

9 ` Y W h f] W U ` 7 \ U f U W h Y f] g h] W g ` ($T_J=25^{\circ}\text{C}$ unless otherwise specified)

| D U f U a Y h Y f | G m a V c ` | 7 c b X] h] c b g | A] b " | H m d " | A U I " | I b] h |
|--|--------------------|---|----------------|----------------|----------------|----------------|
| C Z Z ` 7 \ U f U W h Y f] g h] W g | | | | | | |
| Drain-Source Breakdown Voltage | BV_{DSS} | $V_{GS}=0V, I_D=250\mu A$ | 100 | - | - | V |
| Drain-Source Leakage Current | I_{DSS} | $V_{DS}=80V, V_{GS}=0V, T_J=25^{\circ}\text{C}$ | - | - | 1 | μA |
| | | $V_{DS}=80V, V_{GS}=0V, T_J=85^{\circ}\text{C}$ | - | - | 10 | μA |
| Gate-Source Leakage Current | I_{GSS} | $V_{GS}=\pm 20V, V_{DS}=0V$ | - | - | ± 100 | nA |
| C b ` 7 \ U f U W h Y f] g h] W g | | | | | | |
| Static Drain-Source On-Resistance | $R_{DS(ON)}$ | $V_{GS}=10V, I_D=15A$ | - | 13.7 | 16.5 | m Ω |
| | | $V_{GS}=4.5V, I_D=12A$ | - | 18 | 23 | m Ω |
| Gate Threshold Voltage | $V_{GS(th)}$ | $V_{DS}=V_{GS}, I_D=250\mu A$ | 1.2 | 1.6 | 2.5 | V |
| Forward Transconductance | g_{fs} | $V_{DS}=10V, I_D=3A$ | - | 7 | - | S |
| 8 m b U a] W ` U b X ` G k] h W \] b [` 7 \ U f U W h Y f] g h] W g | | | | | | |
| Total Gate Charge ^{3,4} | Q_g | $V_{DS}=50V, I_D=20A, V_{GS}=10V$ | - | 14.5 | 22 | nC |
| Gate-Source Charge ^{3,4} | Q_{gs} | | - | 1.5 | 3 | |
| Gate-Drain Charge ^{3,4} | Q_{gd} | | - | 4.8 | 7.5 | |
| Turn-On Delay Time ^{3,4} | $t_{d(on)}$ | $V_{DD}=50V, R_G=6\Omega, V_{GS}=10V, I_D=20A$ | - | 4.8 | 7.2 | nS |
| Rise Time ^{3,4} | t_r | | - | 12.5 | 19 | |
| Turn-Off Delay Time ^{3,4} | $t_{d(off)}$ | | - | 27.6 | 42 | |
| Fall Time ^{3,4} | t_f | | - | 8.2 | 13 | |
| Input Capacitance | C_{iss} | $V_{DS}=50V, V_{GS}=0V, F=1\text{MHz}$ | - | 850 | 1300 | pF |
| Output Capacitance | C_{oss} | | - | 190 | 285 | |
| Reverse Transfer Capacitance | C_{rss} | | - | 6.5 | 10 | |
| Gate Resistance | R_g | $V_{GS}=0V, V_{DS}=0V, F=1\text{MHz}$ | - | 0.9 | - | Ω |
| 8 f U] b ! G c i f W Y ` 8] c X Y ` 7 \ U f U W h Y f] g h] W g ` U b X ` A U I] a i a ` F U h] b] g | | | | | | |
| Continuous Source Current | I_S | $V_G=V_D=0V, \text{Force Current}$ | - | - | 45 | A |
| Pulsed Source Current | I_{SM} | | - | - | 90 | A |
| Diode Forward Voltage | V_{SD} | $V_{GS}=0V, I_S=1A, T_J=25^{\circ}\text{C}$ | - | - | 1 | V |
| Reverse Recovery Time | T_{rr} | $V_R=100V, I_S=10A, di/dt=100A/\mu s, T_J=25^{\circ}\text{C}$ | - | 140 | - | nS |
| Reverse Recovery Charge | Q_{rr} | | - | 180 | - | nC |

Note:

1. Repetitive rating: Pulsed width limited by maximum junction temperature.
2. $V_{DD}=50V, V_{GS}=10V, L=0.1\text{mH}, I_{AS}=38A, R_G=25\Omega$, starting $T_J=25^{\circ}\text{C}$.
3. Pluse test: pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
4. Essentially independent of operation temperature.

