,

$I_{D\ (Sillicon\ Limited)}$	67	A

Part Number	Package	Marking
HGD098N10A	TO-252	GD098N10A
HGI098N10A	TO-251	GI098N10A

Absolute Maximum Ratings at T_j=25℃ (unless otherwise specified)

Parameter	Symbol	Conditions	Value	Unit
Continuous Drain Current (Silicon Limited)	I_D	T_C=25℃	67	A
		T_C=100℃	48	
Drain to Source Voltage		-	100	V
		-	±20	V
		-	190	A
Avalanche Energy, Single Pulse	E_{AS}	L=0.1mH, T_C=25℃	31	mJ
Power21/MCID 52/Lang (x-none)>BDC BT/F1		T_C=25℃	94	W
			-55 to175	℃

Parameter	Symbol	Max	Unit
Thermal Resistance Junction-Ambient	R_{JA}	50	℃/W
Thermal Resistance Junction-Case	R_{JC}	1.6	℃/W

Drain to Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}=0V, I_D=250 A				
	$V_{GS(th)}$	V_{GS}=V_{DS}, I_D=250 A	2.0			
			-		9.8	m
			-			
			-			

Dynamic Characteristics

Input Capacitance	C_{iss}				-	
		V_{GS}=0V, V_{DS}=50V, f=1MHz		262		
					-	
	Q_g(10V)		-	23	-	
Gate to Source Charge	Q_{gs}	V_{DD}=50V, I_D=20A, V_{GS}=10V	-	5.5	-	nC
Gate to Drain (Miller) Charge	Q_{gd}		-	6.5	-	
Turn on Delay Time	$t_{d(on)}$		-	6	-	
Rise time	t_r	V_{DD}=50V, I_D=20A, V_{GS}=10V,	-	3	-	ns
Turn off Delay Time	$t_{d(off)}$	R_G=10 ,	-	17	-	
Fall Time	t_f		-	4	-	

