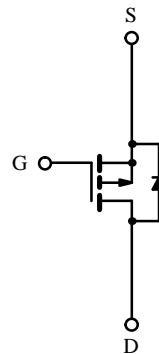
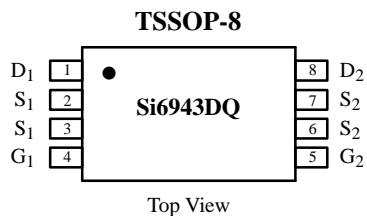


Dual P-Channel Enhancement-Mode MOSFET

Product Summary

| V_{DS} (V) | $r_{DS(on)}$ (Ω) | I_D (A) |
|--------------|---------------------------|-----------|
| -12 | 0.10 @ $V_{GS} = -4.5$ V | ± 2.5 |
| | 0.18 @ $V_{GS} = -2.5$ V | ± 1.9 |



P-Channel MOSFET

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

| Parameter | Symbol | Limit | Unit |
|---|----------------|--------------------------|------------------|
| Drain-Source Voltage | V_{DS} | -12 | V |
| Gate-Source Voltage | V_{GS} | ± 8 | |
| Continuous Drain Current ($T_J = 150^\circ\text{C}$) ^a | I_D | $T_A = 25^\circ\text{C}$ | A |
| | | $T_A = 70^\circ\text{C}$ | |
| Pulsed Drain Current | I_{DM} | ± 20 | |
| Continuous Source Current (Diode Conduction) ^a | I_S | ± 1 | |
| Maximum Power Dissipation ^a | P_D | $T_A = 25^\circ\text{C}$ | W |
| | | $T_A = 70^\circ\text{C}$ | |
| 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} | 125 | $^\circ\text{C}/\text{W}$ |

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 #1809. A SPICE Model data sheet is available for this product (FaxBack document #5142).

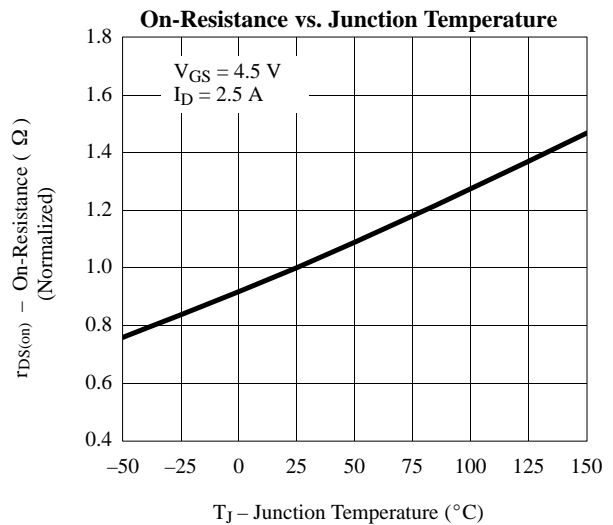
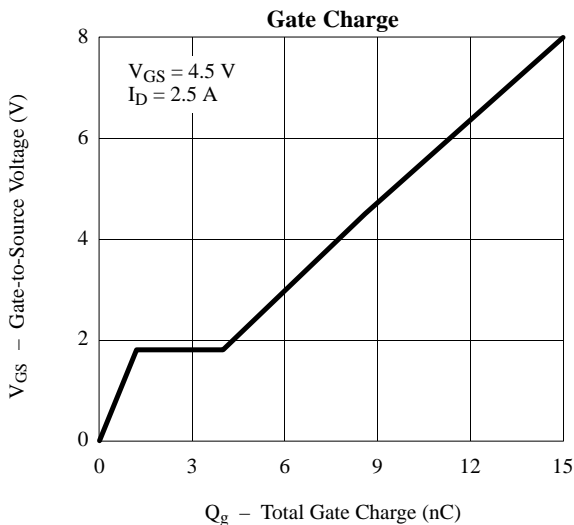
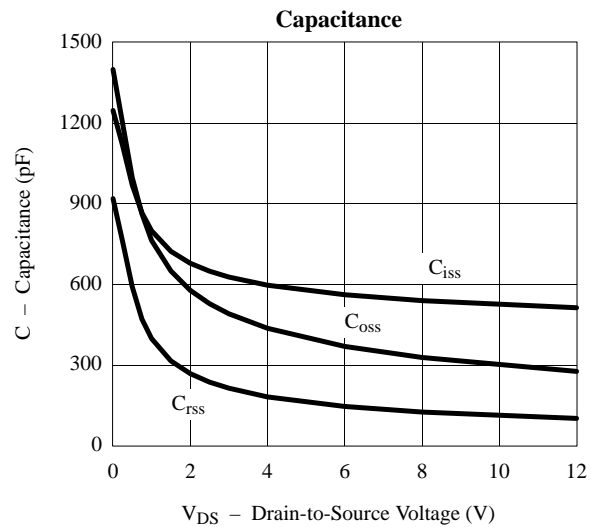
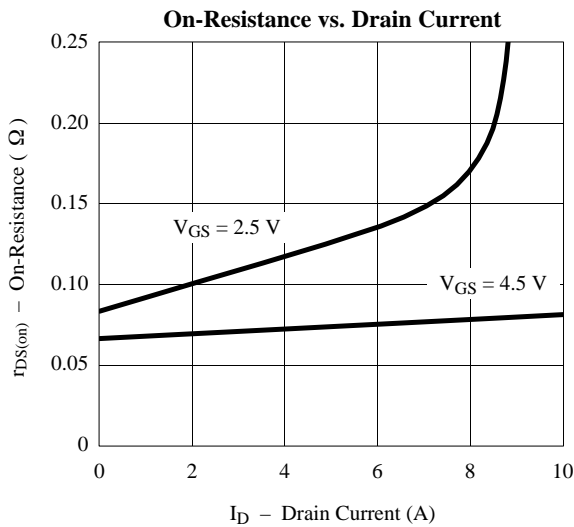
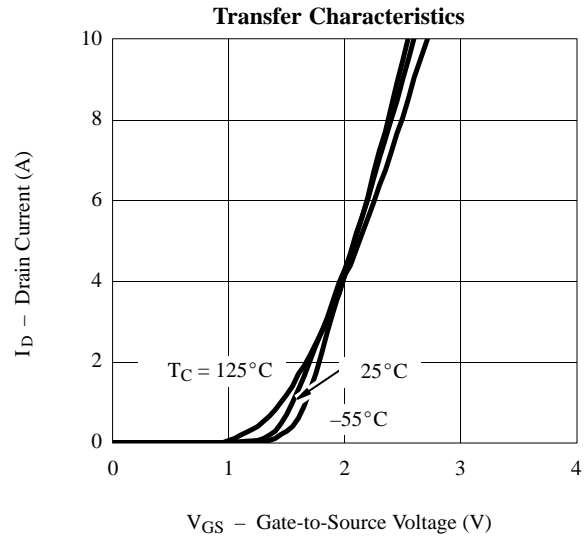
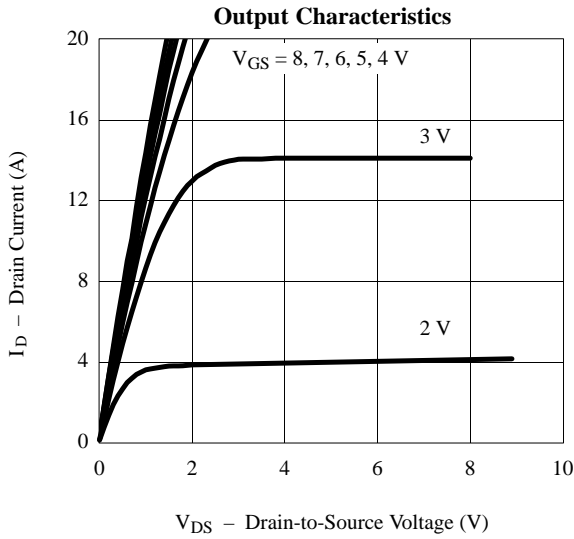
Specifications ($T_J = 25^\circ\text{C}$ Unless Otherwise Noted)

