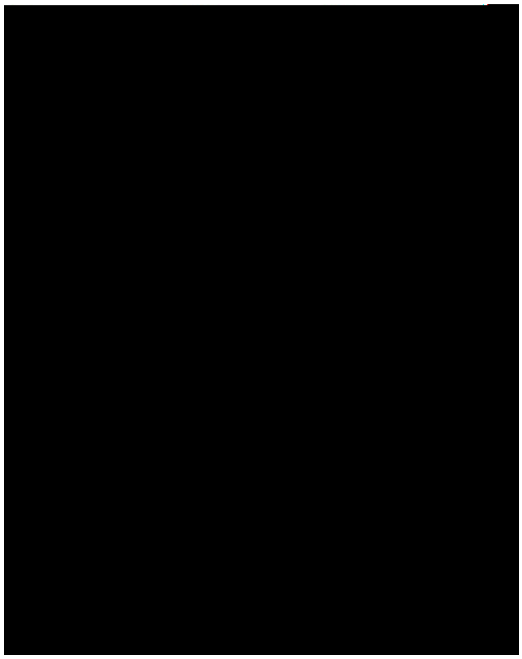
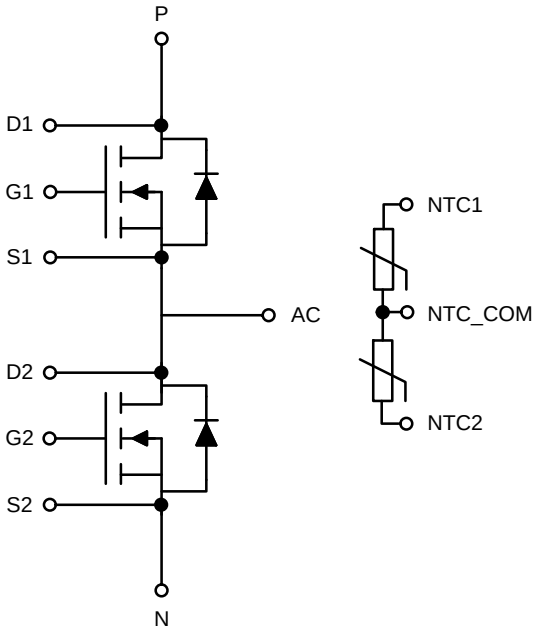




1	N	Negative Power Terminal
2	P	Positive Power Terminal
3	D1	High Side MOSFET (Q1) Drain Sense
4	N/C	No Connection
5	S1	High Side MOSFET (Q1) Source
6	G1	High Side MOSFET (Q1) Gate
7	N/C	No Connection
8	N/C	No Connection
9	AC	Phase Output
10	NTC1	NTC 1
11	S2	Low Side MOSFET (Q2) Source
12	G2	Low Side MOSFET (Q2) Gate
13	NTC2	NTC 2
14	NTC_COM	NTC common
15	D2	Low Side MOSFET (Q2) Drain Sense

(T_{vj} = 25°C, Unless Otherwise Specified)

