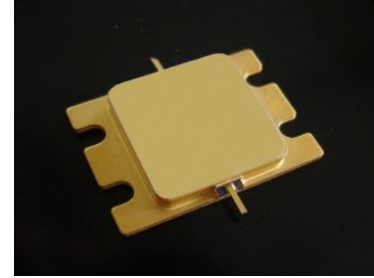


NGN9396H1S-M200 is Gallium Nitride RF power transistor internally matched to 50Ω. It is developed primarily for use in high power pulsed radar amplifiers at 9.3-9.6GHz. This transistor has a hermetically sealed package to enable use in applications with high reliability requirements.

Features

- 200W peak power
- 9dB power gain
- 50Ω input and output impedance
- 35% peak efficiency



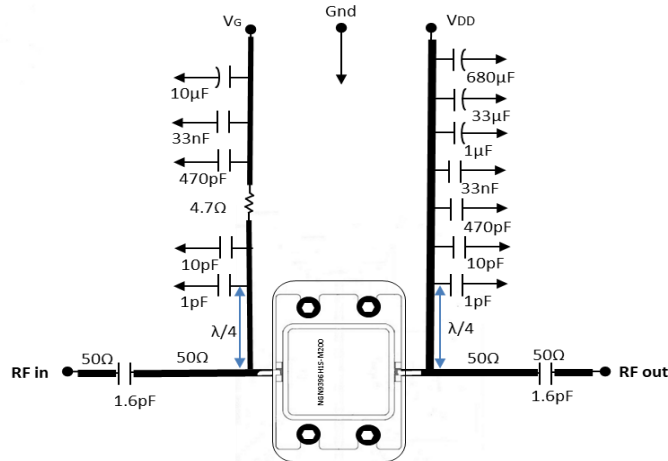
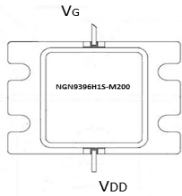
Characteristics	Symbol	Min.	Typ.	Max.	Units	Conditions
<b>DC Characteristics</b>						
Gate Threshold Voltage	$V_{GS(th)}$		-3.0		V <sub>DC</sub>	$V_{DS} = 10\text{ V}, I_D = 41\text{ mA}$
Gate Quiescent Voltage	$V_{GS(Q)}$		-2.7		V <sub>DC</sub>	$V_{DS} = 50\text{ V}, I_D = 400\text{ mA}$
Saturated Drain Current	$I_{DS}$		25		A	$V_{DS} = 6.0\text{ V}, V_{GS} = 2.0\text{ V}$
Drain-Source Breakdown Voltage	$V_{BR}$	150			V <sub>DC</sub>	$V_{GS} = -8\text{ V}, I_D = 31\text{ mA}$
<b>RF Characteristics</b> ( $V_{DD} = 50\text{ V}, T_c = 25^\circ\text{C}, F = 9.3\text{-}9.6\text{ GHz}, 10\% \text{ duty cycle}, 200\mu\text{s}, I_{DQ} = 400\text{ mA}$ )						
Power Gain	S21		9		dB	$P_{in} = 44\text{ dBm}$
Output Power	$P_{SAT}$		200		W	$P_{in} = 44\text{ dBm}$
Output Return Loss	S22		-10		dB	
Input Return Loss	S11		-10		dB	
Drain Efficiency	$\eta$		32		%	$P_{in} = 44\text{ dBm}$
Output Mismatch	VSWR			5:1	$\psi$	

Maximum Ratings	Symbol	Rating	Units	Conditions
<b>Parameter</b>				
Drain-Source Voltage	$V_{DSS}$	150	V <sub>DC</sub>	25°C
Gate-Source Voltage	$V_{GS}$	-10, +2	V <sub>DC</sub>	25°C
Storage temperature	$T_{STG}$	150	°C	
Operating Junction Temperature	$T_J$	225	°C	
Maximum Drain Current	$I_{DMAX}$	19	A	25°C
Maximum Forward Gate Current	$I_{GMAX}$	31	mA	25°C
Operating Case Temperature	$T_{MAX}$	-40 - +85	°C	
Pulse Width	PW	500	μs	
Duty cycle	DC	10	%	

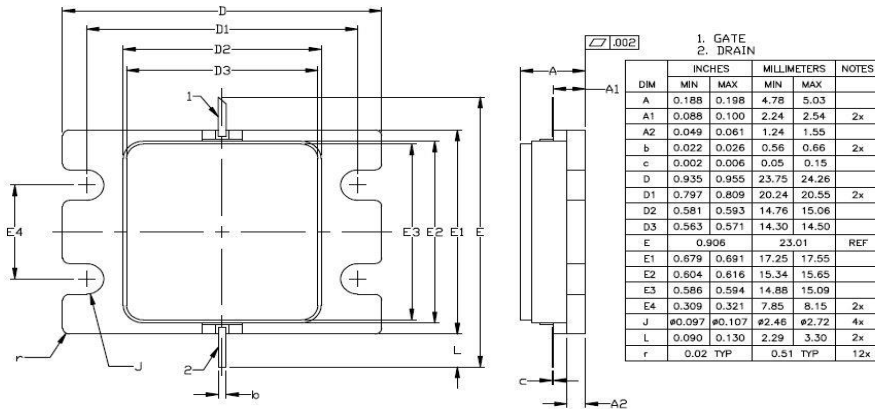
Subject to change without notice.

Test Circuit Drawing

NGN9396H1S-M200 Test circuit drawing



Package outline



Subject to change without notice.