| Parameter | Symbol | Test Condition | Min | Typ | Max | Unit |
|---|--------------|---|---|-----|-----------|---------------|
| Static | | | | | | |
| Gate Threshold Voltage | $V_{GS(th)}$ | $V_{DS} = V_{GS}, I_D = 250 \mu\text{A}$ | -0.6 | | | V |
| Gate-Body Leakage | I_{GSS} | $V_{DS} = 0 \text{ V}, V_{GS} = \pm 8 \text{ V}$ | | | ± 100 | nA |
| Zero Gate Voltage Drain Current | I_{DSS} | $V_{DS} = -12 \text{ V}, V_{GS} = 0 \text{ V}$ | | | -1 | μA |
| | | $V_{DS} = -12 \text{ V}, V_{GS} = 0 \text{ V}, T_J = 70^\circ\text{C}$ | | | -5 | |
| On-State Drain Current ^a | $I_{D(on)}$ | $V_{DS} = -5 \text{ V}, V_{GS} = -4.5 \text{ V}$ | -10 | | | A |
| | | $V_{DS} = -5 \text{ V}, V_{GS} = -2.5 \text{ V}$ | -4 | | | |
| Drain-Source On-State Resistance ^a | $r_{DS(on)}$ | $V_{GS} = -4.5 \text{ V}, I_D = 2.5 \text{ A}$ | | | 0.10 | Ω |
| | | $V_{GS} = -2.5 \text{ V}, I_D = 1.9 \text{ A}$ | | | 0.18 | |
| Forward Transconductance ^a | g_{fs} | $V_{DS} = -9 \text{ V}, I_D = -2.5 \text{ A}$ | | | | S |
| Diode Forward Voltage ^a | V_{SD} | $I_S = -1.0 \text{ A}, V_{GS} = 0 \text{ V}$ | | | -1.2 | V |
| Dynamic^b | | | | | | |
| Total Gate Charge | Q_g | $V_{DS} = -6 \text{ V}, V_{GS} = -4.5 \text{ V}, I_D = -2.5 \text{ A}$ | | 9 | 20 | nC |
| Gate-Source Charge | Q_{gs} | | | 2 | | |
| Gate-Drain Charge | Q_{gd} | | | 3 | | |
| Turn-On Delay Time | $t_{d(on)}$ | $V_{DD} = -6 \text{ V}, R_L = 6 \Omega$ $I_D \cong -1.0 \text{ A}, V_{GEN} = -4.5 \text{ V}, R_G = 6 \Omega$ | | 21 | 40 | ns |
| Rise Time | t_r | | | 35 | 70 | |
| Turn-Off Delay Time | $t_{d(off)}$ | | | 43 | 80 | |
| Fall Time | t_f | | | 22 | 40 | |
| Source-Drain Reverse Recovery Time | t_{rr} | | $I_F = -1.0 \text{ A}, di/dt = 100 \text{ A}/\mu\text{s}$ | | 35 | |

Notes

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

Typical Characteristics (25°C Unless Otherwise Noted)



Typical Characteristics (25°C Unless Otherwise Noted)

