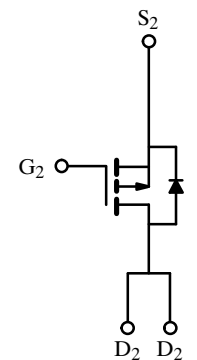
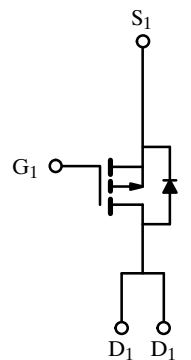
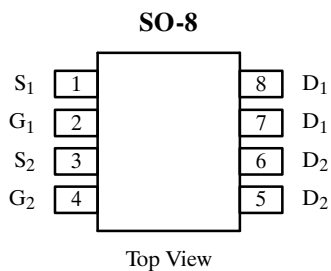


Dual P-Channel Enhancement-Mode MOSFET

Product Summary

| V_{DS} (V) | $r_{DS(on)}$ (Ω) | I_D (A) |
|--------------|---------------------------|-----------|
| -60 | 0.28 @ $V_{GS} = -10$ V | ± 2.0 |
| | 0.50 @ $V_{GS} = -4.5$ V | ± 1.6 |



Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ Unless Otherwise Noted)

| Parameter | Symbol | Limit | Unit | |
|---|----------------|--------------------------|------------------|---|
| Drain-Source Voltage | V_{DS} | -60 | V | |
| Gate-Source Voltage | V_{GS} | ± 20 | | |
| Continuous Drain Current ($T_J = 150^\circ\text{C}$) ^a | I_D | $T_A = 25^\circ\text{C}$ | ± 2.0 | A |
| | | $T_A = 70^\circ\text{C}$ | ± 1.6 | |
| Pulsed Drain Current | I_{DM} | ± 10 | | |
| Continuous Source Current (Diode Conduction) ^a | I_S | -2.0 | | |
| Maximum Power Dissipation ^a | P_D | $T_A = 25^\circ\text{C}$ | 2.0 | W |
| | | $T_A = 70^\circ\text{C}$ | 1.3 | |
| Operating Junction and Storage Temperature Range | T_J, T_{stg} | -55 to 150 | $^\circ\text{C}$ | |

Thermal Resistance Ratings

| Parameter | Symbol | Limit | Unit |
|--|------------|-------|---------------------------|
| Maximum Junction-to-Ambient ^a | R_{thJA} | 62.5 | $^\circ\text{C}/\text{W}$ |

Notes

a. Surface Mounted on FR4 Board, $t \leq 10$ sec.

Subsequent updates to this data sheet may be obtained via facsimile by calling Siliconix FaxBack, 1-408-970-5600. Please request FaxBack document #1217.

