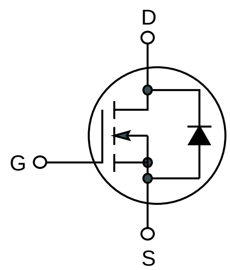

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Drain−to−Source Voltage			V_{DSS}	1200	V
Gate−to−Source Voltage			V_{GS}	−15/+25	V
Recommended Operation Values of Gate−to−Source Voltage	T_C < 175°C		V_{GSop}	−5/+20	V
Continuous Drain Current $R_{\theta JC}$	Steady State	T_C = 25°C	I_D	103	A
Power Dissipation $R_{\theta JC}$			P_D	535	W
Continuous Drain Current $R_{\theta JC}$	Steady State	T_C = 100°C	I_D	73	A
Power Dissipation $R_{\theta JC}$			P_D		

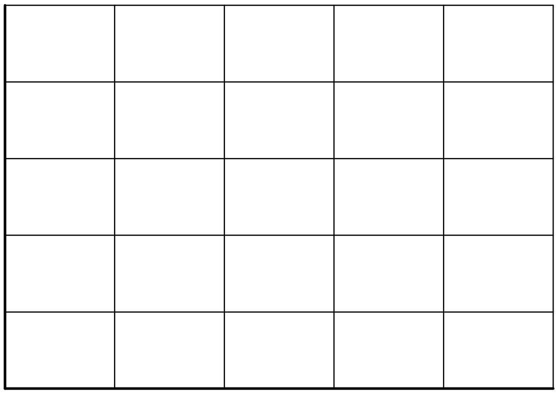
Single Pulse Drain−to−Source Avalanche Energy ($I_{L(pk)}$ = 23 A, L = 1 mH) (Note 3)	E_{AS}	264	mJ

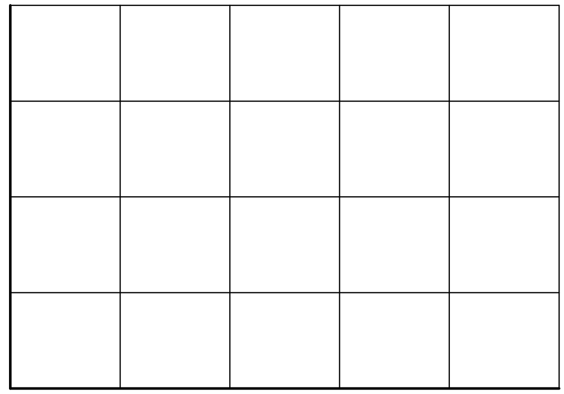
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

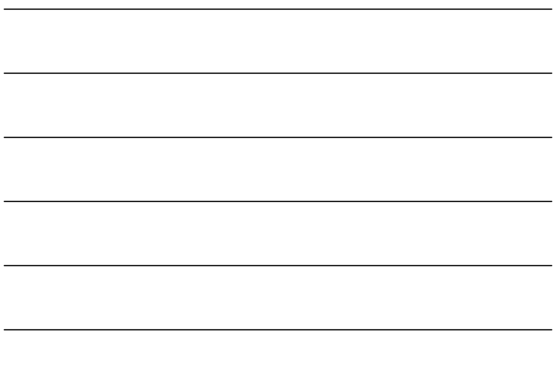
Junction−to−Case (Note 1)	$R_{\theta JC}$	0.28	°C/W
Junction−to−Ambient (Note 1)	$R_{\theta JA}$	40	°C/W

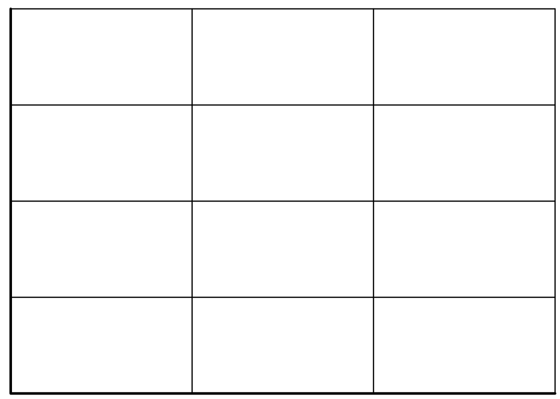
1. The entire application environment impacts the thermal resistance values shown, they are not constants and are only valid for the particular conditions noted.
2. Repetitive rating, limited by max junction temperature.
3. E_{AS} of 264 mJ is based on starting T_J = 25°C; L = 1 mH, I_{AS} = 23 A, V_{DD} = 120 V, V_{GS} = 18 V.

