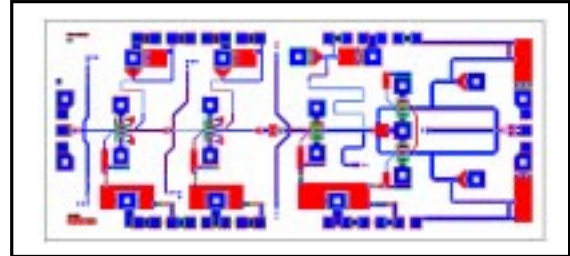


17 – 24 GHz GaAs Power Amplifier/Driver MMIC

- 4 Stage Monolithic Microwave Integrated Circuit (MMIC) Amplifier
- Input/Output matched (incl. bond wires)
- Frequency range: 17 GHz to 24 GHz
- High Isolation > 50 dB
- Gain > 22 dB
- $P_{-1dB} > 23$ dBm, $P_{sat} > 24$ dBm



chip size: 4.2 mm x 1.8 mm

ESD: Electrical discharge sensitive device, observe handling precautions!

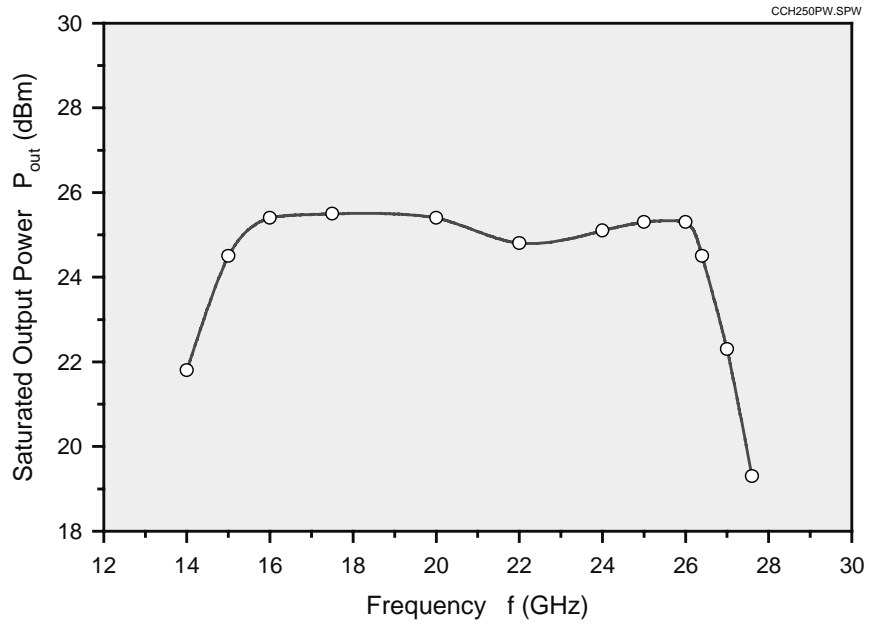
Description:

This 4 stage GaAs MMIC power amplifier is intended for use in radio link applications. It provides an output power of 23 dBm at 1 dB gain compression. The device is fabricated with a 0.18 micron Pseudomorphic InGaAs/AlGaAs/GaAs High Electron Mobility Transistor processing technology.

Type	Ordering Code	Package
Chip T458B	tbd	Chip

Electrical Specifications: ($V_D = 5 - 6$ V, $I_D = 300$ mA)

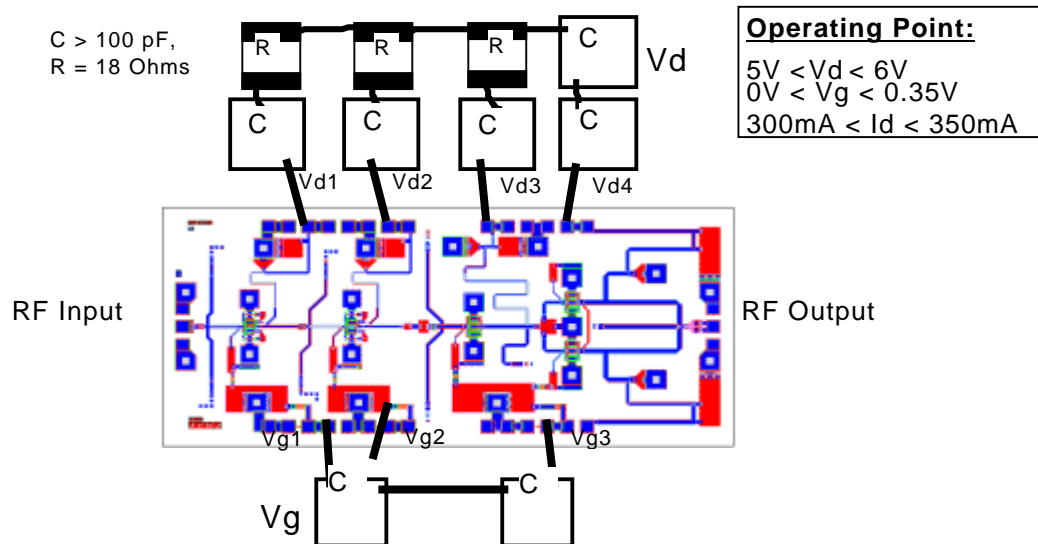
Parameter	Min	Typ	Max	Unit
Frequency Range	17		24	GHz
P_{-1dB}		23		dBm
Gain		22		dB
P_{sat}		24		dBm
PAE		15		%
Input Return Loss (incl. bond wire)		- 6		dB
Output Return Loss (incl. bond wire)		- 3		dB

Measured data: (on chip measurements)**Application Circuit:**

tbd.

Technology data:

Chip thickness	95µm
Chip size	4,2 mm * 1,8 mm
Bond pads	100 µm * 100 µm
Bond pad material	Au (plated gold)
Chip passivation	SiN (silicon nitride)

Suggested measurement setup:

Recommendation of Bonding Conditions:

	Thermocompression Nailhead, without ultrasonic	Wedge Bonding	Bond Pull Test Mil 883, >2 g
Table Temp.	250°C	250°C	1: 2,5 g 2: 3,1 g 3: 3,2 g 4: 3,0 g 5: 2,8 g
Tool Temp.	180°C	150°C	
Scrub	100 Hz		
Bond Force	50 g	25 g	
Wire Diameter	25 µm	17 µm	

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