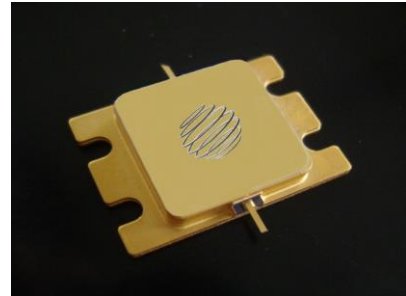


NGN5359H1C-M170 is a Gallium Nitride RF power transistor internally matched to 50Ω, developed for 5.3-5.9 GHz high power amplifiers and suitable for use in pulsed radar applications. This transistor has a hermetically sealed package to enable use in applications with high reliability requirements.

Features

- 5.3-5.9 GHz operation
- 170W typical peak power
- 11.5dB power gain
- 50Ω input and output impedance
- 50% power added efficiency



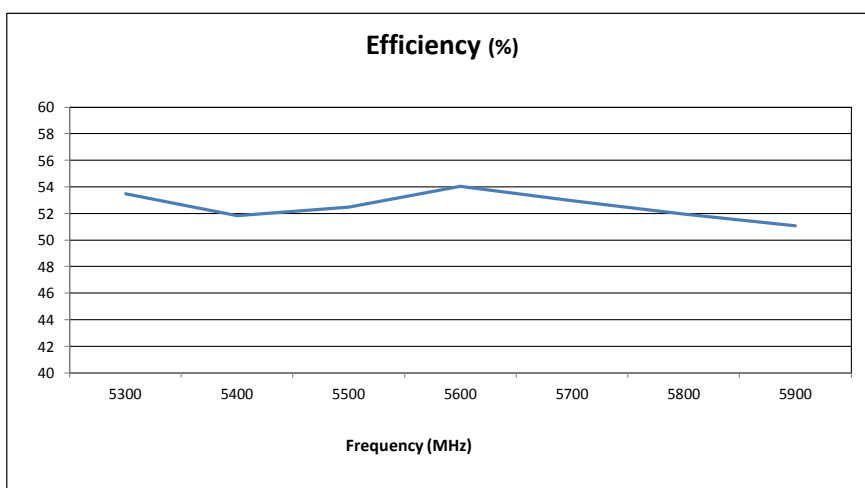
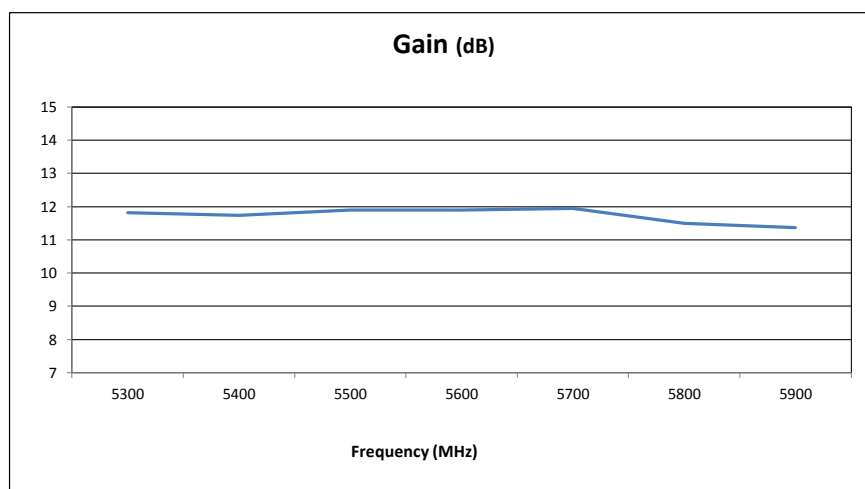
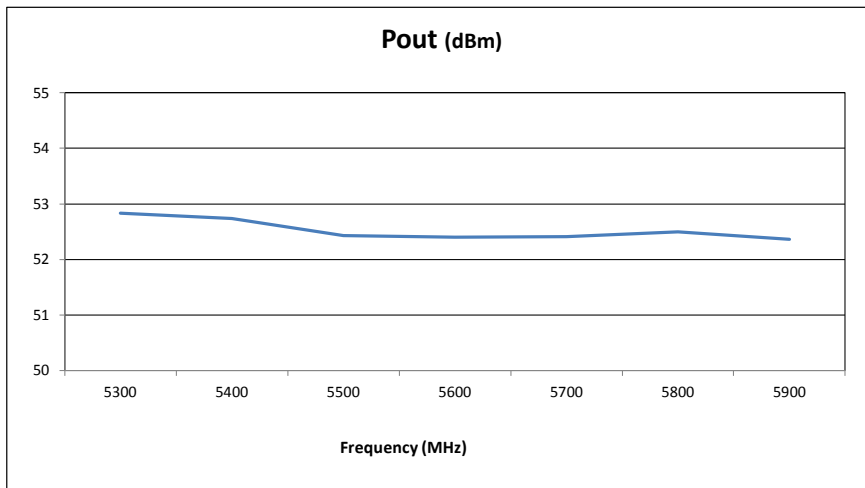
Characteristics	Symbol	Min.	Typ.	Max.	Units	Conditions
DC Characteristics						
Gate Threshold Voltage	VGS(th)		-3.0		VDC	VDS = 10 V, ID = 20.8 mA
Gate Quiescent Voltage	VGS(Q)		-2.8		VDC	VDS = 50 V, ID = 50 mA
Saturated Drain Current ²	IDS		20.8		A	VDS = 6.0 V, VGS = 2.0 V
RF Characteristics Vdd=50V, Idq=50mA, T=25°C, Pin=41dBm, DC=10% 200µs						
Power Gain	GLS		11.5		dB	Pin=41 dBm
Power Output	PSAT		170		W	Pin=41 dBm
Input Return Loss	S11		-10		dB	Pin=41 dBm
PAE	η	-	50	-	%	Pin=41 dBm
Output Mismatch	VSWR			5:1	ψ	

