	$V_{(BR)DSS}$					
Zero Gate Voltage Drain Current	I_{DSS}	V_{GS}=0V, V_{DS}=100V, T_j=25℃	-		1 100	A
Gate to Source Leakage Current	I_{GSS}	V_{GS}=±20V, V_{DS}=0V	-	-	±100	nA
Drain to Source on Resistance						m
	g_{fs}	V_{DS}=5V, I_D=20A	-	37	-	S
Gate Resistance	R_G	V_{GS}=0V, V_{DS} Open, f=1MHz	-	1.4	-	

Dynamic Characteristics

Input Capacitance	C_{iss}		-	1360	-	
Output Capacitance	C_{oss}	V_{GS}=0V, V_{DS}=50V, f=1MHz	-	200	-	pF
Reverse Transfer Capacitance	C_{rss}		-	7.5	-	
Total Gate Charge	Q_g(10V)		-	20	-	
Gate to Source Charge	Q_{gs}	V_{DD}=50V, I_D=20A, V_{GS}=10V	-	7	-	nC
Gate to Drain (Miller) Charge	Q_{gd}		-	3.5	-	
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		-	3	-	

Reverse Diode Characteristics

Diode Forward Voltage	V_{SD}	V_{GS}=0V, I_F=20A	-	0.9	1.2	V
Reverse Recovery Time	t_{rr}	V_R=50V, I_F=20A, dI_F/dt=500A/ s	-	45	-	ns
Reverse Recovery Charge	Q_{rr}		-	175	-	nC