Static Characteristics

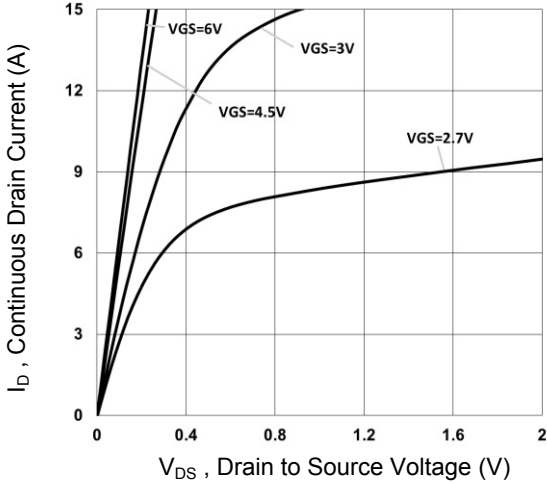


Figure 1: Continuous Drain Current vs. Drain to Source Voltage

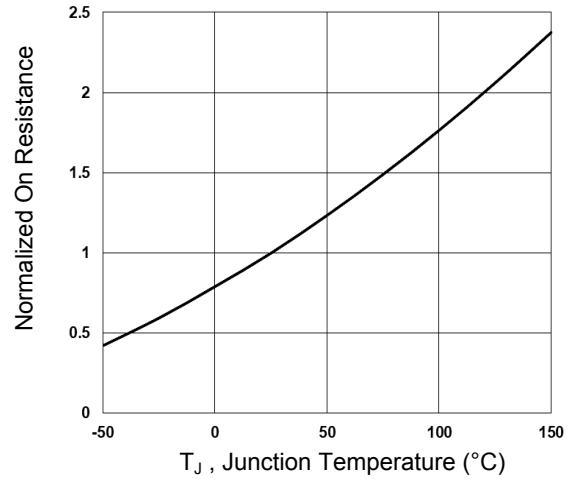


Figure 2: Normalized On Resistance vs. Junction Temperature

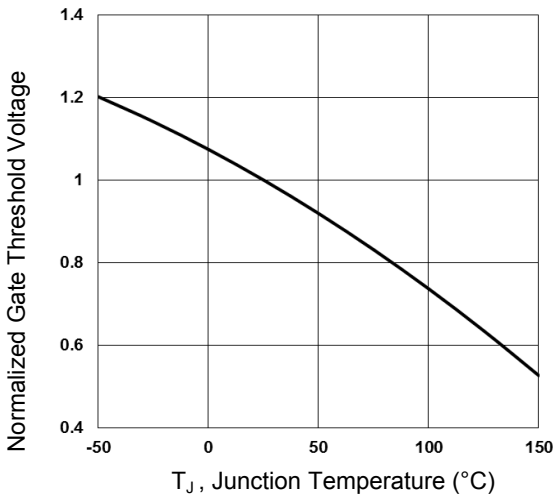


Figure 3: Normalized Gate Threshold Voltage vs. Junction Temperature

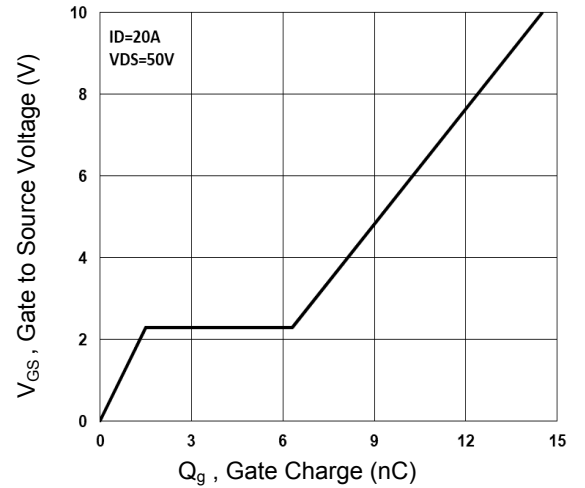


Figure 4: Gate to Source Voltage vs. Gate Charge

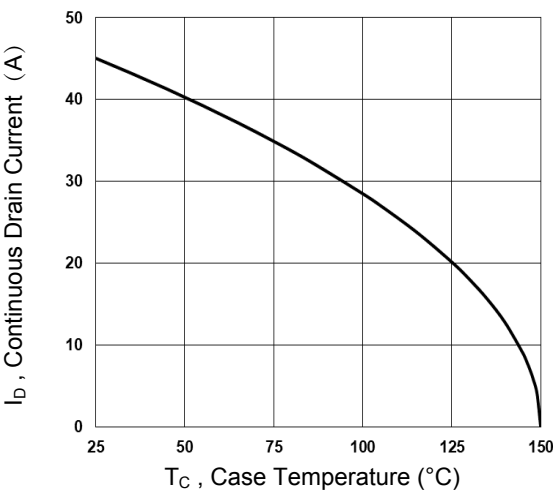


Figure 5: Continuous Drain Current vs. Case Temperature

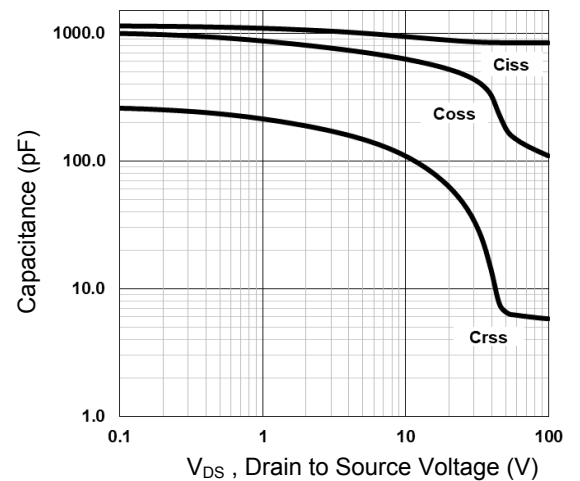