Reverse Diode Characteristics

Diode Forward Voltage	V_{SD}	V_{GS}=0V, I_F=20A	-	0.9	1.2	V
			-			

Fig 1. Typical Output Characteristics

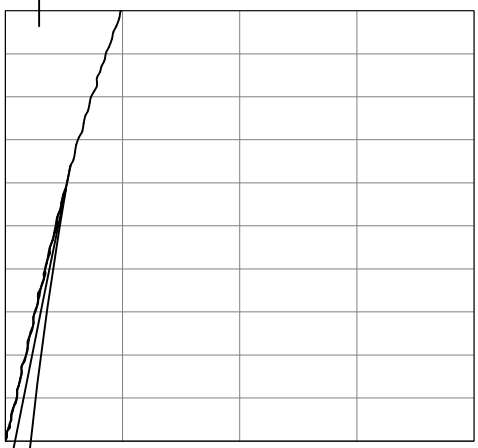


Figure 2. On-Resistance vs. Gate-Source Voltage

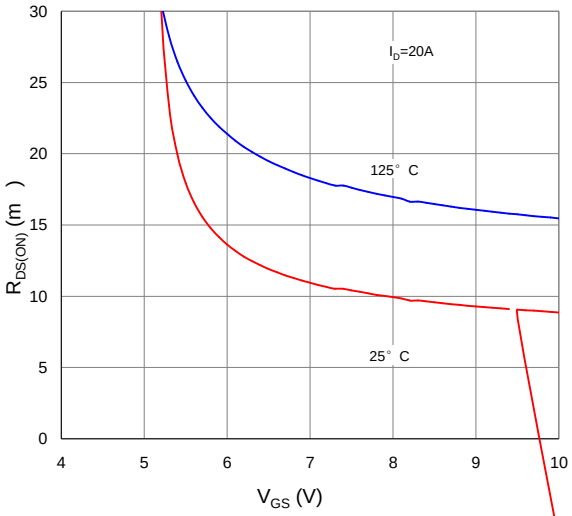


Figure 3. On-Resistance vs. Drain Current and Gate Voltage

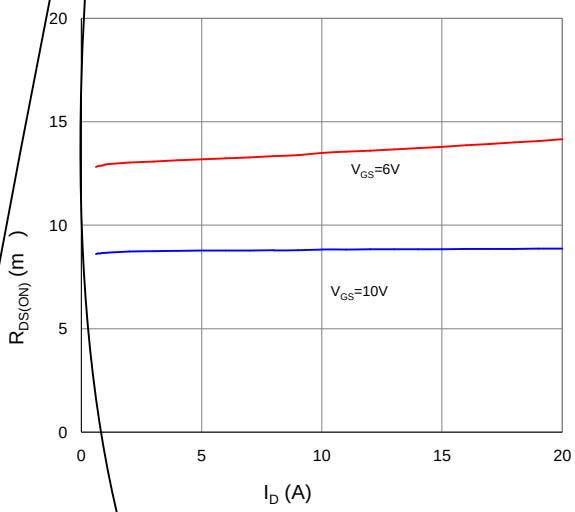


Figure 4. Normalized On-Resistance vs. Junction Temperature

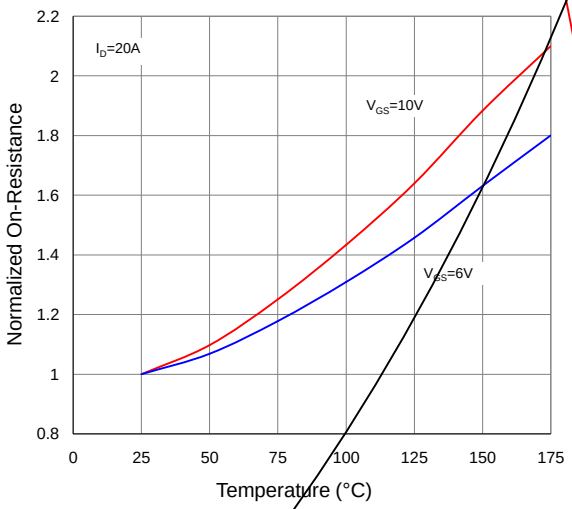


Figure 5. Typical Transfer Characteristics

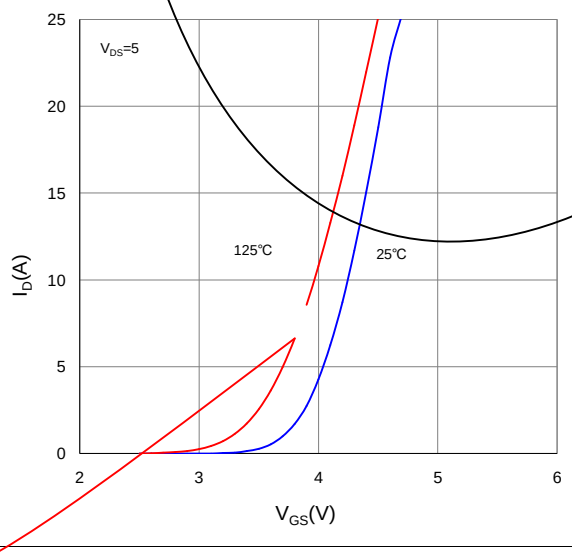


Figure 6. Typical Source-Drain Diode Forward Voltage

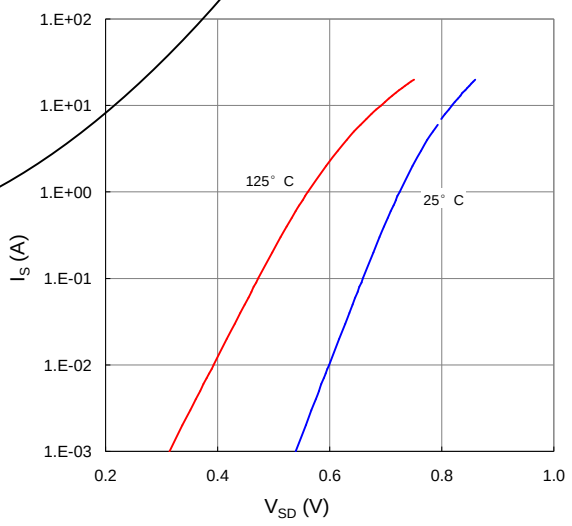


Figure 7. Typical Gate-Charge vs. Gate-to-Source Voltage

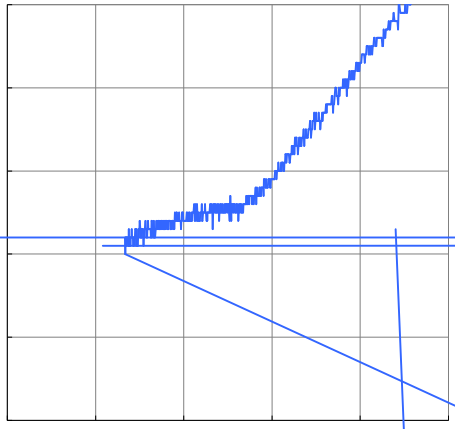


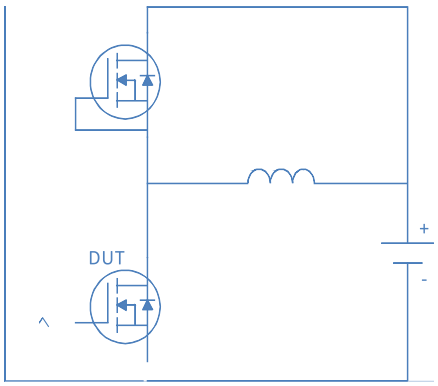
Figure 8. Typical Capacitance vs. Drain-to-Source Voltage

