WR229 Low Noise Amplifier
3.3GHz ~ 4.9GHz

Note: The photo is for illustration purposes only.
Please refer to the outline drawing.

RoHS Compliant

Features

- Gain: 60dB Typical
- Noise Figure: 2.2dB Typical
- P1dB Output Power: +18dBm Typical

Typical Applications

- Wireless Infrastructure
- Military & Aerospace
- Test & Measurement

Electrical Specifications, T_A = +25 ℃

Parameter	Min.	Typ.	Max.	Units
Frequency Range	3.3		4.9	GHz
Gain	55	60		dB
Gain Flatness		±1.5		dB
Gain Variation Over Temperature (-45℃ ~ +85℃)		±2.0		dB
Noise Figure		2.2	2.8	dB
Input VSWR		1.5		: 1
Output VSWR		1.5		: 1
Output 1dB Compression Point (P1dB)	15	19		dBm
Saturated Output Power (Psat)		23		dBm
Output Third Order Intercept (IP3)		30		dBm
Isolation S12		-60		dB
Supply Current (Vcc=+12V)		250		mA
Weight	/			ounces
Impedance	50			Ohms
Input / Output Connectors	WR229/N-Female			
Material	Aluminum			
Package Sealing	Epoxy Sealed			

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Absolute Maximum Ratings

Operating Voltage	+15V
RF Input Power	-20dBm

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +12V biasing
Power OFF Procedure	
Step 1	Turn off +12V biasing
Step 2	Remove RF connection
Step 3	Remove Ground.

Environmental Specifications and Test Standards

Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45°C~+85°C
Storage Temperature		-55°C~+125°C
Thermal Shock		1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature +85°C for 72 Hours
Shock		1. Weight >20g, 50g half sine wave for 11ms, Speed variation 3.44m/s 2. Weight <=20g, 100g Half sine wave for 6ms, Speed variation 3.75m/s 3. Total 18 times (6 directions, 3 repetitions per direction).
Altitude		Standard: 30,000 Ft (Epoxy Sealed Controlled Environment) Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min)
Hermetically Sealed (Optional)	MIL-STD-883	MIL-STD-883 (For Hermetically Sealed Units)

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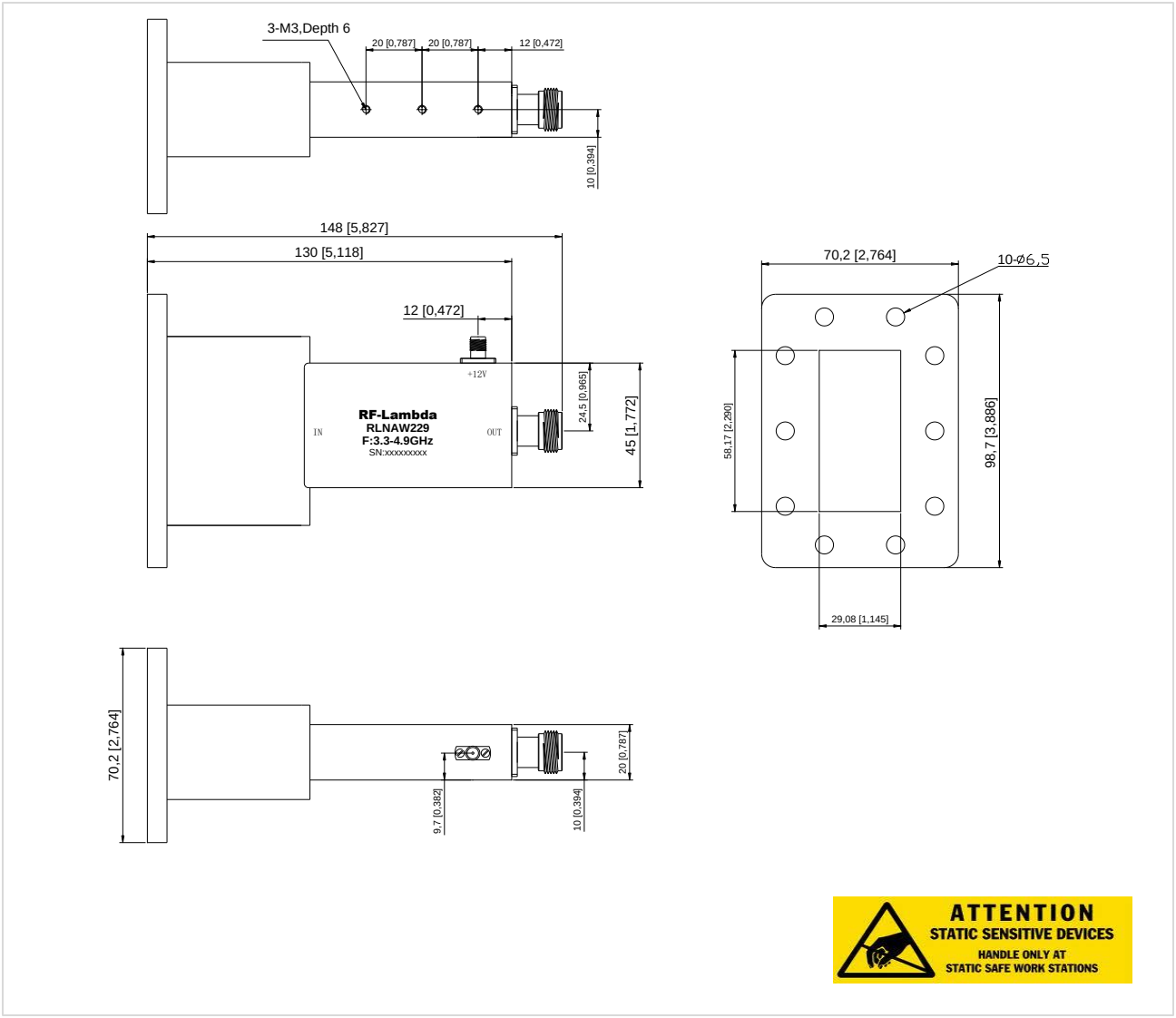
Outline Drawing:

All Dimensions in mm [inches]



Ordering Information

Part No.	ECCN	Description
RLNARW229C	EAR99	3.3-4.9GHz WR229 Low Noise Amplifier

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