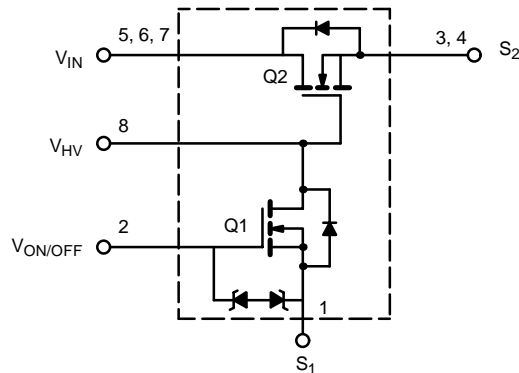
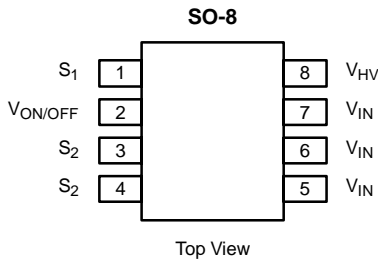




Load Switch with Level-Shift

| PRODUCT SUMMARY | | |
|-----------------|---------------------------|-----------|
| V_{DS2} (V) | $r_{DS(on)}$ (Ω) | I_D (A) |
| 30 | 0.024 @ $V_{GS2} = 10$ V | 5.5 |
| | 0.035 @ $V_{GS2} = 4.5$ V | 4.5 |



| ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED) | | | |
|---|-------------------------|------------|------------------|
| Parameter | Symbol | Limit | Unit |
| Input Voltage | V_{IN} | 30 | V |
| ON/OFF Voltage | $V_{ON/OFF}$ | 8 | |
| Load Current | Continuous ^a | 5.5 | A |
| | Pulsed ^b | ± 20 | |
| Continuous Intrinsic Diode Conduction ^a | I_S | -1.15 | |
| Maximum Power Dissipation ^a | P_D | 1.25 | W |
| Operating Junction and Storage Temperature Range | T_J, T_{stg} | -55 to 150 | $^\circ\text{C}$ |
| ESD Rating, MIL-STD-883D Human Body Model (100 pF, 1500 Ω) | ESD | 3 | kV |