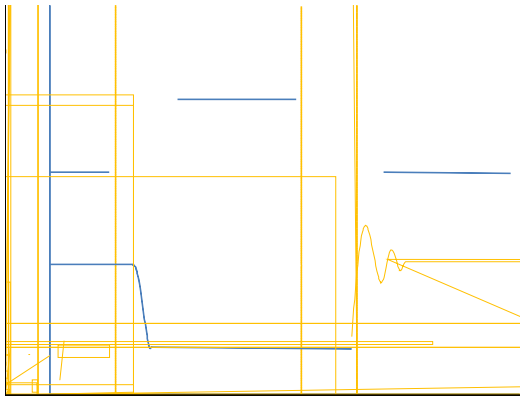
Figure 9. Maximum Safe Operating Area

Figure 10. Maximun Drain Current vs. Case Temperature

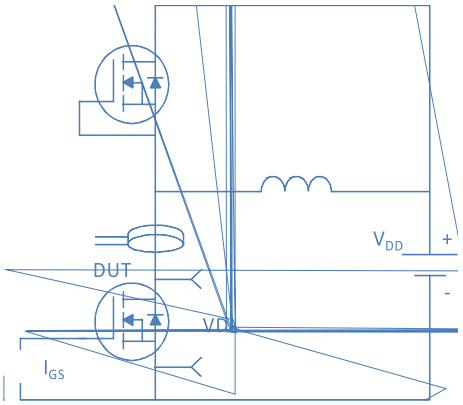
Figure 11. Normalized Maximum Transient Thermal Impedance, Junction-to-Ambient

