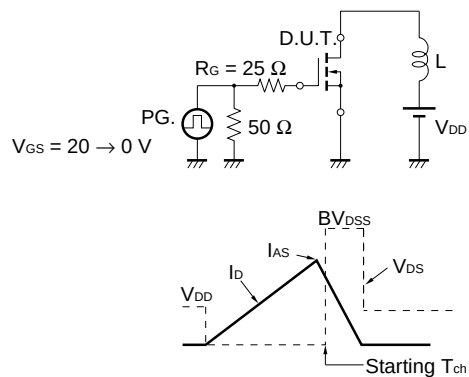




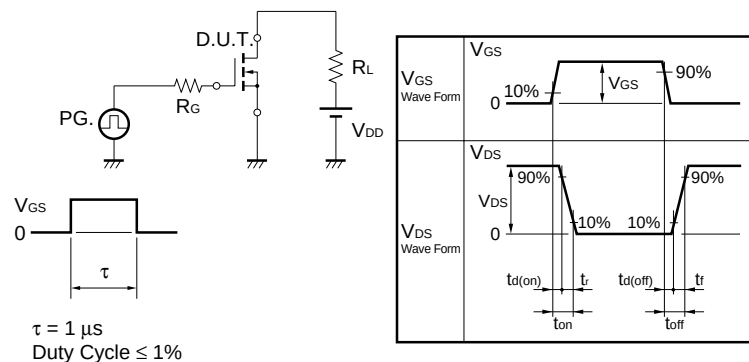
**ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C, All terminals are connected.)**

| CHARACTERISTICS                     | SYMBOL               | TEST CONDITIONS                                 | MIN. | TYP. | MAX. | UNIT |
|-------------------------------------|----------------------|-------------------------------------------------|------|------|------|------|
| Zero Gate Voltage Drain Current     | I <sub>DSS</sub>     | V <sub>DS</sub> = 30 V, V <sub>GS</sub> = 0 V   |      |      | 10   | μA   |
| Gate Leakage Current                | I <sub>GSS</sub>     | V <sub>GS</sub> = ±18 V, V <sub>DS</sub> = 0 V  |      |      | ±10  | μA   |
| Gate Cut-off Voltage                | V <sub>GS(off)</sub> | V <sub>DS</sub> = 10 V, I <sub>D</sub> = 1 mA   | 1.5  | 2.0  | 2.5  | V    |
| Forward Transfer Admittance         | y <sub>fs</sub>      | V <sub>DS</sub> = 10 V, I <sub>D</sub> = 4.0 A  | 3.5  | 7.0  |      | S    |
| Drain to Source On-state Resistance | R <sub>DS(on)1</sub> | V <sub>GS</sub> = 10 V, I <sub>D</sub> = 4.0 A  |      | 18.0 | 23.0 | mΩ   |
|                                     | R <sub>DS(on)2</sub> | V <sub>GS</sub> = 4.5 V, I <sub>D</sub> = 4.0 A |      | 25.0 | 35.0 | mΩ   |
|                                     | R <sub>DS(on)3</sub> | V <sub>GS</sub> = 4.0 V, I <sub>D</sub> = 4.0 A |      | 28.5 | 41.0 | mΩ   |
| Input Capacitance                   | C <sub>iss</sub>     | V <sub>DS</sub> = 10 V                          |      | 480  |      | pF   |
| Output Capacitance                  | C <sub>oss</sub>     | V <sub>GS</sub> = 0 V                           |      | 190  |      | pF   |
| Reverse Transfer Capacitance        | C <sub>rss</sub>     | f = 1 MHz                                       |      | 70   |      | pF   |
| Turn-on Delay Time                  | t <sub>d(on)</sub>   | V <sub>DD</sub> = 15 V, I <sub>D</sub> = 4.0 A  |      | 9.9  |      | ns   |
| Rise Time                           | t <sub>r</sub>       | V <sub>GS</sub> = 10 V                          |      | 6.2  |      | ns   |
| Turn-off Delay Time                 | t <sub>d(off)</sub>  | R <sub>G</sub> = 10 Ω                           |      | 25   |      | ns   |
| Fall Time                           | t <sub>f</sub>       |                                                 |      | 5.8  |      | ns   |
| Total Gate Charge                   | Q <sub>G</sub>       | V <sub>DD</sub> = 24 V                          |      | 10   |      | nC   |
| Gate to Source Charge               | Q <sub>GS</sub>      | V <sub>GS</sub> = 10 V                          |      | 1.9  |      | nC   |
| Gate to Drain Charge                | Q <sub>GD</sub>      | I <sub>D</sub> = 8.0 A                          |      | 2.6  |      | nC   |
| Body Diode Forward Voltage          | V <sub>F(S-D)</sub>  | I <sub>F</sub> = 8.0 A, V <sub>GS</sub> = 0 V   |      | 0.81 |      | V    |
| Reverse Recovery Time               | t <sub>rr</sub>      | I <sub>F</sub> = 8.0 A, V <sub>GS</sub> = 0 V   |      | 28   |      | ns   |
| Reverse Recovery Charge             | Q <sub>rr</sub>      | di/dt = 100 A/μs                                |      | 23   |      | nC   |