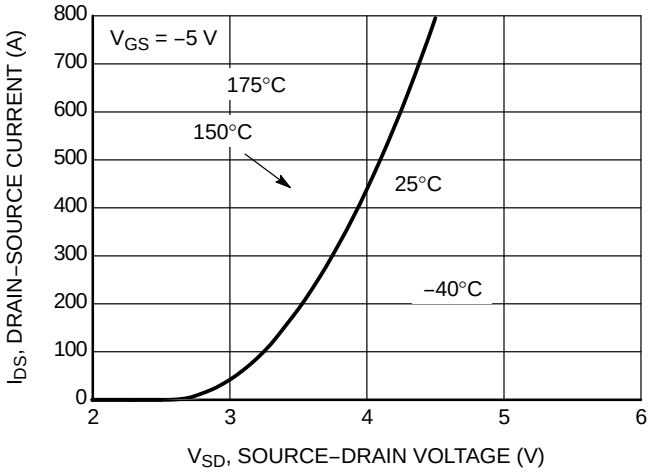
$R_{DS(ON)}$	Drain−to−Source On Resistance (Terminal)	V_{GS} = 20V, I_D = 400A	T_{vj} = 25°C T_{vj} = 175°C	–	2.6 4.6	–	mΩ
$V_{GS(TH)}$	Gate Threshold Voltage	V_{GS} = V_{DS} , I_D = 150 mA		2.1	3.2	–	V
g_{fs}	Forward Transconductance	V_{DS} = 10 V, I_D = 400 A		–	170	–	S
Q_G	Total Gate Charge	V_{GS} = −5/+20 V, V_{DS} = 800 V, I_D = 400 A		–	1.75	–	C
$R_{g.int}$	Internal Gate Resistance			–	2.1	–	Ω
C_{iss}	Input Capacitance	V_{DS} = 800 V, V_{GS} = 0 V, f = 100 kHz		–	31.7	–	nF
C_{oss}	Output Capacitance			–	2.2	–	nF
C_{rss}	Reverse Transfer Capacitance			–	0.22	–	nF
I_{DSS}	Zero Gate Voltage Drain Current	V_{GS} = 0 V, V_{DS} = 1200 V	T_{vj} = 25°C T_{vj} = 175°C	–	– 13.1	250 –	A
I_{GSS}	Gate−Source Leakage Current	V_{GS} = 20/−5 V, V_{DS} = 0 V				±700	nA
$T_{d.on}$	Turn On Delay, Inductive Load	I_{DS}= 400 A, V_{DS} = 800 V, V_{GS} = +20/−5 V, Rg.on = 3 Ω	T_{vj} = 25°C T_{vj} = 175°C	–	125 115	–	ns
T_r	Rise Time, Inductive Load	I_{DS} = 400 A, V_{DS} = 800 V, V_{GS} = +20/−5 V, Rg.on = 3Ω	T_{vj} = 25°C T_{vj} = 175°C	–	59 54	–	ns
$T_{d.off}$	Turn Off Delay, Inductive Load	I_{DS} = 400 A, V_{DS} = 800 V, V_{GS} = +20/−5 V, Rg.off = 1 Ω	T_{vj} = 25°C, T_{vj} = 175°C	–	220 228	–	ns
T_f	Fall Time, Inductive Load	I_{DS} = 400 A, V_{DS} = 800 V, V_{GS} = +20/−5 V, Rg.off = 1 Ω	T_{vj} = 25°C T_{vj} = 175°C	–	51 61	–	ns
E_{ON}	Turn−On Switching Loss (including diode reverse recovery loss)	I_{DS} = 400 A, V_{DS} = 800 V, V_{GS} = +20/−5 V, Ls = 17 nH, Rg.on = 3Ω	di/dt = 8.4 A/ns, T_{vj} = 25°C di/dt = 9.7 A/ns, T_{vj} = 175°C	–	26 28	–	mJ
E_{OFF}	Turn−Off Switching Loss	I_{DS} = 400A, V_{DS} = 800 V, V_{GS} = +20/−5 V, Ls =17 nH, Rg.off = 1 Ω	dv/dt = 19.8 V/ns, T_{vj} = 25°C dv/dt = 16.8 V/ns, T_{vj} = 175°C	–	14 17	–	mJ
E_{sc}	Short Circuit Energy Withstand	V_{GS} = 20 V, V_{DS} = 800 V	T_{vj} = 25°C T_{vj} = 175°C	–	12 11	–	J

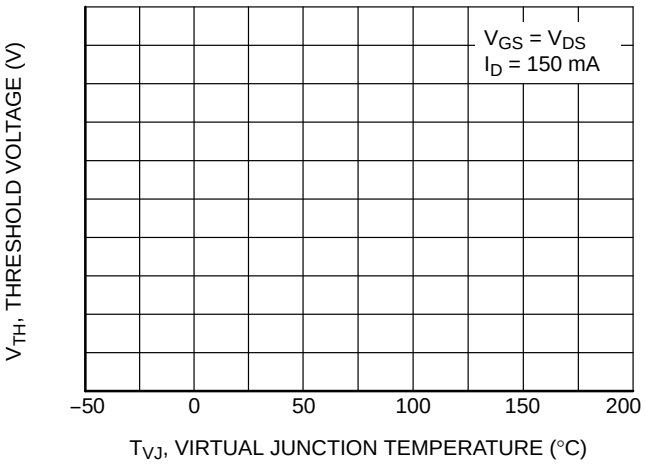
(T_{vj} = 25°C, Unless Otherwise Specified)