Inductive switching Test

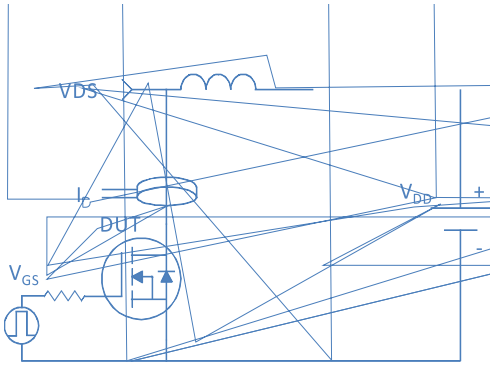


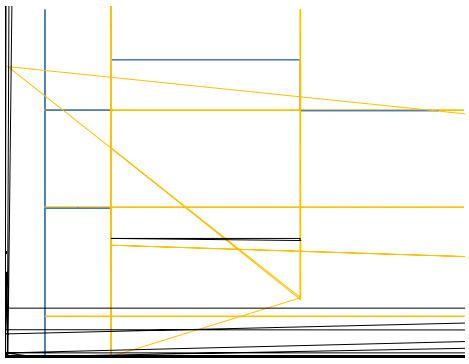


Gate Charge Test

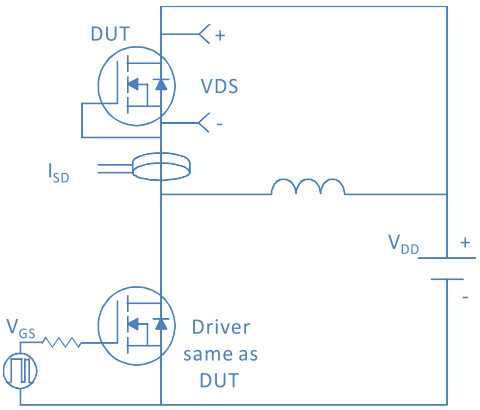


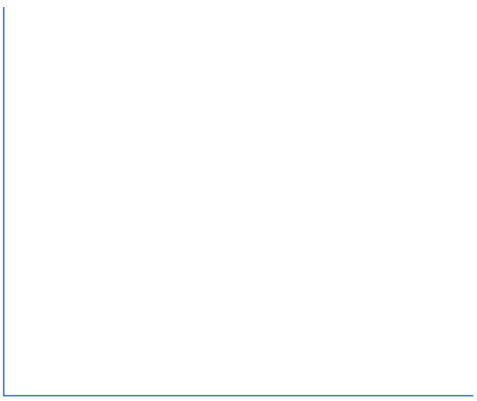
Uclamped Inductive Switching (UIS) Test





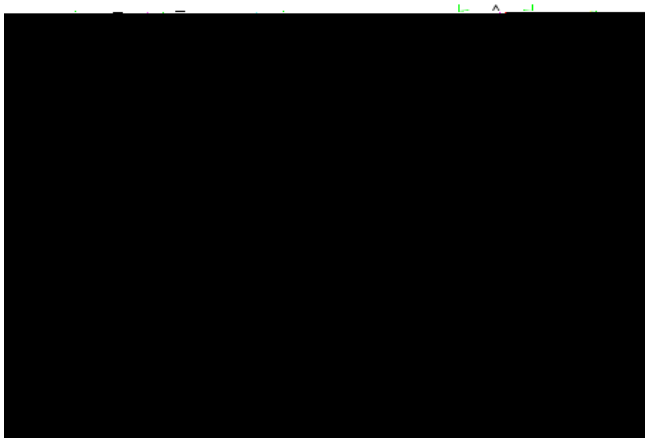
Diode Recovery Test



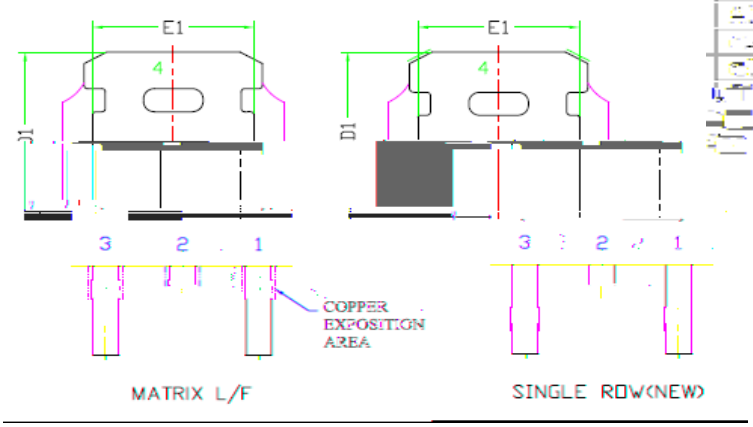


Package Outline

TO-252, 2 leads

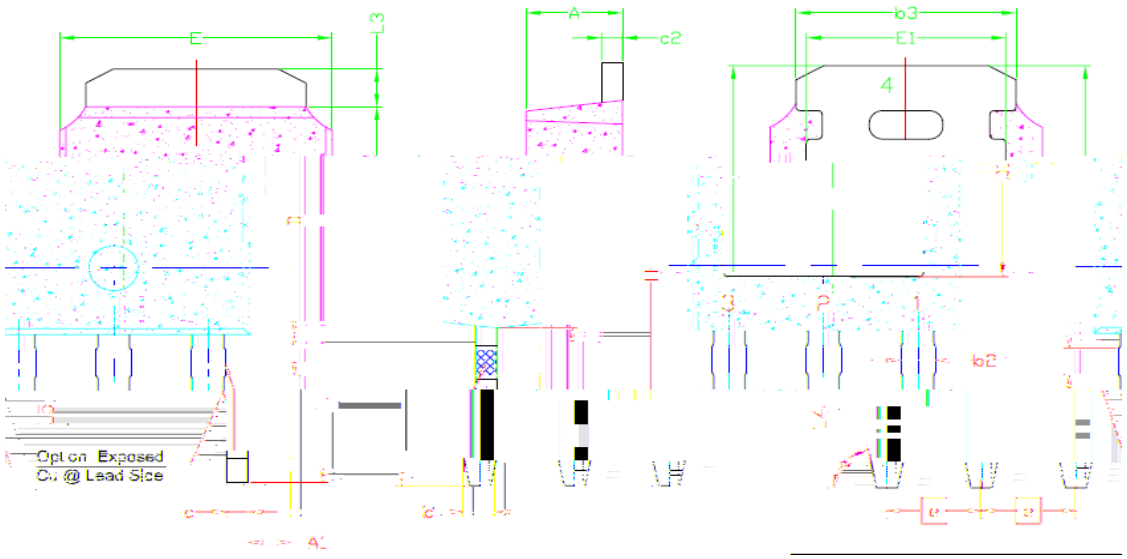


SYMBOL	DIMENSIONAL REQMTS		
	MIN	NOM	MAX
E	6.40	6.60	6.731
L	1.40	1.52	1.77
L1		2.743 REF	
L2		0.508 BSC	
L3	0.89	--	1.27
L4	0.64	--	1.01
L5	--	--	--
D	6.00	6.10	6.223



Package Outline

TO-251, 3leads



SYMBOL	DIMENSIONAL REQMTS		
	MIN	NOM	MAX
E	6.40	6.60	6.731
L	3.98	4.13	4.28
L3	0.89	--	1.27
L4		0.698 REF	
L5	0.972	1.099	1.226
D	6.00	6.10	6.223
H	11.05	11.25	11.45
b	0.64	0.76	0.88
b2	0.77	0.84	1.14
b3	5.21	5.34	5.46
e		2.286 BSC	
A	2.20	2.30	2.38
A1	0.89	1.04	1.15
c	0.46	0.50	0.60
c2	0.46	0.50	0.60
D1	5.10	--	--
E1	4.40	--	--
α		79° REF	