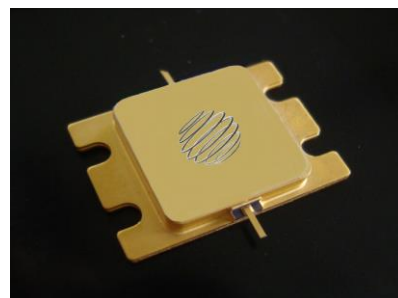


NGN5359H1C-M220 is a Gallium Nitride RF power transistor internally matched to 50Ω. It is primarily developed for use in 5.3-5.9 GHz high power pulsed radar amplifiers. This transistor has hermetically sealed package to enable use in applications with high reliability requirements.

**Features**

- 220W typical peak power
- 11.5dB power gain
- 50Ω input and output impedance
- 50% power added efficiency

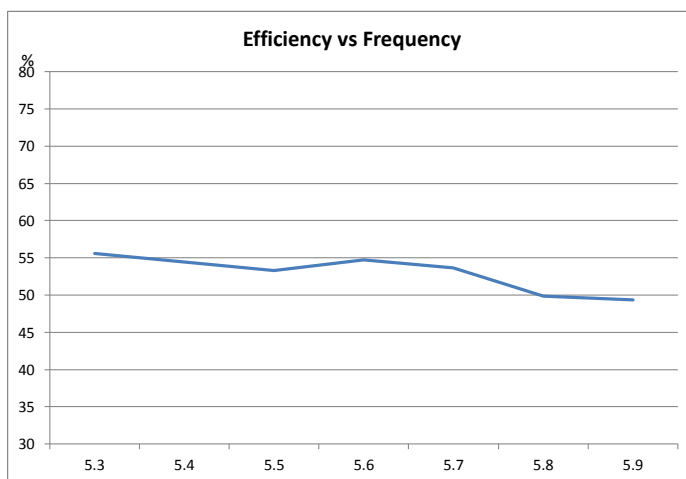
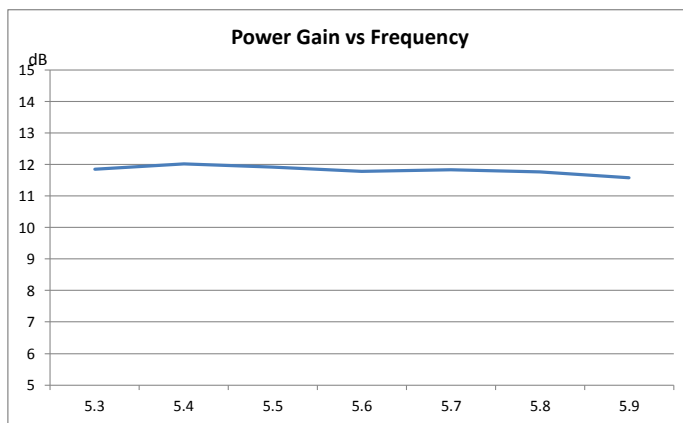
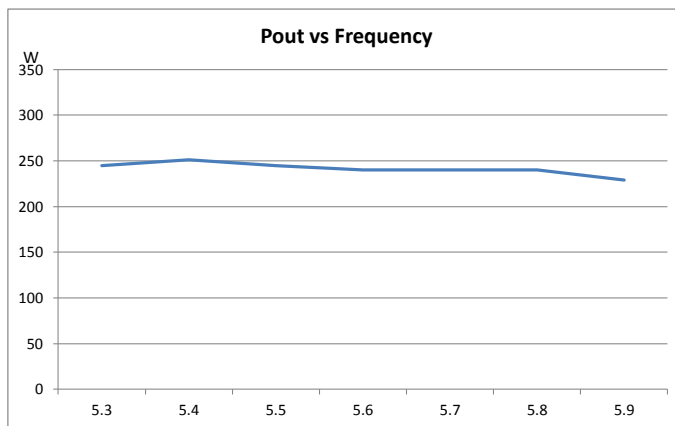