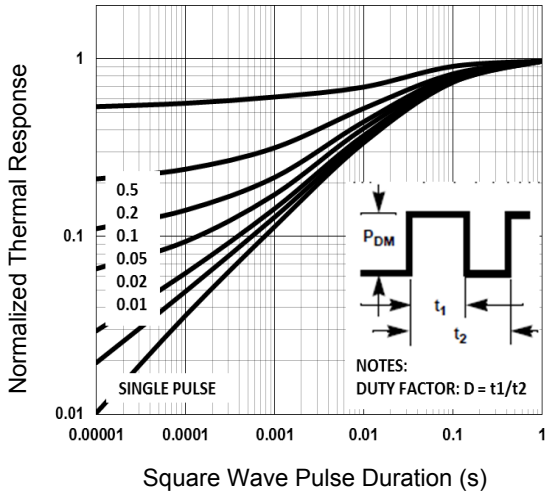
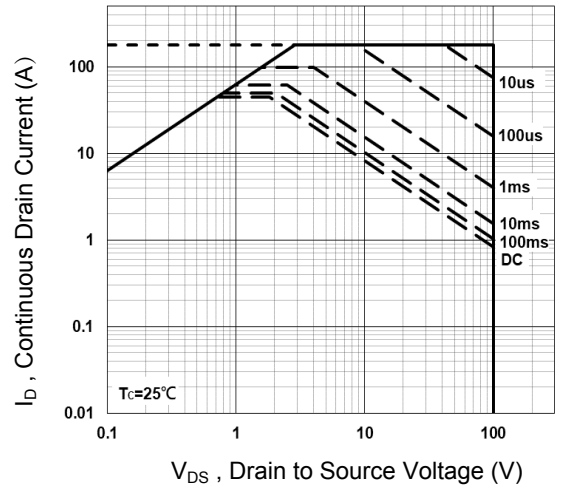


Figure 6: Capacitance vs. Drain to Source Voltage

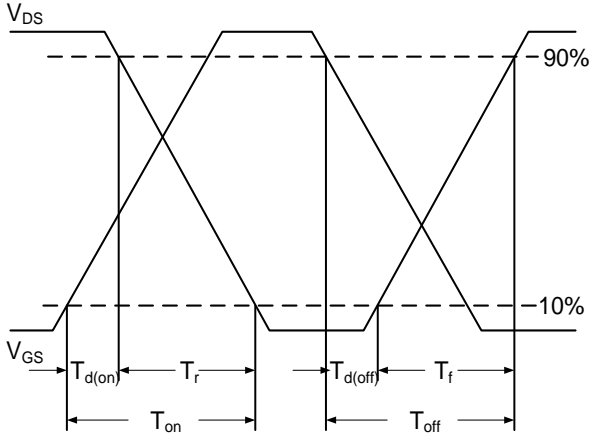


:] [" + ' ' B c f a U '] n Y X ' H f U b g] Y b h ' = a d Y X U b W Y

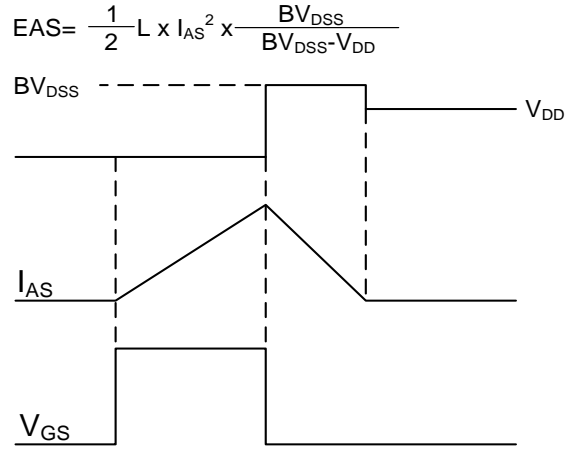


:] [" , ' ' A U !] a i a ' G U Z Y ' C d Y f U h] c b ' 5 f Y U

H m d] W U ' ' 9 ` Y W h f] W U ' ' U b X ` H \ Y f a U ' ` 7 \ U f U W h Y f] g h] W ' 7 i f j Y g `



:] [" - ' ' G k] h W \] b [' H] a Y ' K U j Y z c f a



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