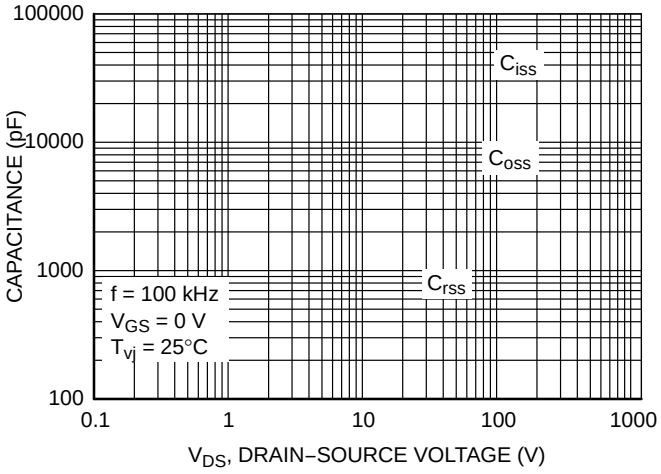
V_{SD}	Diode Forward Voltage (Terminal)	V_{GS} = –5 V, I_{SD} = 400 A	T_{vj} = 25°C T_{vj} = 175°C	–	3.8 3.3	–	V
E_{rr}	Reverse Recovery Energy	I_{SD} = 400 A, V_R = 800 V, V_{GS} = –5 V, Ls = 17 nH, Rg.on = 3 Ω	di/dt = 8.4 A/ns, T_{vj} = 25°C di/dt = 9.7 A/ns, T_{vj} = 175°C	–	0.4 2.1	–	mJ
Q_{RR}	Recovered Charge	I_{SD} = 400 A, V_R = 800 V, V_{GS} = –5 V, Rg.on = 3 Ω	T_{vj} = 25°C T_{vj} = 175°C	–	2.3 8.6	–	C
I_{RR}	Peak Reverse Recovery Current	I_{SD} = 400 A, V_R = 800 V, V_{GS} = –5 V, Rg.on = 3 Ω	T_{vj} = 25°C T_{vj} = 175°C	–	527 650	–	A

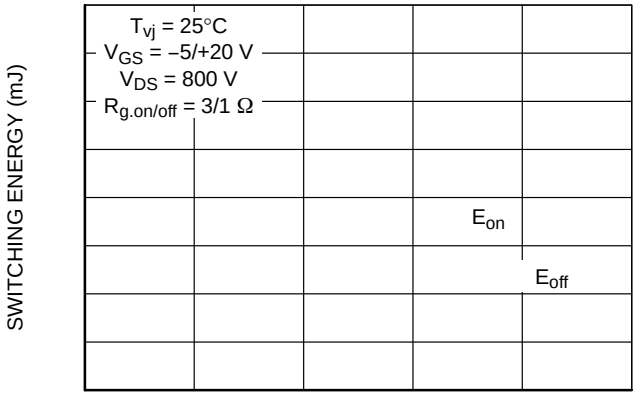
(T_{vj} = 25°C, Unless Otherwise Specified)