Characteristics	Symbol	Min.	Typ.	Max.	Units	Conditions
<b>DC Characteristics</b>						
Gate Threshold Voltage	V <sub>GS(th)</sub>		-3.0		V	V <sub>DS</sub> = 10 V, I <sub>D</sub> = 31.2 mA
Gate Quiescent Voltage	V <sub>GS(Q)</sub>		-2.8		V	V <sub>DS</sub> = 50 V, I <sub>D</sub> = 100 mA
Saturated Drain Current	I <sub>DS</sub>		31.2		A	V <sub>DS</sub> = 6.0 V, V <sub>GS</sub> = 2.0 V
<b>RF Characteristics</b>						
V <sub>DD</sub> =50V, I <sub>DQ</sub> =100mA, T=25°C, DC=10% 200μs						
Power Gain	G <sub>LS</sub>		11.5		dB	
Small Signal Gain	G <sub>SS</sub>		14		dB	
Power Output	P <sub>SAT</sub>		220		W	
Input Return Loss	S <sub>11</sub>		-10		dB	
PAE	η	-	50	-	%	
Output Mismatch	VSWR			5:1	ψ	

Maximum Ratings	Symbol	Rating	Units	Conditions
<b>Parameter</b>				
Drain-Source Voltage	V <sub>DSS</sub>	150	V	25°C
Gate-Source Voltage	V <sub>GS</sub>	-10, +2	V	25°C
Storage temperature	T <sub>STG</sub>	-65 - 150	°C	
Operating Junction Temperature	T <sub>J</sub>	225	°C	
Maximum Drain Current	I <sub>DMAX</sub>	19.2	A	25°C
Maximum Forward Gate Current	I <sub>GMAX</sub>	31.2	mA	25°C
Duty cycle	DC	10	%	

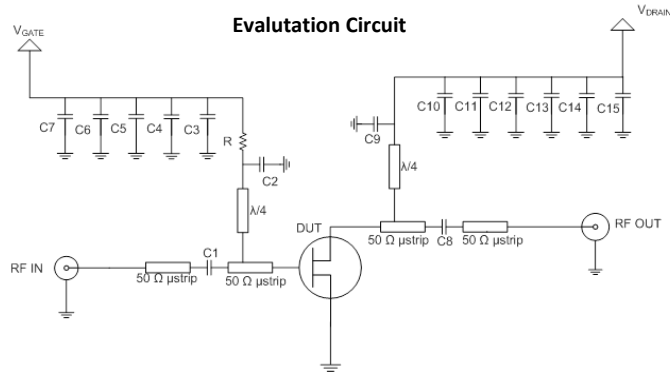
Subject to change without notice.

Measured Data



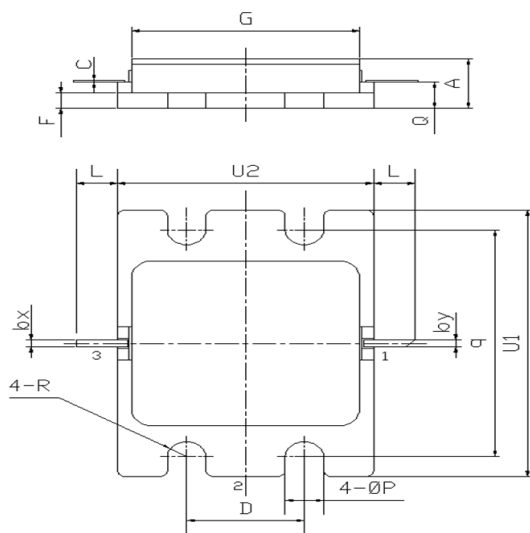
Subject to change without notice.

Drawings



Pos.	Descr.
R	10Ω
C1,C2,C8,C9	3.3pF
C3,C10	10pF
C4, C11	100μF
C5, C12	1000pF
C6, C13	33nF
C7, C14	0.01μF
C15	470μF
PCB 4350B	$\epsilon_r=3.66$

Package Drawing



Item	Measure mm	
	Min	Max
A	4.05	4.5
bx	0.55	0.65
by	0.55	0.65
C	0.05	0.15
D	7.85	8.15
F	1.2	1.6
L	2.85	3.15
G	15.35	15.65
ØP	2.45	2.75
Q	2.25	2.55
q	20.2	20.6
R	1.15	1.45
U1	23.8	24.2
U2	17.2	17.6

Subject to change without notice.