Fig 1. Typical Output Characteristics

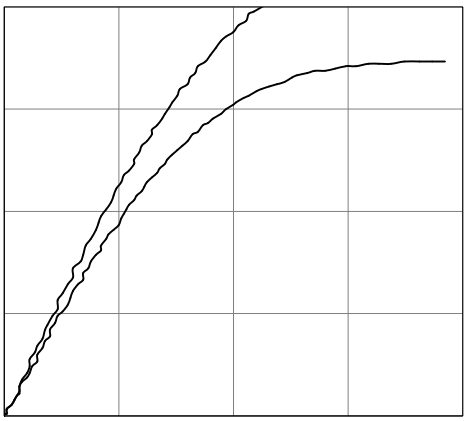


Figure 2. On-Resistance vs. Gate-Source Voltage

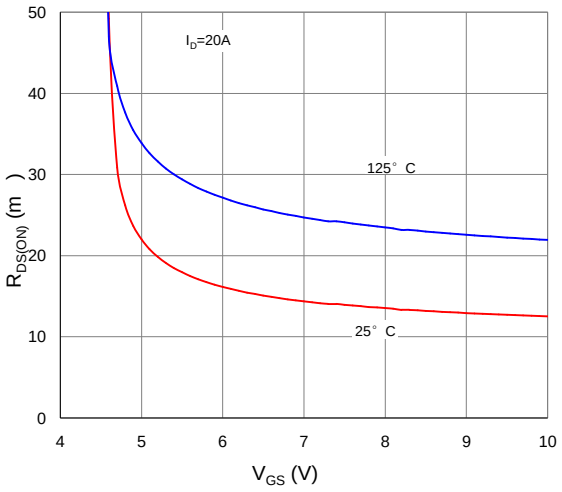


Figure 3. On-Resistance vs. Drain Current and Gate Voltage

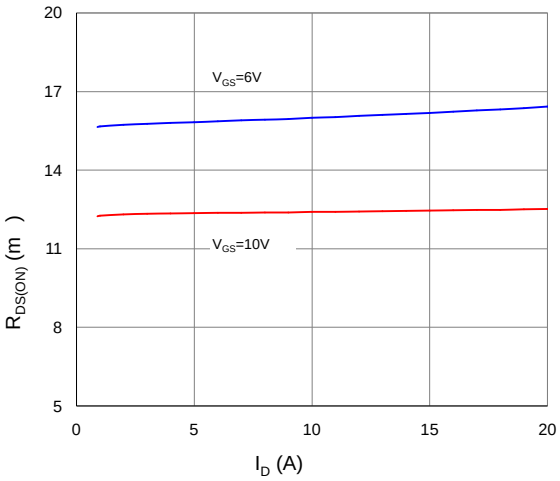


Figure 4. Normalized On-Resistance vs. Junction Temperature

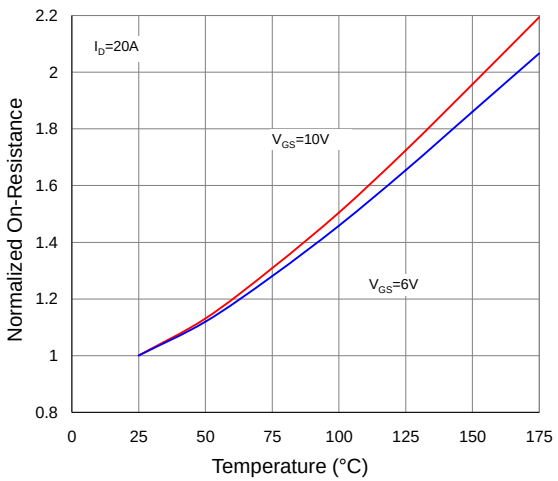


Figure 5. Typical Transfer Characteristics

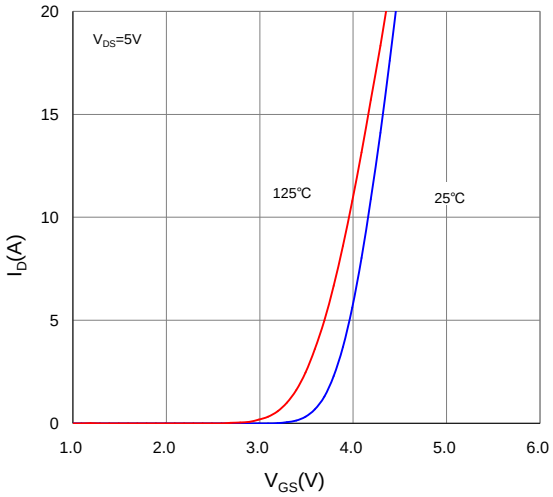


Figure 6. Typical Source-Drain Diode Forward Voltage

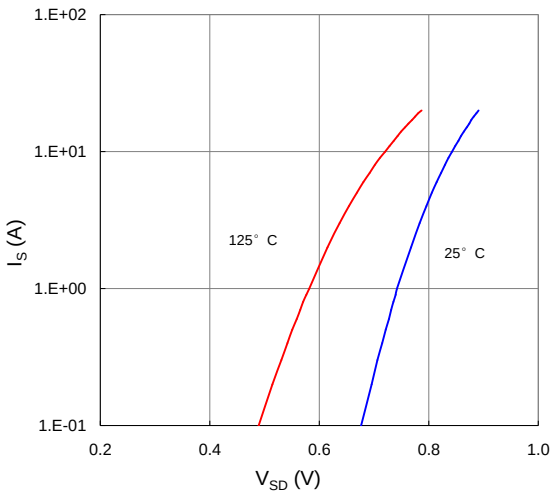


Figure 7. Typical Gate-Charge vs. Gate-to-Source Voltage

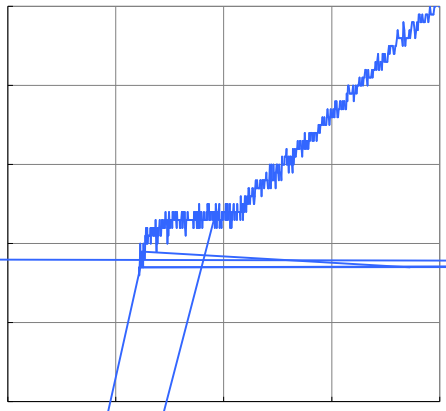


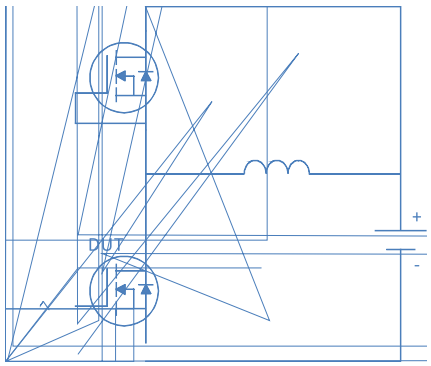
Figure 8. Typical Capacitance vs. Drain-to-Source Voltage

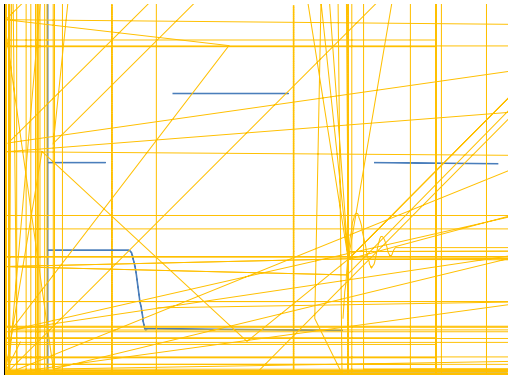
Figure 9. Maximum Safe Operating Area

Figure 10. Maximun Drain Current vs. Case Temperature

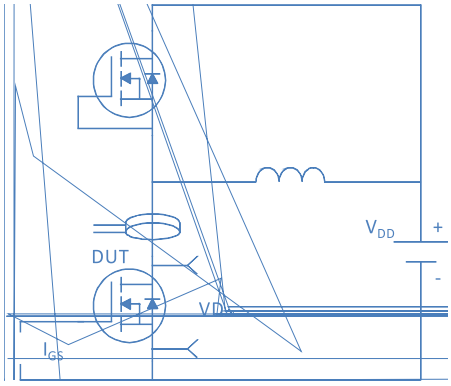
Figure 11. Normalized Maximum Transient Thermal Impedance, Junction-to-Ambient