Maximum Ratings	Symbol	Rating	Units	Conditions
Parameter				
Drain-Source Voltage	VDSS	150	V	25°C
Gate-Source Voltage	VGS	-10, +2	V	25°C
Storage temperature	TSTG	-65 - 150	°C	
Operating Junction Temperature	TJ	225	°C	
Maximum Drain Current	IDMAX	12.8	A	25°C
Maximum Forward Gate Current	IGMAX	20.8	mA	25°C
Duty cycle	DC	10	%	

Subject to change without notice.

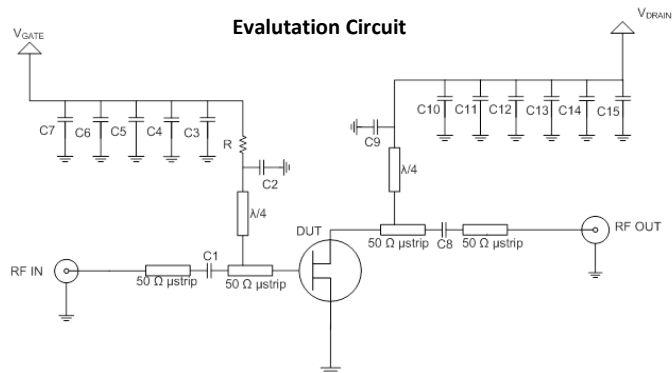
Typical Performance

Vdd=50V, Idq=50mA, T=25°C, Pin=41dBm, DC=10% 200µs



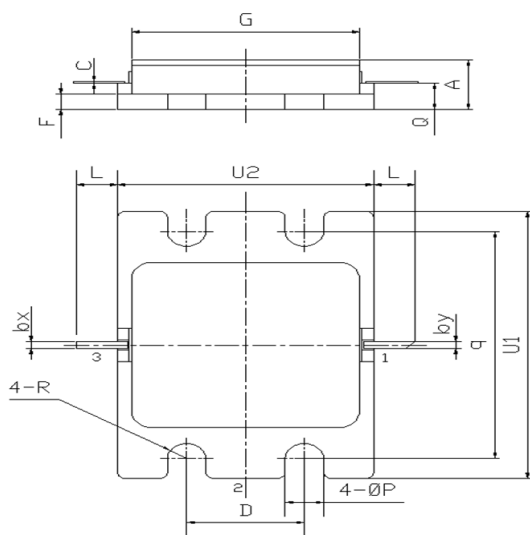
Subject to change without notice.

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.