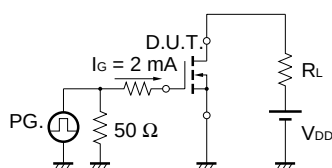
**TEST CIRCUIT 1 AVALANCHE CAPABILITY**



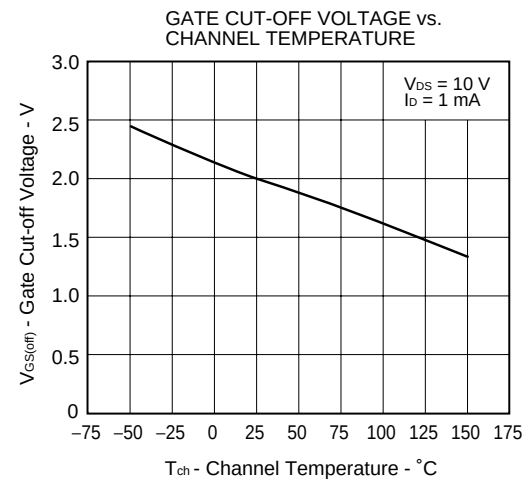
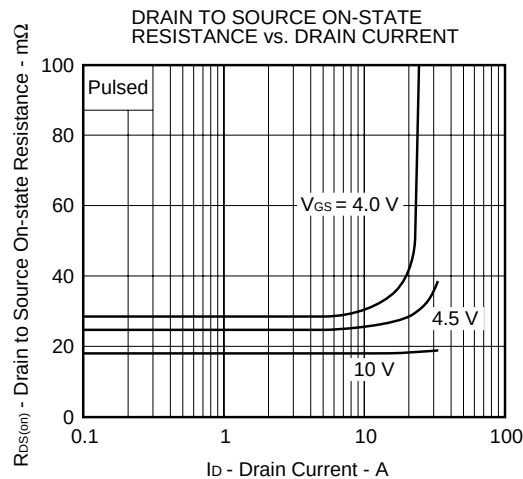
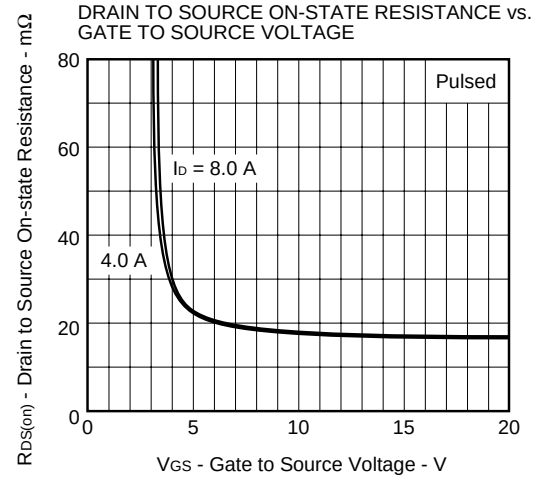
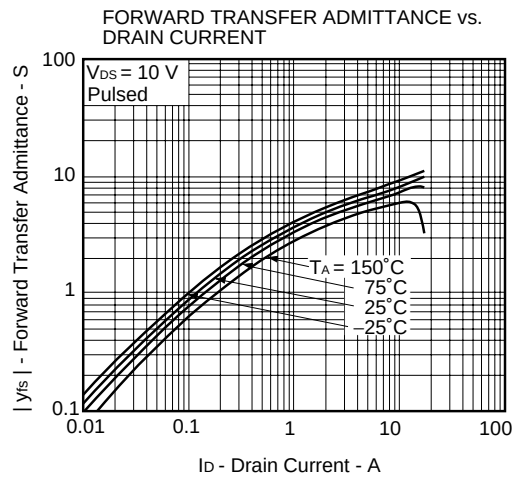
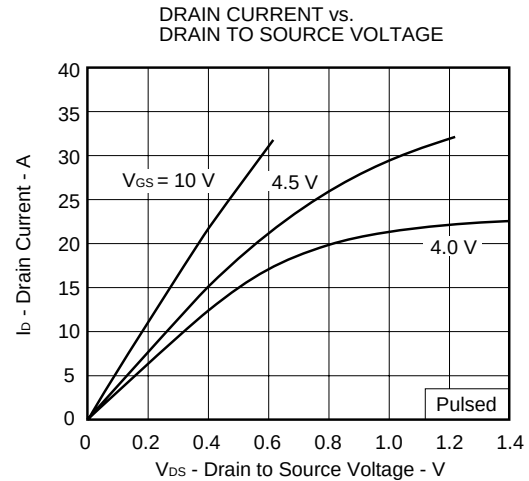
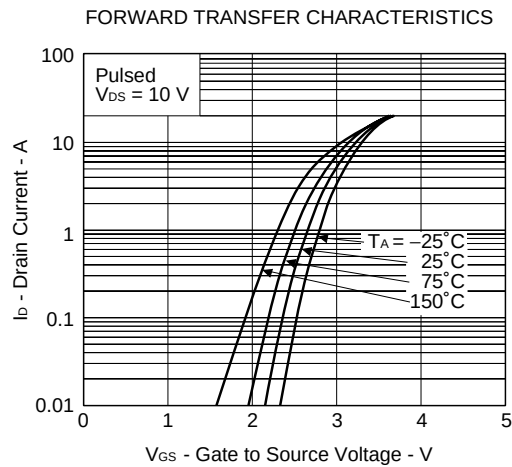
**TEST CIRCUIT 2 SWITCHING TIME**