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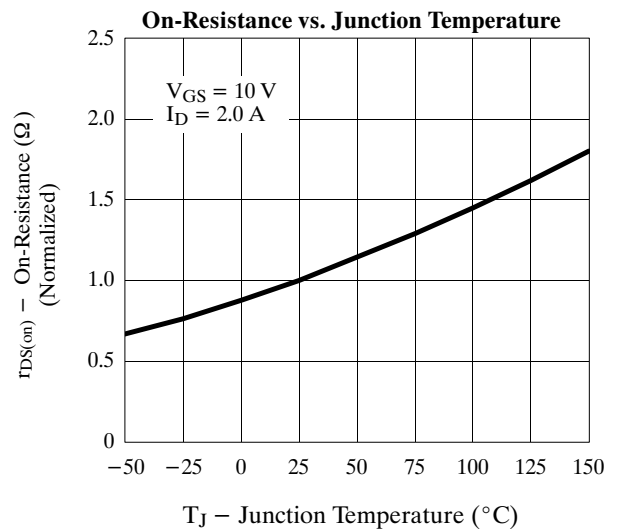
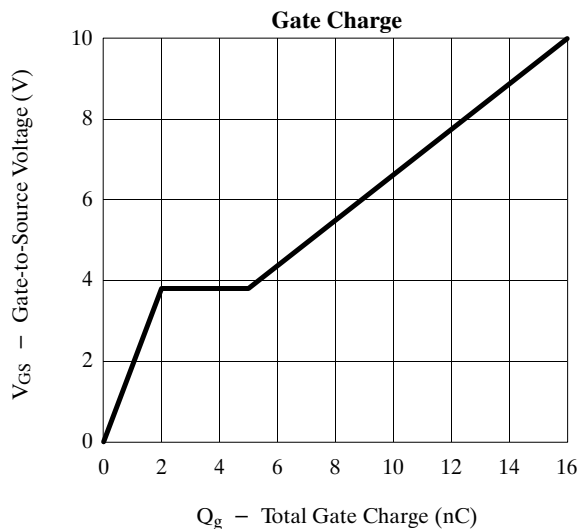
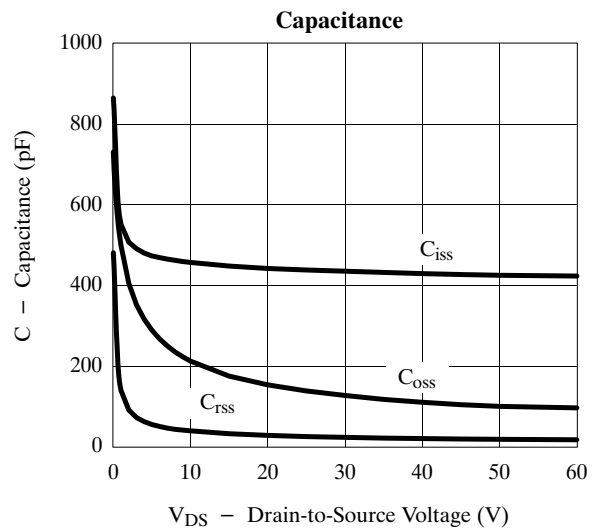
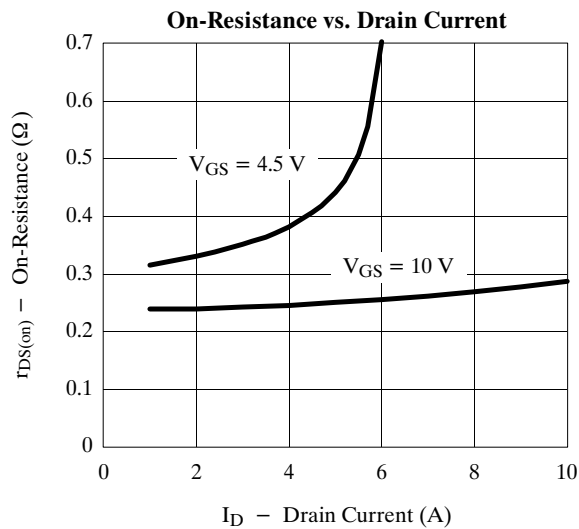
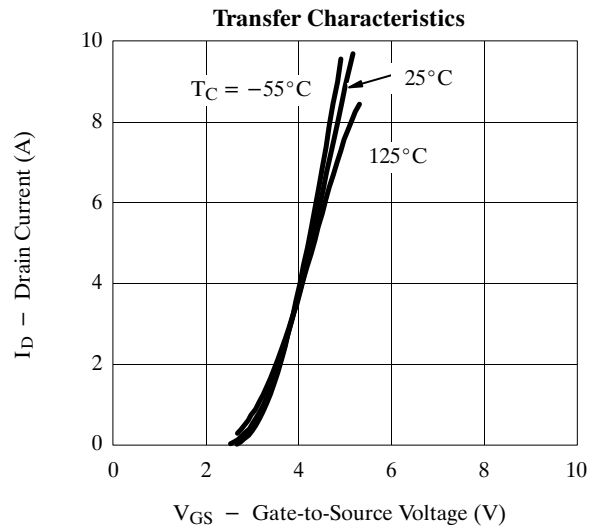
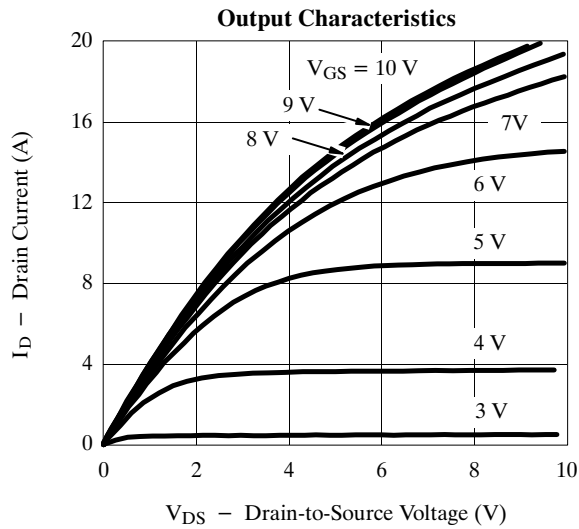
Specifications ($T_J = 25^\circ\text{C}$ Unless Otherwise Noted)

