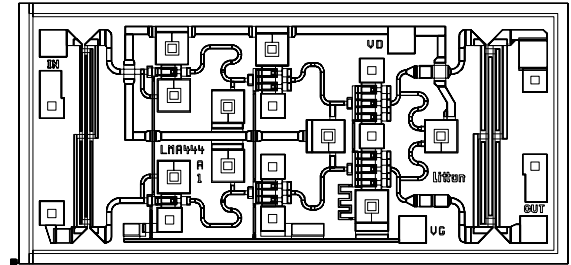


Typical Specifications

- +21dBm Output Power @ 1dB Gain Compression
- 15dB Typical Gain
- 10dB Input/Output Return Loss
- +5Volts Dual Bias Supply
- DC Decoupled RF Input and Output
- Chip Size : 0.95mmX2mm (.038"X.079")
- Chip Thickness : 100µm (.004")
- Pad Dimension : 100X100µm²



Description

The LMA444 is a medium power PHEMT amplifier that operates from 37 to 40GHz. This 3-stage amplifier provides 15dB linear power gain with 1dB gain compression power output of greater than +21dBm. The LMA444 Millimeter Wave point to point and point to multi-point radio link applications. Ground is provided to the circuitry through vias to the backside metallization.

Electrical Specifications at T_a=25°C

(V_{DD}=+5V, Z_{IN}=Z_{OUT}=50Ω)

Symbol	Parameter	Test Conditions	Limit			Units
			Min.	Typ.	Max.	
BW	Operating Bandwidth		37		40	GHz
S ₂₁	Small Signal Gain	@ .75 I _{DSS}	14	15		dB
I _{DSS}	Drain Current at Saturation	@ I _{DSS}	300	360	450	mA
ΔS ₂₁	Small Signal Gain Flatness			±1	±2	dB
RL _{IN}	Input Return Loss			-10		dB
RL _{OUT}	Output Return Loss			-10		dB
S ₁₂	Reverse Isolation			-40		dB
P _{-1dB}	1-dB Gain Compression Power	@ .75 I _{DSS}	17	19		dBm
P _{SAT}	Saturated Output Power			20		dBm

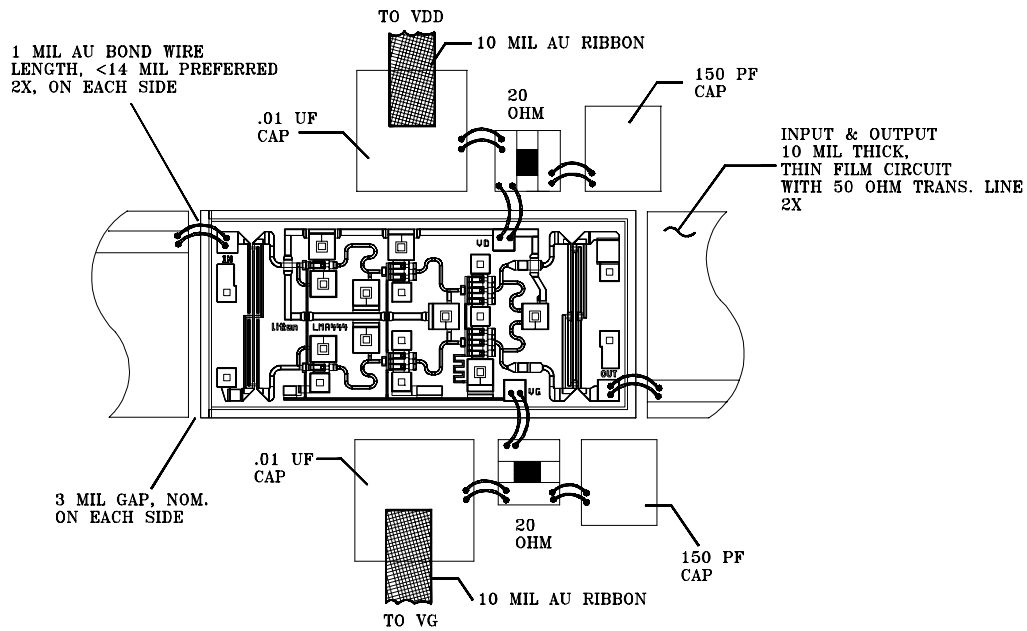
Absolute Maximum Ratings

Symbol	Parameter/Conditions	Min.	Max.	Units
V _{DD}	Drain Supply Voltage		8	Volts
I _{DD}	Total Drain Current		495	mA
P _{IN}	RF Input Power		15	dBm
P _t	Power Dissipation		4	W
T _{CH}	Operating Channel Temperature		150	°C
T _{STG}	Storage Temperature	-65	165	°C
T _{MAX}	Max. Assembly Temp. (1 min. max.)		300	°C

Notes:

1. This GaAs MMIC is susceptible to damage from Electrostatic Discharge. Proper precautions should be used when handling these devices.
2. Specifications subject to change without notice.

Assembly Diagram



Mechanical Outline