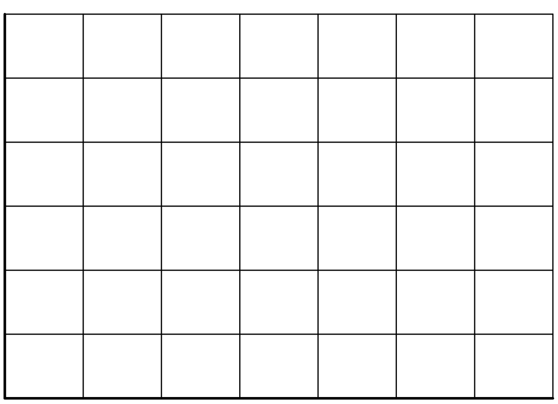
Drain−to−Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0 V, I_D = 1 mA	1200	−	−	V
Drain−to−Source Breakdown Voltage Temperature Coefficient	$V_{(BR)DSS}/T_J$	I_D = 1 mA, referenced to 25°C	−	900	−	mV/°C
Zero Gate Voltage Drain Current	I_{DSS}	V_{GS} = 0 V, V_{DS} = 1200 V, T_J = 25°C	−	−	100	μA
		V_{GS} = 0 V, V_{DS} = 1200 V, T_J = 175°C	−	−	250	
Gate−to−Source Leakage Current	I_{GSS}	V_{GS} = +25/−15 V, V_{DS} = 0 V	−	−	±1	μA
Gate Threshold Voltage	$V_{GS(th)}$	V_{GS} = V_{DS}, I_D = 20 mA	1.8	2.7	4.3	V
Recommended Gate Voltage	V_{GOP}		−5	−	+20	V
Drain−to−Source On Resistance	$R_{DS(on)}$	V_{GS} = 20 V, I_D = 60 A, T_J = 25°C	−	20	28	mΩ
		V_{GS} = 20 V, I_D = 60 A, T_J = 175°C	−	35	50	
Forward Transconductance	g_{FS}	V_{DS} = 10 V, I_D = 60 A	−	28	−	S
Input Capacitance	C_{ISS}	V_{GS} = 0 V, f = 1 MHz, V_{DS} = 800 V	−	2890	−	pF
Output Capacitance	C_{OSS}		−	260	−	
Reverse Transfer Capacitance	C_{RSS}		−	22	−	
Total Gate Charge	$Q_{G(tot)}$	V_{GS} = −5/20 V, V_{DS} = 600 V, I_D = 80 A	−	203	−	nC
Threshold Gate Charge	$Q_{G(th)}$		−	33	−	
Gate−to−Source Charge	Q_{GS}		−	66	−	
Gate−to−Drain Charge	Q_{GD}		−	47	−	
Gate Resistance	R_G	f = 1 MHz	−	1.81	−	Ω

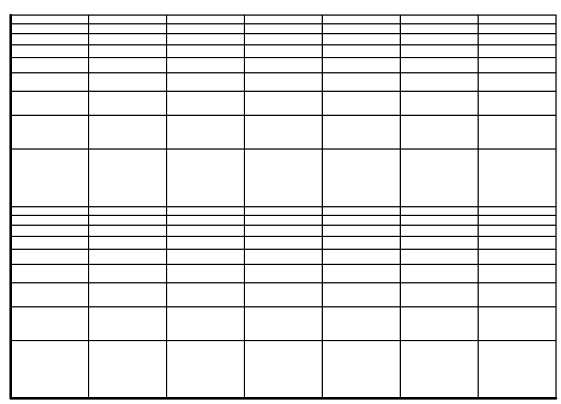












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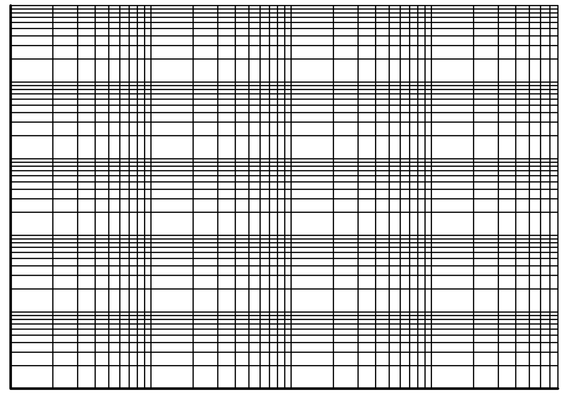

