

100V N-Ch Power MOSFET

V_{DS}		100	V
$R_{DS(on),typ}$	$V_{GS}=10V$	6.4	$m\Omega$
$R_{DS(on),typ}$	$V_{GS}=4.5V$	7.8	$m\Omega$
I_D (Silicon Limited)		86	A
I_D (Package Limited)		60	

Part Number	Package	Marking
HGN077N10SL	DFN5X6	GN077N10SL

Conditions	Value	Un 86.
------------	-------	--------

Drain to Source Voltage	V
-------------------------	---

Electrical Characteristics at $T_j=25$ (unless otherwise specified)

Static Characteristics

Parameter	Symbol	Conditions	Value			Unit
			min	typ	max	
Drain to Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=250\mu A$	100	-	-	V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{GS}=V_{DS}, I_D=250\mu A$	1.4	1.9	2.4	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{GS}=0V, V_{DS}=100V, T_j=25$	-	-	1	μA
		$V_{GS}=0V, V_{DS}=100V, T_j=100$	-	-	100	
Gate to Source Leakage Current	I_{GSSS}		-	-	± 100	
Drain to Source on Resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=20A$	-	6.4		$m\Omega$
		$V_{GS}=4.5V, I_D=20A$	-	7.8	10.0	
		$V_{DS}=5V, I_D=20A$	-			

