Table 1. THERMAL CHARACTERISTICS

Parameter	Symbol	Max	Unit
Junction−to−Case − Steady State (Note 1)	$R_{\theta JC}$	0.3	°C/W
Junction−to−Ambient − Steady State (Note 1)	$R_{\theta JA}$	40	

Table 2. ELECTRICAL CHARACTERISTICS (T_J = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition		Min	Typ	Max	Unit
OFF CHARACTERISTICS							
Drain−to−Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0 V, I_D = 1 mA		650	−	−	V
Drain−to−Source Breakdown Voltage Temperature Coefficient	$V_{(BR)DSS}/T_J$	I_D = 20 mA, referenced to 25°C		−	0.12	−	V/°C
Zero Gate Voltage Drain Current	I_{DSS}	V_{GS} = 0 V, V_{DS} = 650 V	T_J = 25°C	−	−	10	μA
			T_J = 175°C	−	−	1	mA
Gate−to−Source Leakage Current	I_{GSS}	V_{GS} = +22/−8 V, V_{DS} = 0 V		−	−	250	nA
ON CHARACTERISTICS (Note 2)							
Gate Threshold Voltage	$V_{GS(TH)}$	V_{GS} = V_{DS}, I_D = 25 mA		1.8	2.5	4.3	V
Recommended Gate Voltage	V_{GOP}			−5	−	+18	V
Drain−to−Source On Resistance	$R_{DS(on)}$	V_{GS} = 15 V, I_D = 75 A, T_J = 25°C		−	15	−	mΩ
		V_{GS} = 18 V, I_D = 75 A, T_J = 25°C		−	12	18	
		V_{GS} = 18 V, I_D = 75 A, T_J = 175°C		−	16	−	
Forward Transconductance	g_{FS}	V_{DS} = 10 V, I_D = 75 A		−	47	−	S
CHARGES, CAPACITANCES & GATE RESISTANCE							
Input Capacitance	C_{ISS}	V_{GS} = 0 V, f = 1 MHz, V_{DS} = 325 V		−	4790	−	pF
Output Capacitance	C_{OSS}			−	430	−	
Reverse Transfer Capacitance	C_{RSS}			−	33	−	

Table 2. ELECTRICAL CHARACTERISTICS (T_J = 25°C unless otherwise specified) (continu

TYPICAL CHARACTERISTICS (CONTINUED)

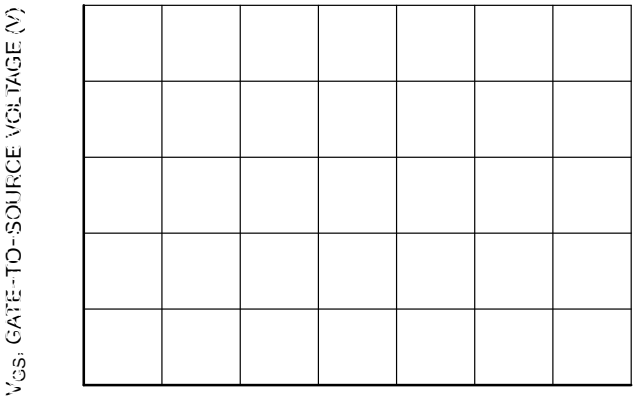


Figure 7. Gate−to−Source Voltage vs. Total Charge

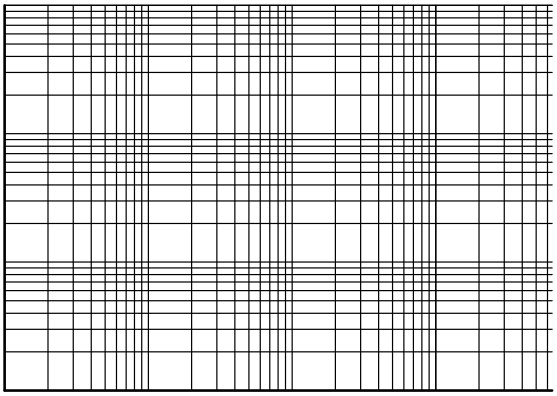


Figure 8. Capacitance vs. Drain−to−Source Voltage

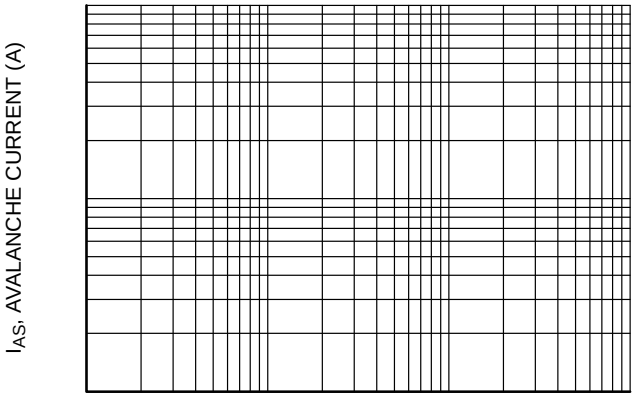


Figure 9. Unclamped Inductive Switching Capability

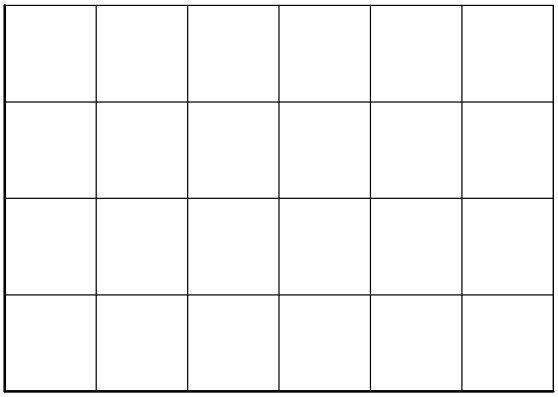


Figure 10. Maximum Continuous Drain Current vs. Case Temperature

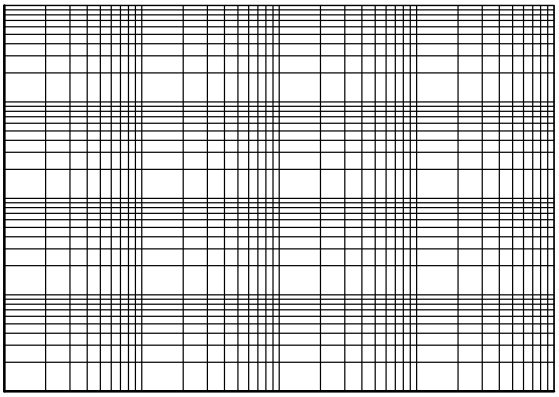
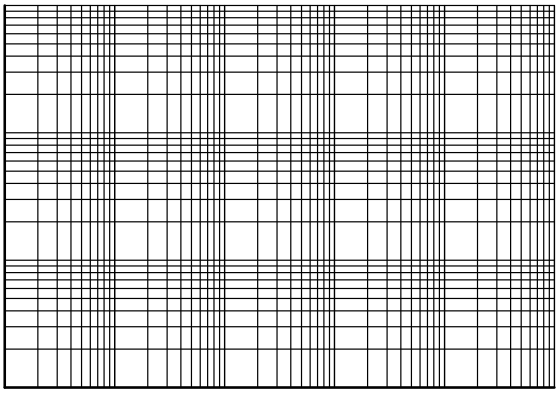


Figure 11. Safe Operating Area



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