

8W Power Amplifier Die (9.5 – 10.5 GHz)

ITT8505D

ADVANCED INFORMATION

Features

- 32% Typical Power Added Efficiency
- 50 Ω Input/Output Impedance
- Self-Aligned MSAG[®] MESFET Process



Description

The ITT8505D is a three stage MMIC power amplifier fabricated using GaAsTEK's mature GaAs Self-Aligned MSAG[®] MESFET Process. This product is fully matched to 50 ohms on both the input and the output.

Maximum Ratings (T_A = 25 °C unless otherwise noted)

Rating	Symbol	Value	Unit
DC Drain Supply Voltage	V _{DD}	12	Vdc
DC Gate Supply Voltage	V _{GG}	-4	Vdc
Power Dissipation (T _{BASE} = 70 °C)	P _{DISS}	-	W
RF Input Power	P _{IN}	200	mW
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-40 to +85	°C

ELECTRICAL CHARACTERISTICS V_{DD}=9.0 V, V_{GG}=-1.8 V, T_A=25 °C

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency	<i>f</i>	9.5	—	10.5	GHz
Output Power, Saturated	P _{SAT}		39		dBm
Output Power, P _{1dB}	P _{1dB}		37		dBm
Power Gain (Linear)	G _P		23		dB
Gain Flatness Over Frequency	-		+/- 1.0		dB
Power Added Efficiency	η		32		%
Input VSWR	-		TBD		
Harmonics	Nf _o			-20	dBc
Spurious	-			-60	dBc
Third-Order Intercept Point	TOI		TBD		dBm