3350 -

-

- 15

$V_{DD}=50V, I_D=20A, V_{GS}=10V,$
 $R_G=10\Omega,$

Fig 1. Typical Output Characteristics

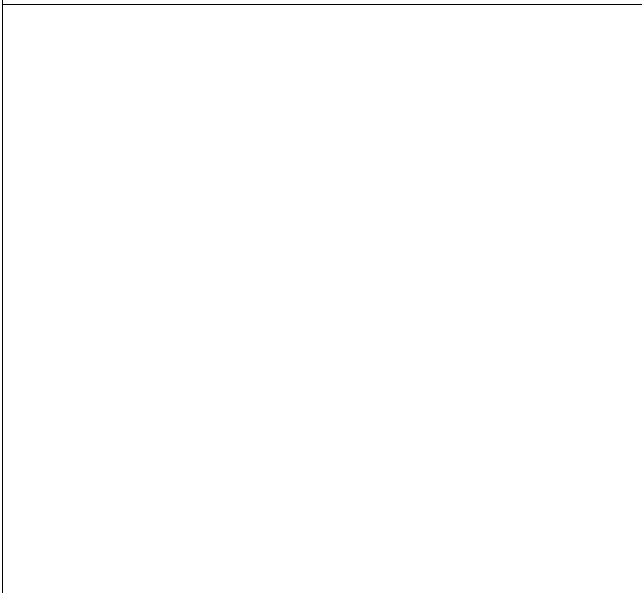


Figure 2. On-Resistance vs. Gate-Source Voltage

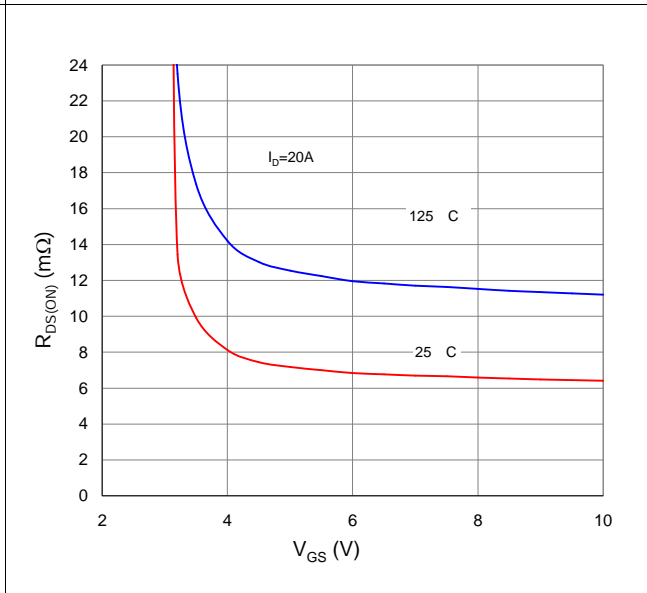


Figure 3. On-Resistance vs. Drain Current and Gate Voltage

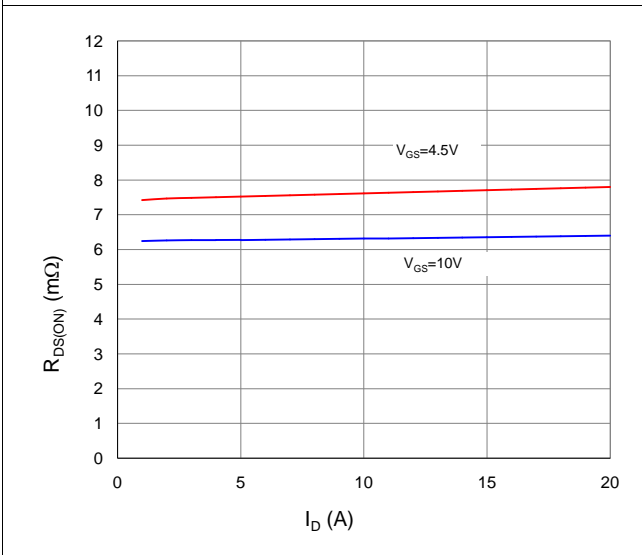


Figure 4. Normalized On-Resistance vs. Junction Temperature

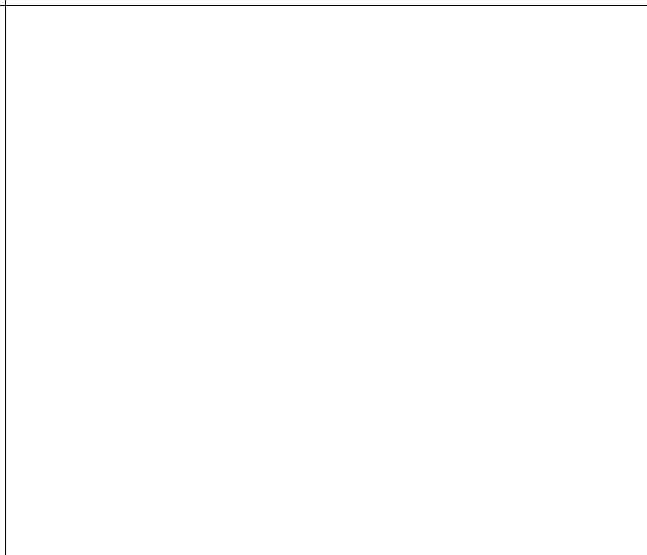


Figure 5. Typical Transfer Characteristics

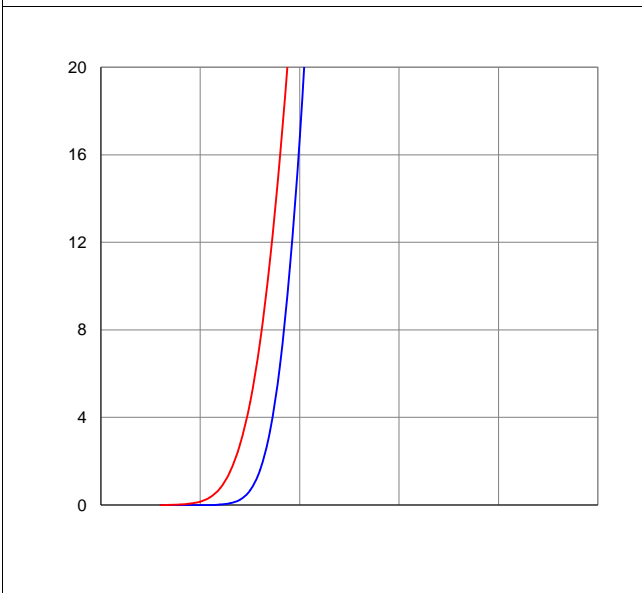


Figure 6. Typical Source-Drain Diode Forward Voltage

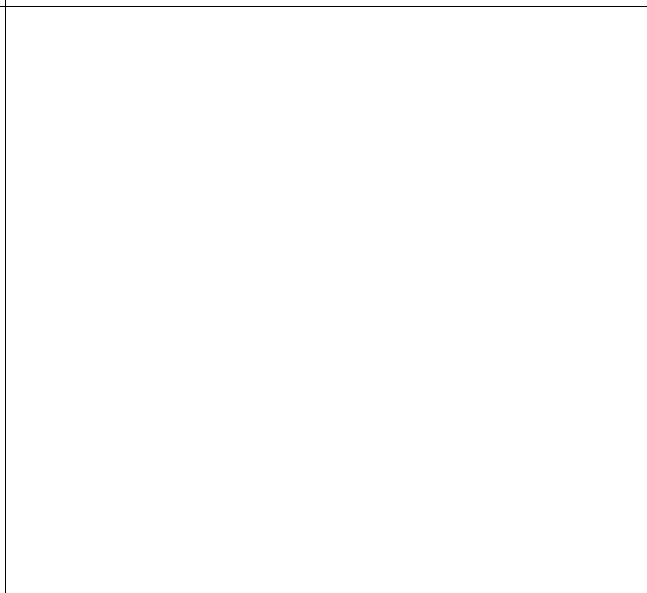