| Parameter | Symbol | Test Condition | Min | Typ ^a | Max | Unit |
|---|--------------|--|---|------------------|-----------|---------------|
| Static | | | | | | |
| Gate Threshold Voltage | $V_{GS(th)}$ | $V_{DS} = V_{GS}, I_D = -250 \mu\text{A}$ | -1 | | | V |
| Gate-Body Leakage | I_{GSS} | $V_{DS} = 0 \text{ V}, V_{GS} = \pm 20 \text{ V}$ | | | ± 100 | nA |
| Zero Gate Voltage Drain Current | I_{DSS} | $V_{DS} = -40 \text{ V}, V_{GS} = 0 \text{ V}$ | | | -2 | μA |
| | | $V_{DS} = -40 \text{ V}, V_{GS} = 0 \text{ V}, T_J = 55^\circ\text{C}$ | | | -25 | |
| On-State Drain Current ^b | $I_{D(on)}$ | $V_{DS} \leq -5 \text{ V}, V_{GS} = -10 \text{ V}$ | -10 | | | A |
| Drain-Source On-State Resistance ^b | $r_{DS(on)}$ | $V_{GS} = -10 \text{ V}, I_D = -2.0 \text{ A}$ | | | 0.28 | Ω |
| | | $V_{GS} = -4.5 \text{ V}, I_D = -1.6 \text{ A}$ | | | 0.50 | |
| Forward Transconductance ^b | g_{fs} | $V_{DS} = -15 \text{ V}, I_D = -2.0 \text{ A}$ | | 5.0 | | S |
| Diode Forward Voltage ^b | V_{SD} | $I_S = -2.0 \text{ A}, V_{GS} = 0 \text{ V}$ | | -0.9 | -1.2 | V |
| Dynamic^a | | | | | | |
| Total Gate Charge | Q_g | $V_{DS} = -30 \text{ V}, V_{GS} = -10 \text{ V}, I_D = -2.0 \text{ A}$ | | 16 | 30 | nC |
| Gate-Source Charge | Q_{gs} | | | 2.0 | | |
| Gate-Drain Charge | Q_{gd} | | | 3 | | |
| Turn-On Delay Time | $t_{d(on)}$ | $V_{DD} = -30 \text{ V}, R_L = 30 \Omega$ $I_D \cong -1 \text{ A}, V_{GEN} = -10 \text{ V}, R_G = 6 \Omega$ | | 8 | 25 | ns |
| Rise Time | t_r | | | 11 | 30 | |
| Turn-Off Delay Time | $t_{d(off)}$ | | | 28 | 60 | |
| Fall Time | t_f | | | 14 | 40 | |
| Source-Drain Reverse Recovery Time | t_{rr} | | $I_F = -2.0 \text{ A}, di/dt = 100 \text{ A}/\mu\text{s}$ | | 65 | |

Notes

- a. Guaranteed by design, not subject to production testing.
- b. Pulse test; pulse width $\leq 300 \mu\text{s}$, duty cycle $\leq 2\%$.

Typical Characteristics (25°C Unless Otherwise Noted)



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Typical Characteristics (25°C Unless Otherwise Noted)

