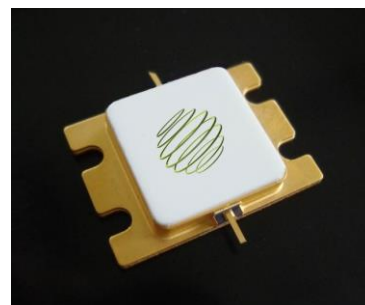


NGN5359H1S-M45 is a Gallium Nitride RF power transistor internally matched to 50Ω , developed for 5.3-5.9 GHz high power amplifiers and suitable for use in pulsed radar applications. This transistor has a hermetically sealed package to enable use in applications with high reliability requirements.

Features

- 45W typical peak power
- 13dB power gain
- 50Ω input and output impedance
- 55% power added efficiency

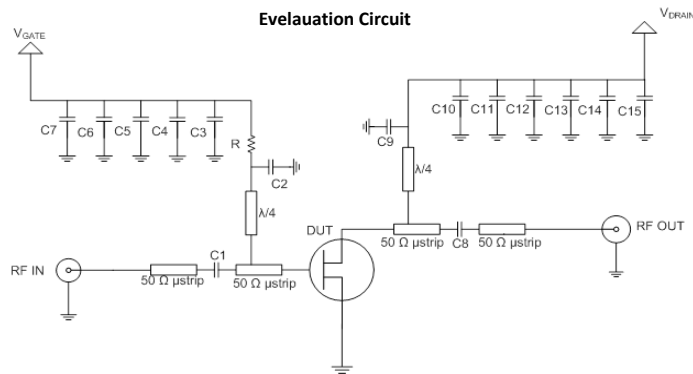


Characteristics	Symbol	Min.	Typ.	Max.	Units	Conditions
DC Characteristics						
Gate Threshold Voltage	V _{GS(th)}		-3.0		VDC	V _{DS} = 10 V, I _D = 5.2 mA
Gate Quiescent Voltage	V _{GS(Q)}		-2.8		VDC	V _{DS} = 50 V, I _D = 20 mA
Saturated Drain Current ²	I _{DS}		5.2		A	V _{DS} = 6.0 V, V _{GS} = 2.0 V
RF Characteristics V _{dd} =50V, I _{dq} =20mA, T=25°C, Pin=33.5dBm, DC=10% 200µs						
Power Gain	GLS		13		dB	
Power Output	PSAT		45		W	
Input Return Loss	S ₁₁		-10		dB	
PAE	η	-	55	-	%	
Output Mismatch	VSWR			5:1	ψ	

Maximum Ratings	Symbol	Rating	Units	Conditions
Parameter				
Drain-Source Voltage	V _{DSS}	150	V	25°C
Gate-Source Voltage	V _{GS}	-10, +2	V	25°C
Storage temperature	T _{STG}	-65 - 150	°C	
Operating Junction Temperature	T _J	225	°C	
Maximum Drain Current	I _{DMAX}	3.2	A	25°C
Maximum Forward Gate Current	I _{GMAX}	5.2	mA	25°C
Duty cycle	DC	10	%	

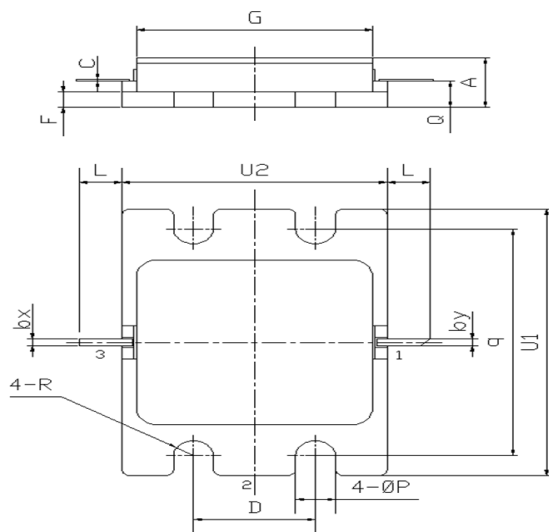
Subject to change without notice.

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	ε _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.