Figure 7. Typical Gate-Charge vs. Gate-to-Source Voltage

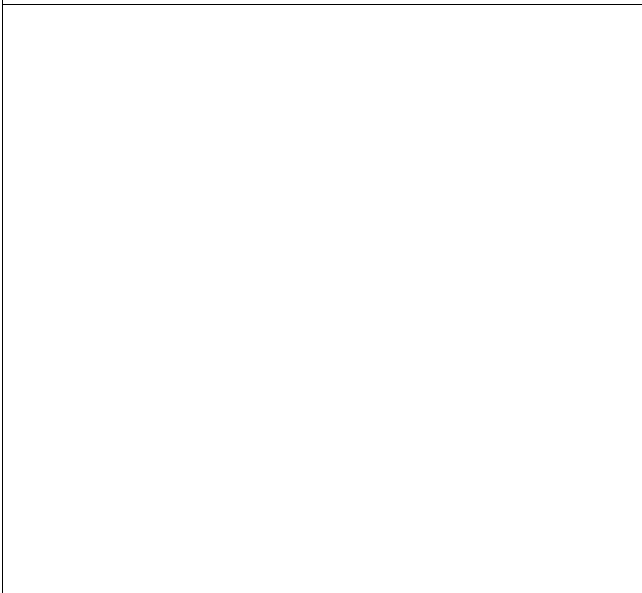


Figure 8. Typical Capacitance vs. Drain-to-Source Voltage

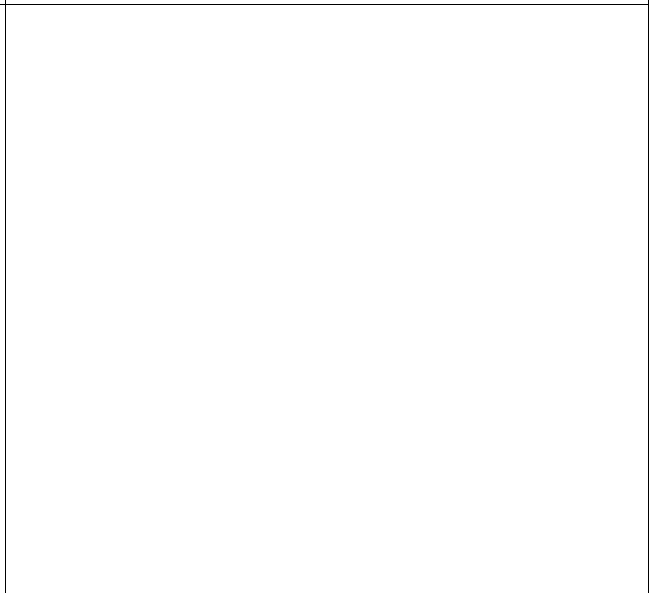


Figure 9. Maximum Safe Operating Area

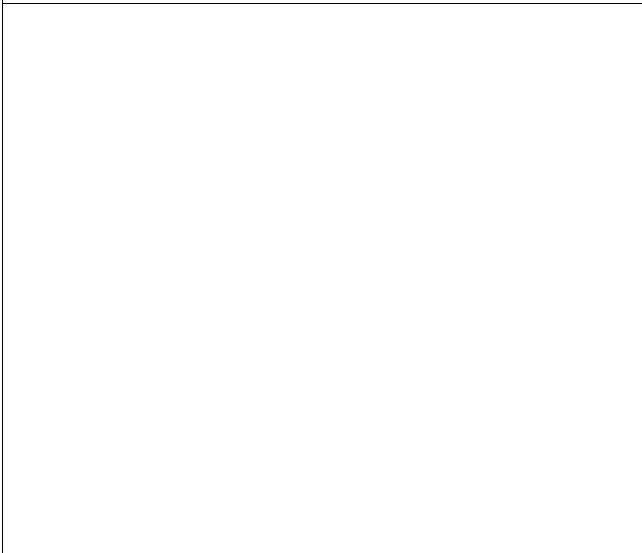


Figure 10. Maximun Drain Current vs. Case Temperature

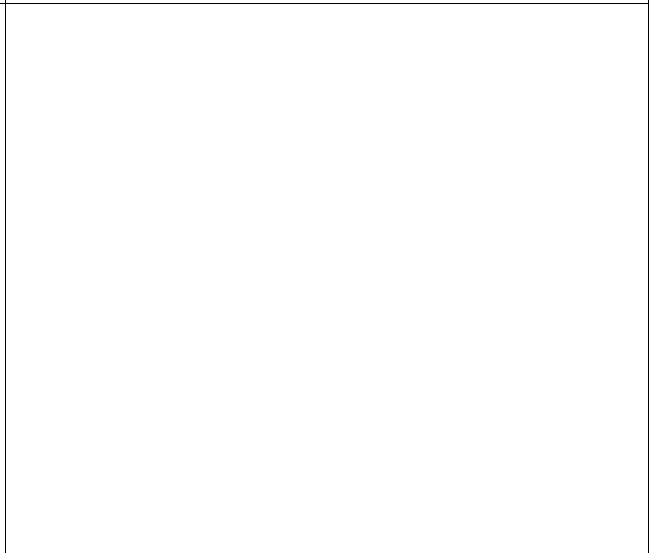
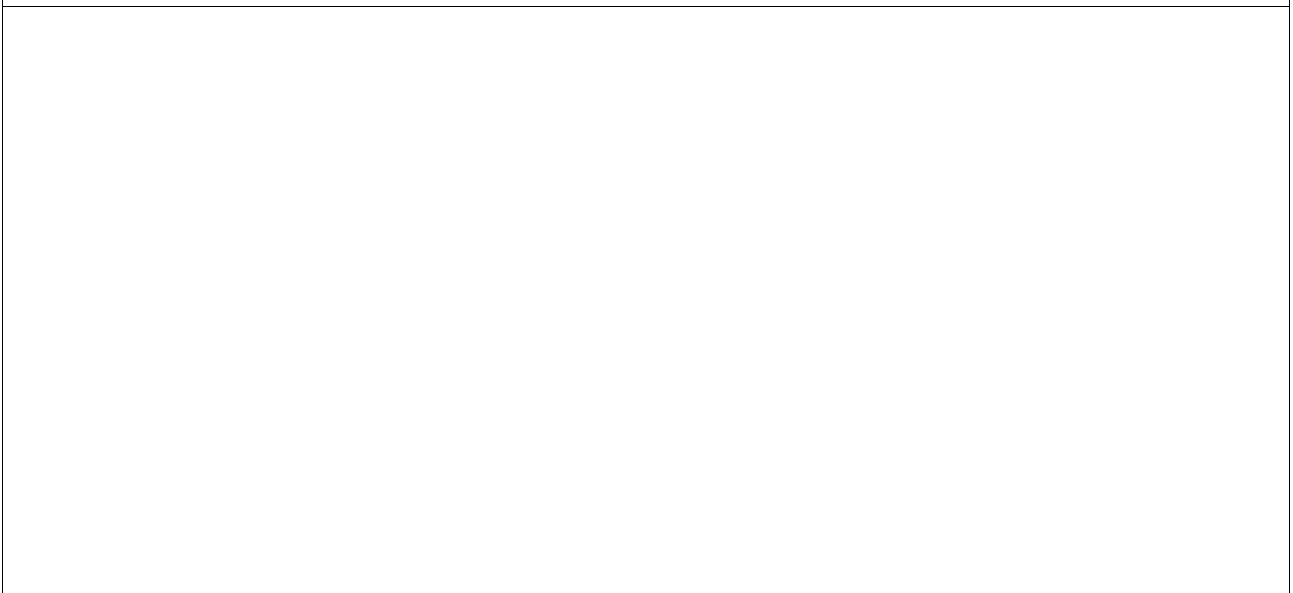


Figure 11. Normalized Maximum Transient Thermal Impedance, Junction-to-Case



Inductive switching Test

--	--

Gate Charge Test

--	--

Uclamped Inductive Switching (UIS) Test

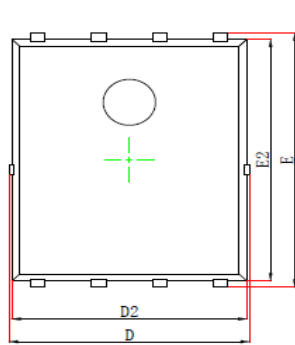