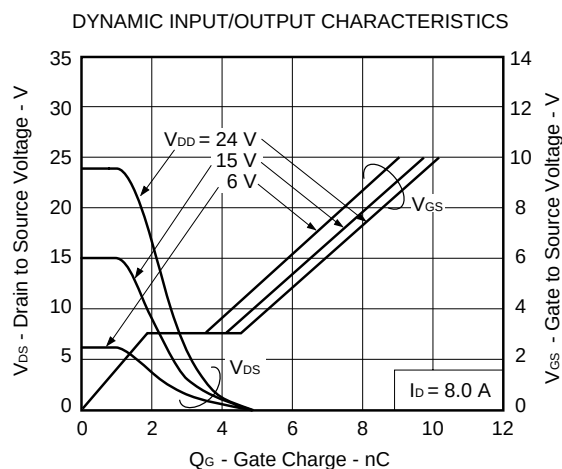
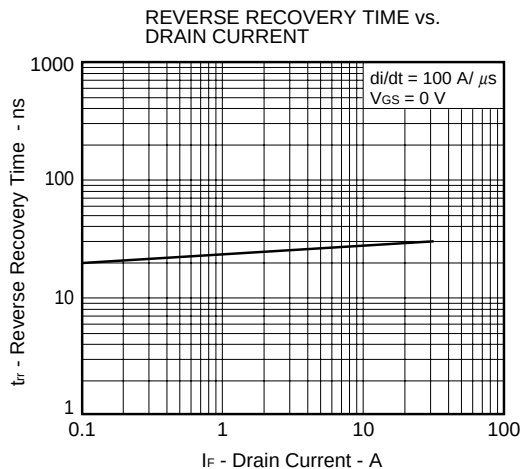
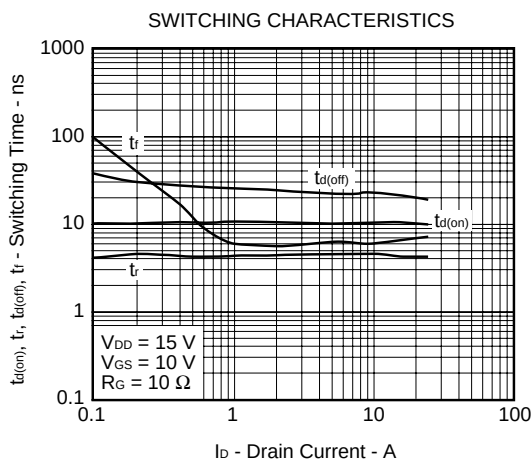
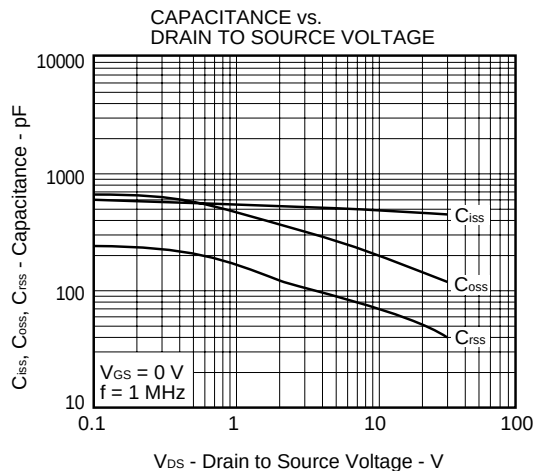
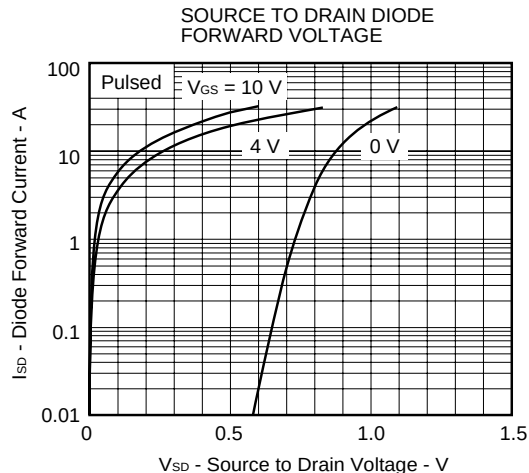
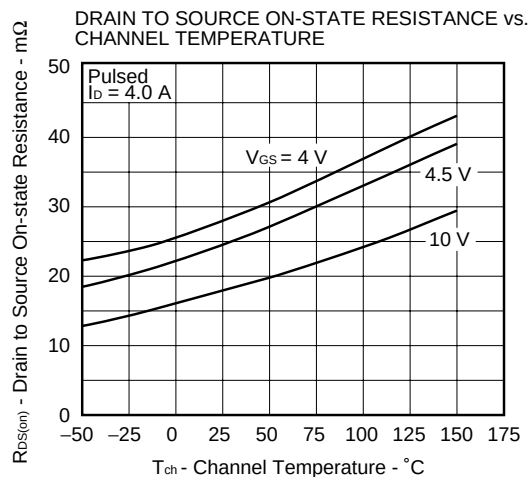


