

GaAs pHEMT MMIC 1/2 WATT POWER AMPLIFIER, 24 - 29.5 GHz

Typical Applications

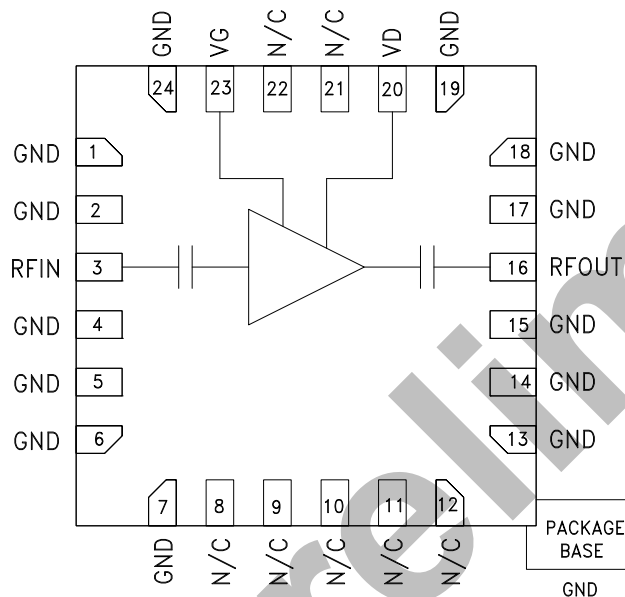
The HMC863LP4E is ideal for:

- Point-to-Point Radios
- Point-to-Multi-Point Radios
- VSAT
- Military & Space

Features

- Saturated Output Power:
up to +29 dBm @ 15% PAE
- High Output IP3: +40 dBm
- High Gain: 23 dB
- DC Supply: +6V @ 350mA
- No External Matching Required
- 24 Lead 4x4 mm SMT Package: 16 mm²

Functional Diagram



General Description

The HMC863ALC4 is a three stage GaAs pHEMT MMIC 1/2 Watt Power Amplifier which operates between 24 and 29.5 GHz. The HMC863ALC4 provides 23 dB of gain, +29 dBm of saturated output power and 15% PAE from a +6V supply. High output IP3 makes the HMC863LP4E ideal for point-to-point and point-to-multi-point radio systems as well as VSAT applications. The RF I/Os are DC blocked and matched to 50 Ohms for ease of integration into higher level assemblies.

Electrical Specifications, $T_A = +25^\circ\text{C}$, $V_{dd} = V_{dd1} = V_{dd2} = +6\text{V}$, $I_{dd} = 350\text{mA}$ [1]

Parameter	Min.	Typ.	Max.	Units
Frequency Range	24 - 29.5			GHz
Gain	20	23		dB
Gain Variation Over Temperature		0.019		dB/°C
Input Return Loss		8		dB
Output Return Loss		12		dB
Output Power for 1 dB Compression (P1dB)	24	27		dBm
Saturated Output Power (Psat)		29		dBm
Output Third Order Intercept (IP3)[2]		40		dBm
Total Supply Current (Idd)		350		mA

[1] Adjust Vgg between -2 to 0V to achieve Idd = 350mA typical.

[2] Measurement taken at +6V @ 350mA, Pout / Tone = +14 dBm

HMC863ALC4* PRODUCT PAGE QUICK LINKS

Last Content Update: 09/16/2017

COMPARABLE PARTS

View a parametric search of comparable parts.

EVALUATION KITS

- [NO TITLE FOUND] EvalBoard
- HMC863ALC4 Evaluation Board

DOCUMENTATION

Data Sheet

- HMC863ALC4: GaAs pHEMT MMIC 1/2 Watt Power Amplifier, 24 - 29.5 GHz Preliminary Data Sheet
- HMC863ALC4: GaAs pHEMT MMIC 1/2 Watt Power Amplifier, 22 - 26.5 GHz Preliminary Data Sheet

DESIGN RESOURCES

- HMC863ALC4 Material Declaration
- PCN-PDN Information
- Quality And Reliability
- Symbols and Footprints

DISCUSSIONS

View all HMC863ALC4 EngineerZone Discussions.

SAMPLE AND BUY

Visit the product page to see pricing options.

TECHNICAL SUPPORT

Submit a technical question or find your regional support number.

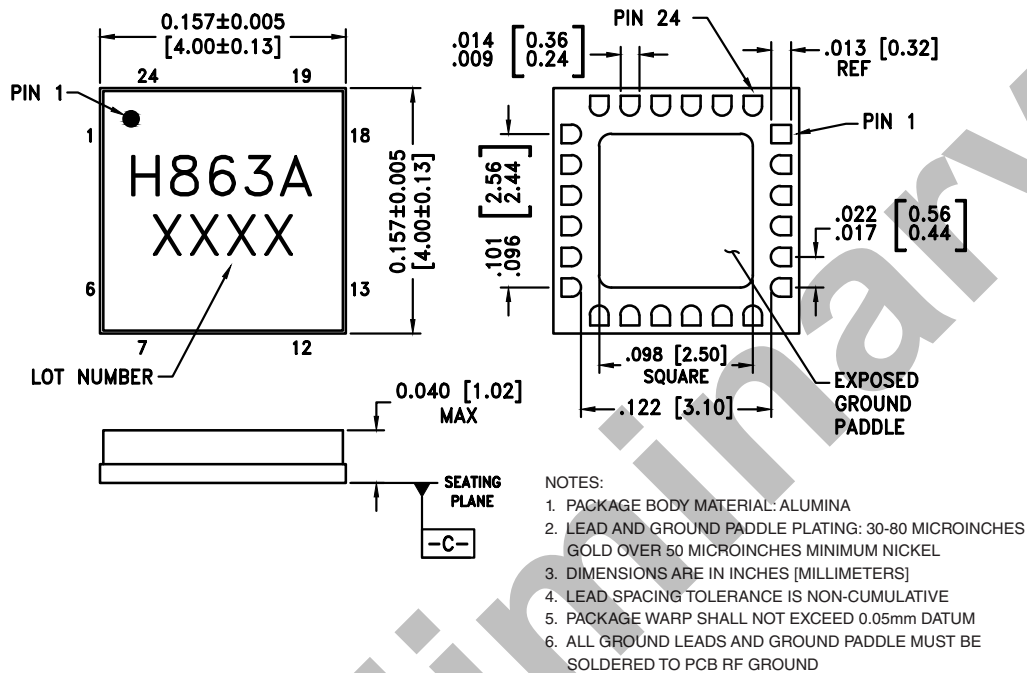
DOCUMENT FEEDBACK

Submit feedback for this data sheet.

**GaAs pHEMT MMIC 1/2 WATT
POWER AMPLIFIER, 24 - 29.5 GHz**

Outline Drawing

BOTTOM VIEW



PRODUCT TYPE - SMT