--	--

Diode Recovery Test

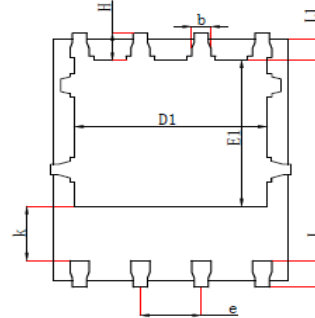
--	--

Package Outline

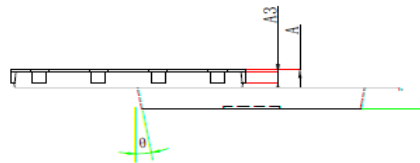
DFN5x6_P, 8 Leads



Top View
[顶视图]



Bottom View
[背视图]



Side View
[侧视图]

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A3	0.254 REF		0.010REF	
D	4.680	5.120	0.184	0.202
E	5.900	6.126	0.232	0.241
D1	3.610	4.110	0.142	0.162
E1	3.380	3.780	0.133	0.149
D2	4.800	5.000	0.189	0.197
E2	5.674	5.826	0.223	0.229
k	1.100	1.390	0.043	0.055
b	0.330	0.510	0.013	0.020
e	1.270TYP		1.270TYP	
L	0.510	0.711	0.020	0.028
L1	0.424	0.576	0.017	0.023
H	0.410	0.726	0.016	0.029
θ	0°	12°	0°	12°