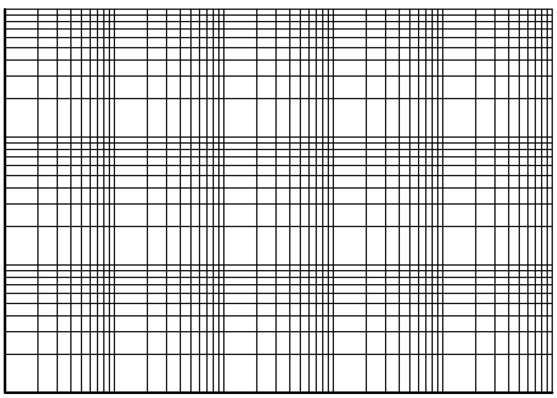

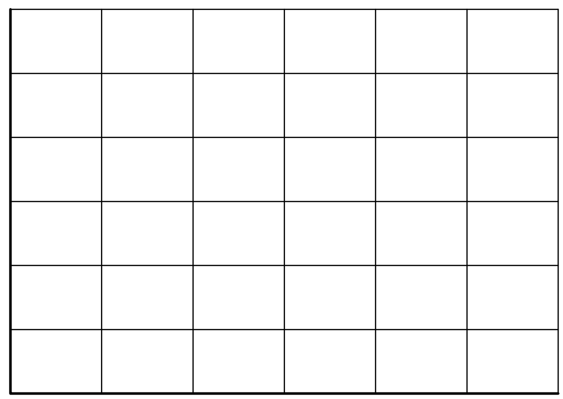

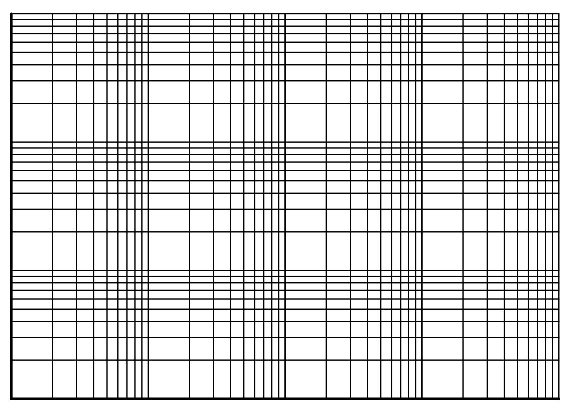

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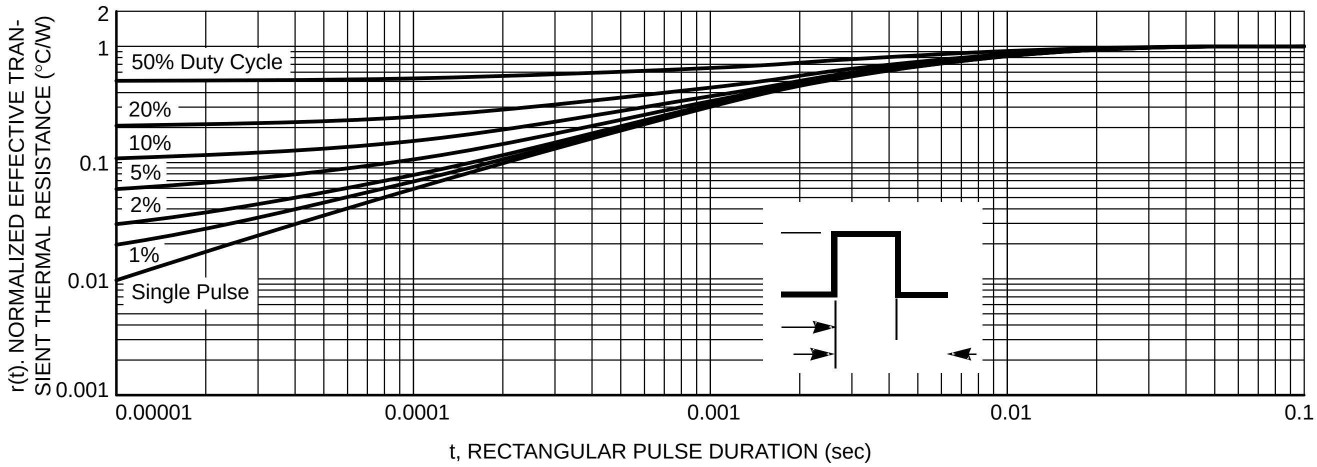
r(t). NORMALIZED EFFECTIVE TRAN-SIENT THERMAL RESISTANCE (°C/W)
2
1
0.1