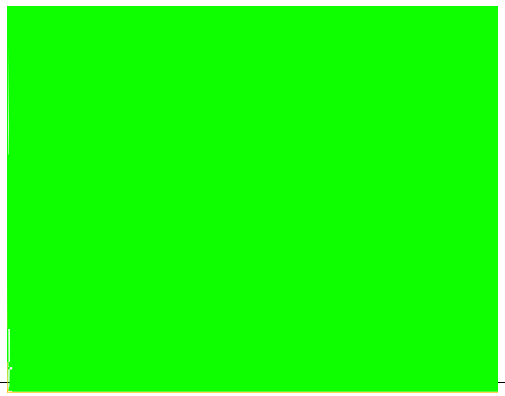
Inductive switching Test



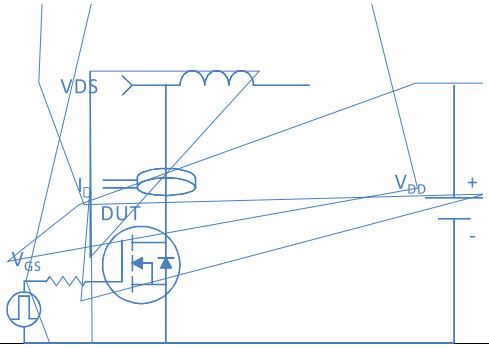


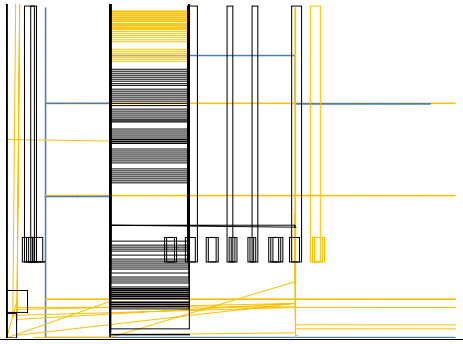
Gate Charge Test



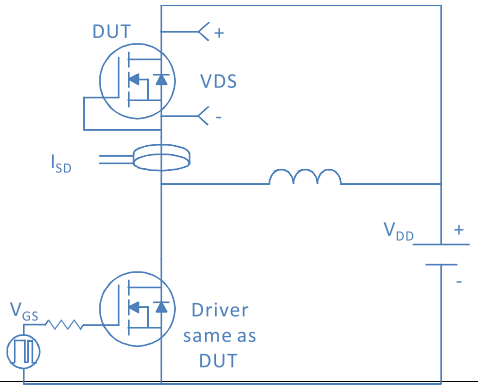


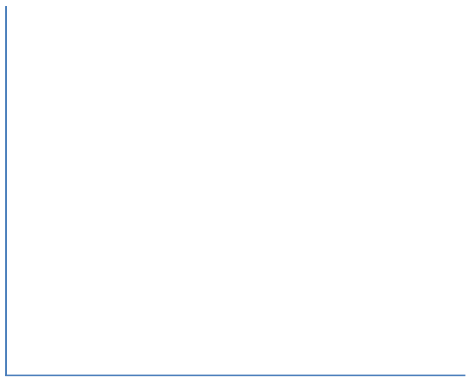
Uclamped Inductive Switching (UIS) Test





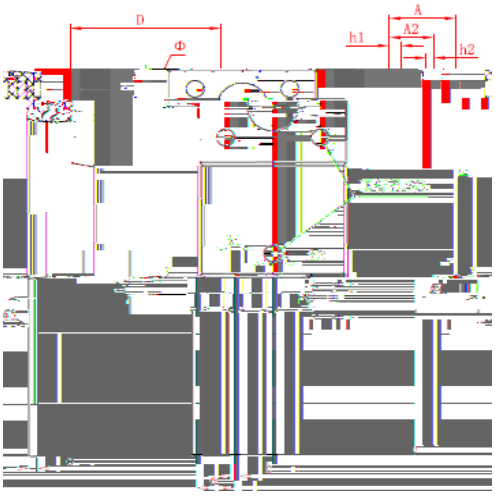
Diode Recovery Test





Package Outline

TO-220F, 3 leads



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.350	4.650	0.169	0.185
A1	1.300 REF.		0.051 REF.	
A2	2.850	3.150	0.112	0.124
A3	2.600	2.800	0.102	0.110
b	0.500	0.750	0.020	0.030
b1	0.800	1.050	0.031	0.041
b2	1.100	1.350	0.043	0.053
c	0.500	0.750	0.020	0.030
D	9.960	10.360	0.392	0.408
E	14.800	15.200	0.583	0.598
e	2.540 TYP.		0.100 TYP.	
F	2.700 REF.		0.106 REF.	
Φ	3.500 REF.		0.138 REF.	
h	0.000	0.300	0.000	0.012
h1	0.800 REF.		0.031 REF.	
h2	0.500 REF.		0.020 REF.	
L	28.000	28.400	1.102	1.118
L1	1.100	1.300	0.043	0.051