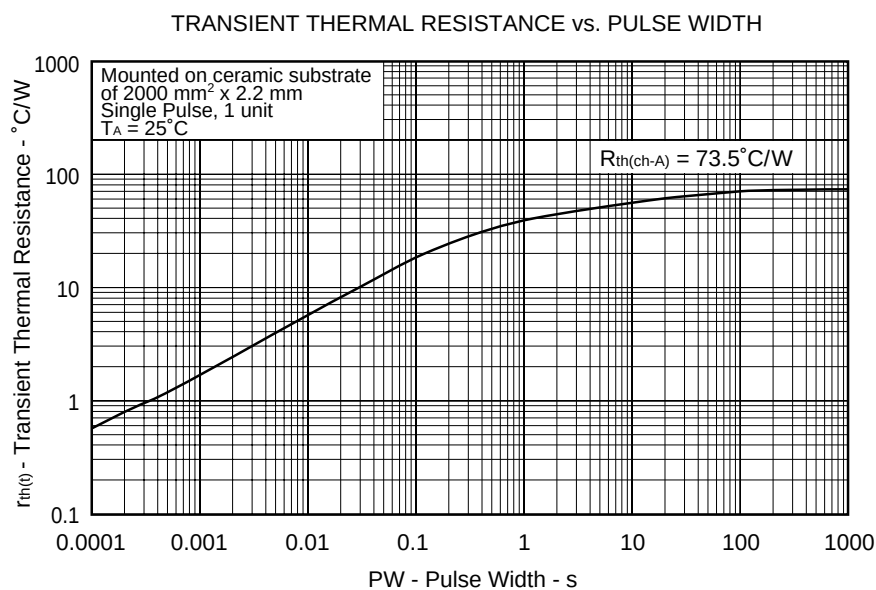
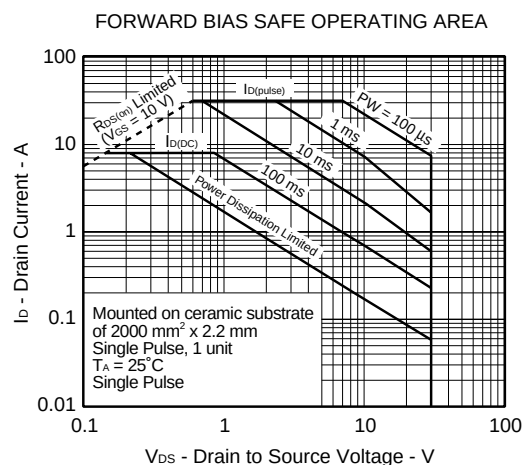
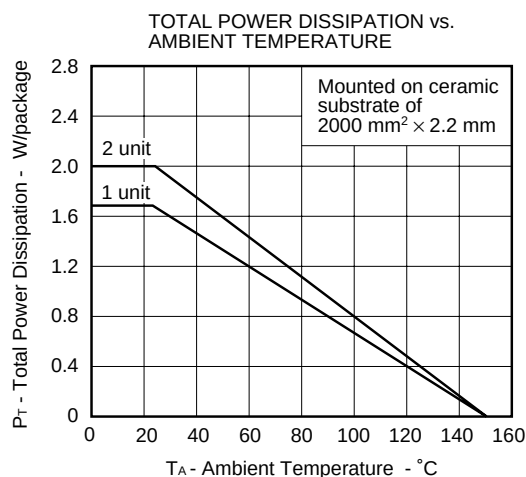
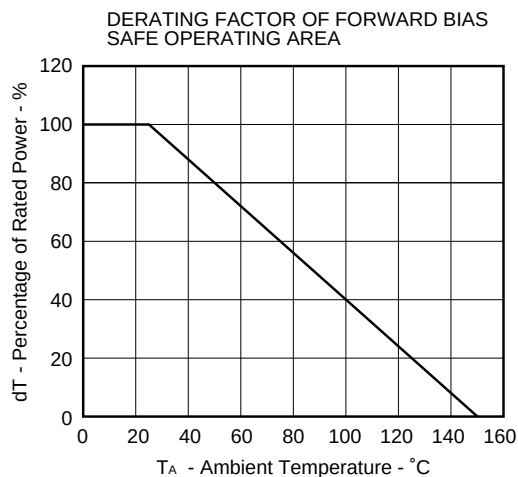
**TEST CIRCUIT 3 GATE CHARGE**

