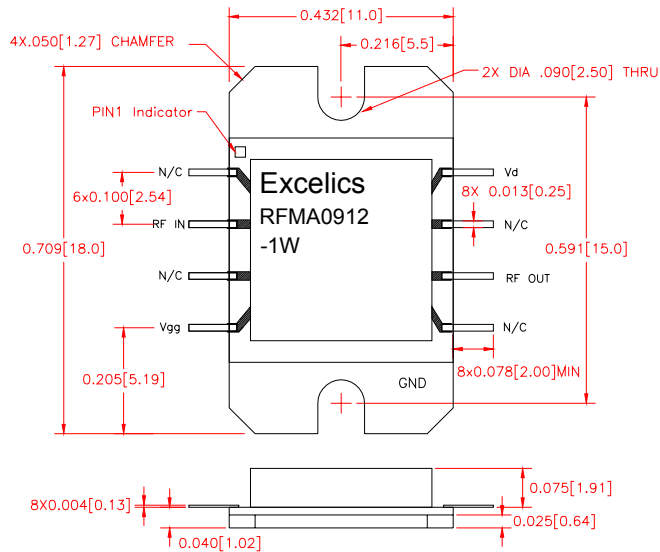
### 01 Package Pin Assignment

	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8	PIN 9	PIN 10
RFMA0912-1W-01	Vd	NC	RF IN	NC	Vg	Vd	NC	RF OUT	NC	Vg
RFMA0912-1W-01A	NA	Vd	RF IN	Vg	NA	NA	Vd	RF OUT	Vg	NA
RFMA0912-1W-01B	Vd	NA	RF IN	NA	Vg	Vd	NA	RF OUT	NA	Vg
RFMA0912-1W-01C	GND	GND	RF IN	Vg	GND	GND	GND	RF OUT	Vd	NC

NOTE:

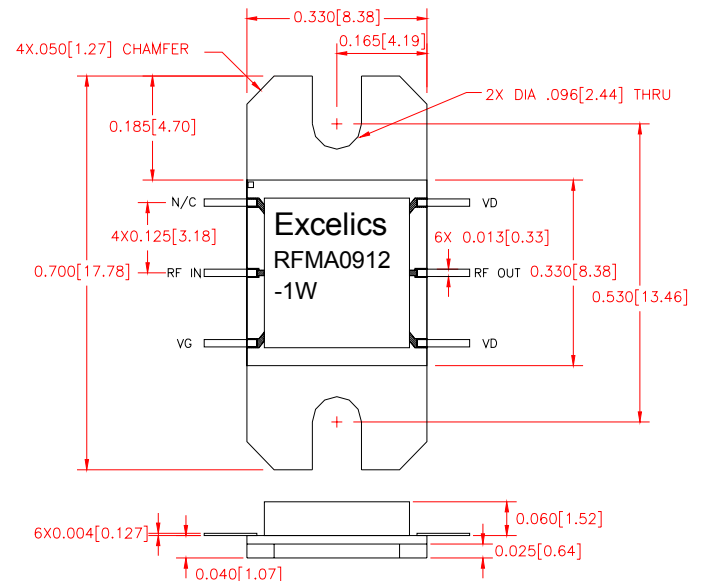
1. PACKAGE 01A: Recommend to Use
2. NC: Not Connected
3. NA: Not Available

### 02 Package Outline



All dimensions in inches [mm]

### 03 Package Outline



All dimensions in inches [mm]

## ORDERING INFORMATION

Part Number	
RFMA0912-1W-01	Refer 01 Package Outline
RFMA0912-1W-01A	Refer 01 Package Outline
RFMA0912-1W-01B	Refer 01 Package Outline
RFMA0912-1W-01C	Refer 01 Package Outline
RFMA0912-1W-02	Refer 02 Package Outline
RFMA0912-1W-03	Refer 03 Package Outline