0.01
0.001
50% Duty Cycle
20%
10%
5%
2%
1%
Single Pulse
0.00001
0.0001
0.001
0.01
0.1
t, RECTANGULAR PULSE DURATION (sec)

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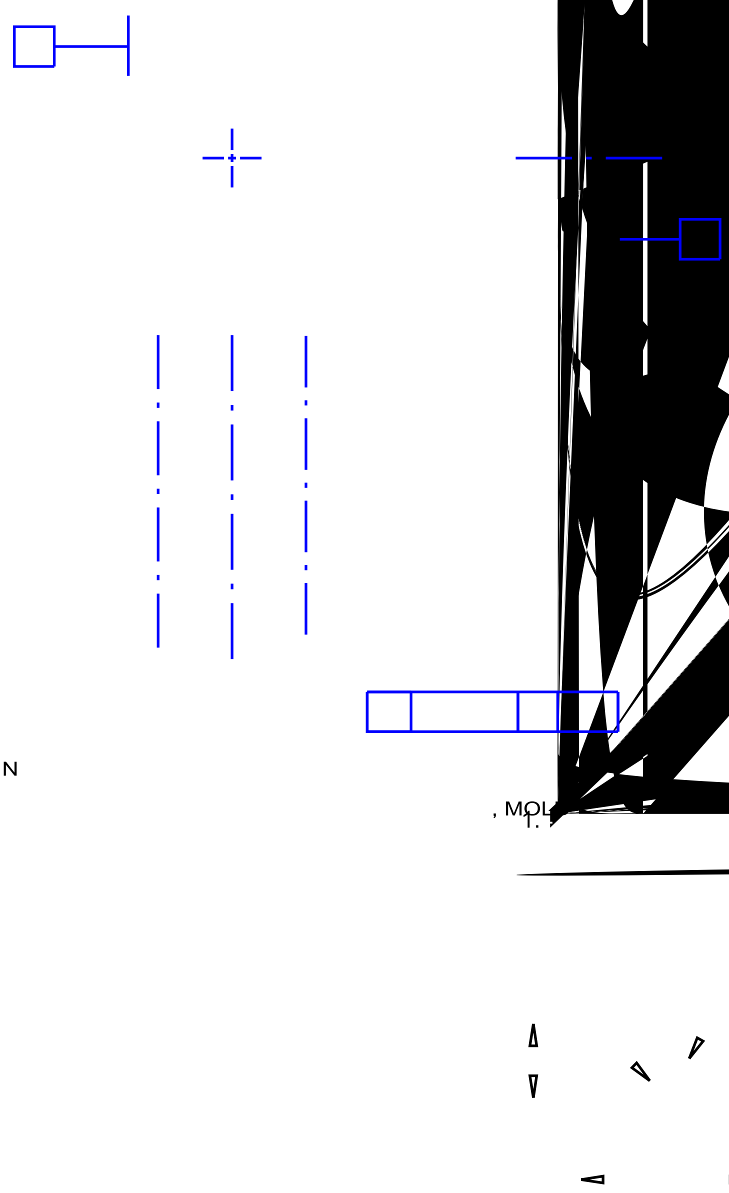
D. D



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		1.50	1.60
D	2		