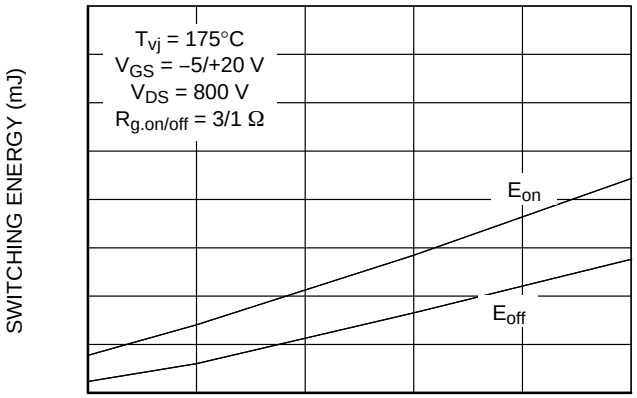
R25	Rated Resistance	Tc = 25					

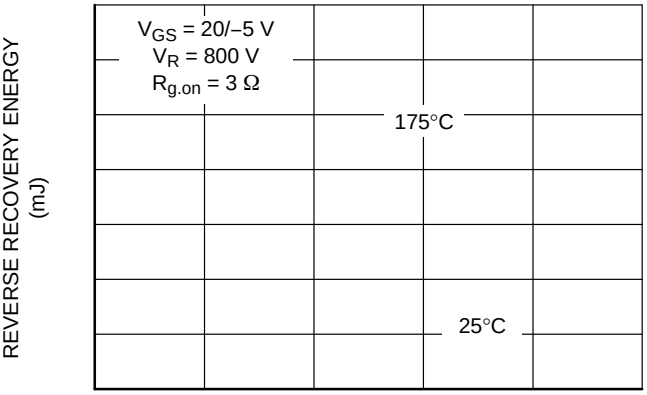

V_{GS} = −5 V
175°C
150°C
25°C
−40°C
I_{DS}, DRAIN−SOURCE CURRENT (A)
V_{SD}, SOURCE−DRAIN VOLTAGE (V)

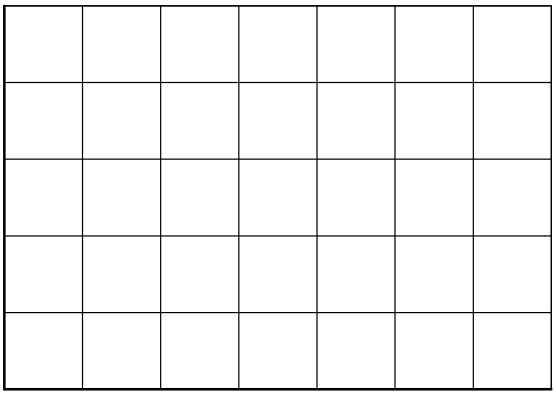

V_{GS} = V_{DS}
I_D = 150 mA
V_{TH}, THRESHOLD VOLTAGE (V)
T_{VJ}, VIRTUAL JUNCTION TEMPERATURE (°C)


C_{iss}
C_{oss}
C_{rss}
f = 100 kHz
V_{GS} = 0 V
T_{vj} = 25°C
CAPACITANCE (pF)
V_{DS}, DRAIN−SOURCE VOLTAGE (V)


T_{vj} = 25°C
V_{GS} = −5/+20 V
V_{DS} = 800 V
$R_{g.on/off}$ = 3/1 Ω
E_{on}
E_{off}
SWITCHING ENERGY (mJ)
I_{DS}, DRAIN−SOURCE CURRENT (A)

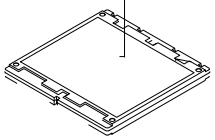

T_{vj} = 175°C
V_{GS} = −5/+20 V
V_{DS} = 800 V
$R_{g.on/off}$ = 3/1 Ω
E_{on}
E_{off}
SWITCHING ENERGY (mJ)
I_{DS}, DRAIN−SOURCE CURRENT (A)


V_{GS} = 20/−5 V
V_R = 800 V
$R_{g.on}$ = 3 Ω
175°C
25°C
REVERSE RECOVERY ENERGY (mJ)
I_{SD}, DRAIN−TO−SOURCE CURRENT (A)



TEMPERATURE (°C)

Q_g, TOTAL GATE CHARGE (C)



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ZZZ = Assembly Lot Code
AT = Assembly & Test Location
Y = Year
WW = Work Week
XXXX = Specific Device Code
NNNN = Serial Number

*This information is generic. Please refer to device data sheet for actual part marking. Pb−Free indicator, “G” or microdot “▪”, may or may not be present. Some products may not follow the Generic Marking.