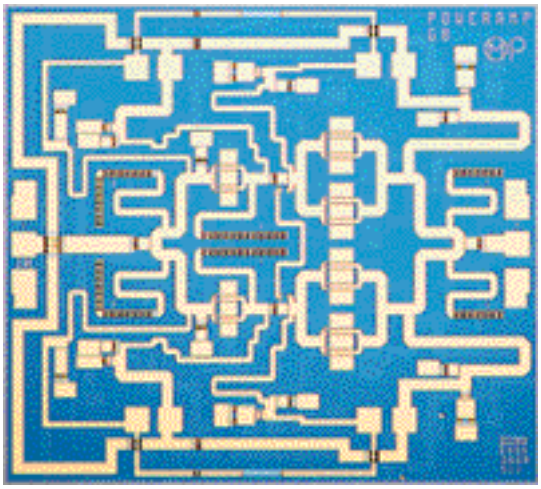
Ka-Band MMIC Power Amplifier

PA-GB95W45-2
(TLCP04981)



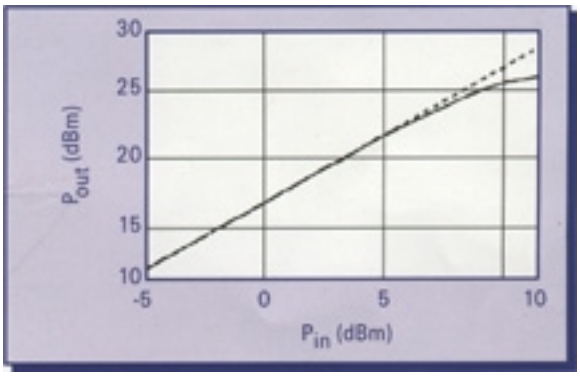
Size: 2.17 x 1.95 x 0.1 mm

- 25 to 30 GHz
- P_{SAT} = 27 dBm
- Large signal gain = 10dB
- 2 stage

Description and Applications

The PA-GM95W45-2 is a two stage MMIC power amplifier. A 0.25 µm PHEMT process was chosen to provide high power output with good power added efficiency.

The high power provided by the PA-GB95W45-2 makes it an excellent candidate for use in radar or communication systems.



Performance Summary

Parameter (@ 25°C)	Min	Typ	Max
Frequency (GHz)	25	—	29
Psat (dB)	25	27	29
Large signal gain (dB)	9	11	—
PAE (% @ 27 GHz)	15	16	20
IP3 (dBm)	28	30	---
Small signal gain (dB)	12	14	—
DC Power (W)	—	2.4	3.0

Typical Operating Conditions

V_{gs} = 0.6 V V_{ds} = 6 V

Assembly

Ti/Pt/Au metallization is used for the bond pads and backside which is compatible with eutectic die attach and thermocompression or thermosonic bonding. Either 3 mil Au ribbon or 1 mil Au wire may be used to connect the MMW and DC pads to the system.

Additional DC bypass capacitors (22 pf & 0.1 µf) are recommended.

TLC Precision Wafer Technology, Inc.

1411 West River Road North ~ Minneapolis, MN 55411
tele: 612-341-2795 ~ fax: 612-341-2799 ~ email: sales@tlcprecision.com ~ web: www.tlcprecision.com