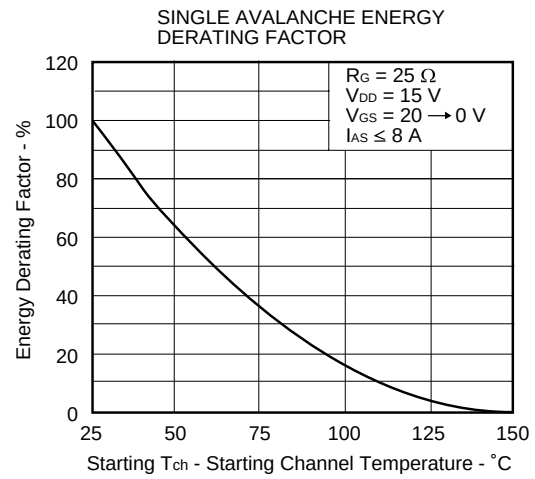
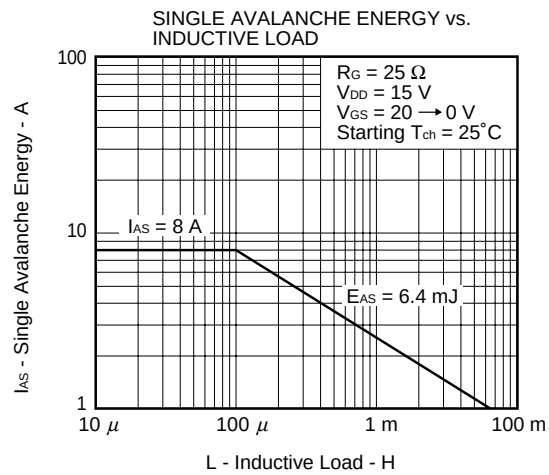


TYPICAL CHARACTERISTICS (TA = 25°C)









[MEMO]

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