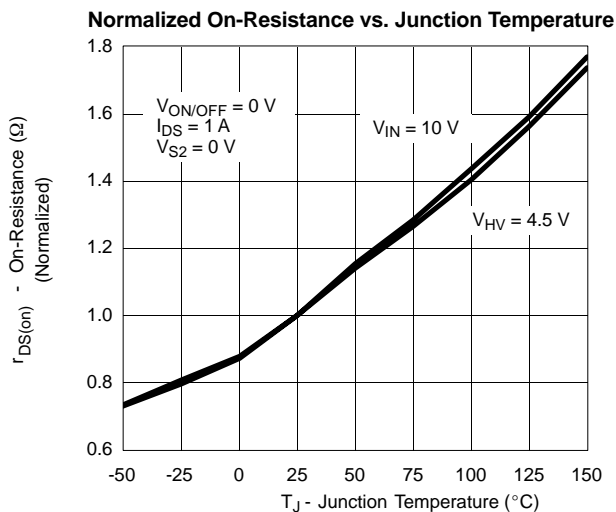
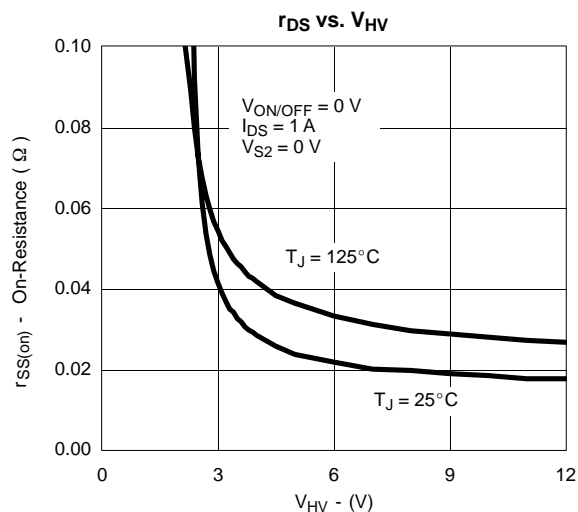
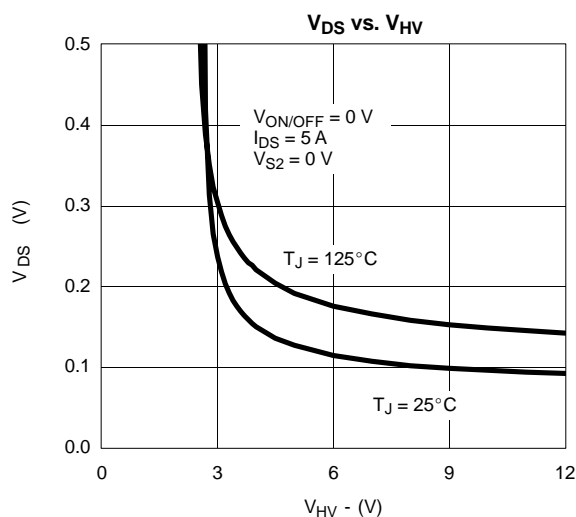
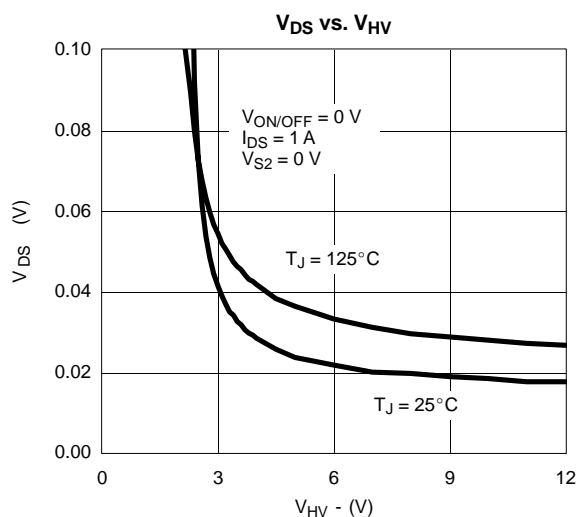
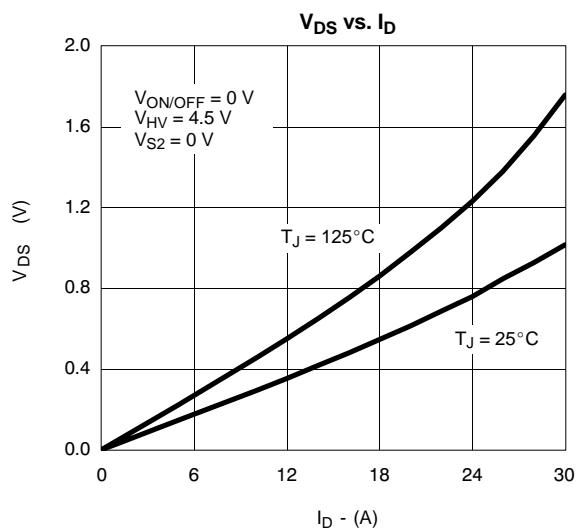
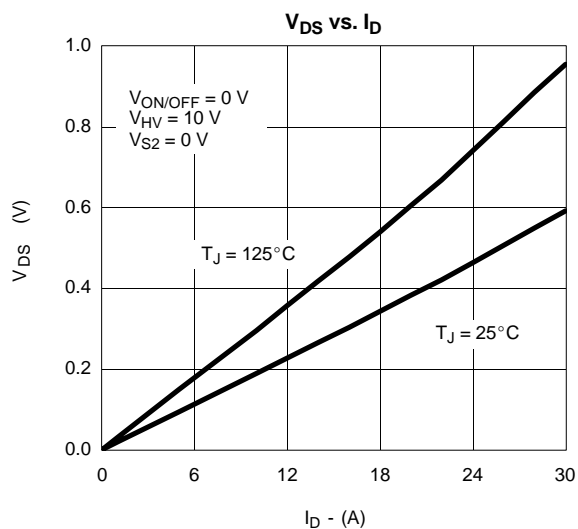
| THERMAL RESISTANCE RATINGS | | | | |
|---|------------|---------|---------|--------------------|
| Parameter | Symbol | Typical | Maximum | Unit |
| Maximum Junction-to-Ambient (t = steady state) ^a | R_{thJA} | 83 | 100 | $^\circ\text{C/W}$ |
| Maximum Junction-to-Foot (Q2) | R_{thJC} | 25 | 30 | |

| SPECIFICATIONS ($T_J = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED) | | | | | | |
|---|--------------|--|-----|-------|-------|---------------|
| Parameter | Symbol | Test Condition | Min | Typ | Max | Unit |
| OFF Characteristics | | | | | | |
| Reverse Leakage Current | I_{FL} | $V_{IN} = 30$ V, $V_{ON/OFF} = 0$ V, $V_{HV} = 0$ V | | | 1 | μA |
| Diode Forward Voltage | V_{SD} | $I_S = -1.15$ A | | 0.7 | 1 | V |
| ON Characteristics | | | | | | |
| On-Resistance (Q2) | $r_{DS(on)}$ | $V_{ON/OFF} = 0$ V, $I_D = 5.5$ A, $V_{HV} = 10$ V, $V_{S2} = 0$ V | | 0.019 | 0.024 | Ω |
| | | $V_{ON/OFF} = 0$ V, $I_D = 4.5$ A, $V_{HV} = 4.5$ V, $V_{S2} = 0$ V | | 0.028 | 0.035 | |
| On-State (Q2) Drain-Current | $I_{D(on)}$ | $V_{IN} - V_{OUT} \leq 0.1$ V, $V_{IN} = 5$ V, $V_{ON/OFF} = 0$ V, $V_{HV} = 10$ V | 15 | | | A |

Notes

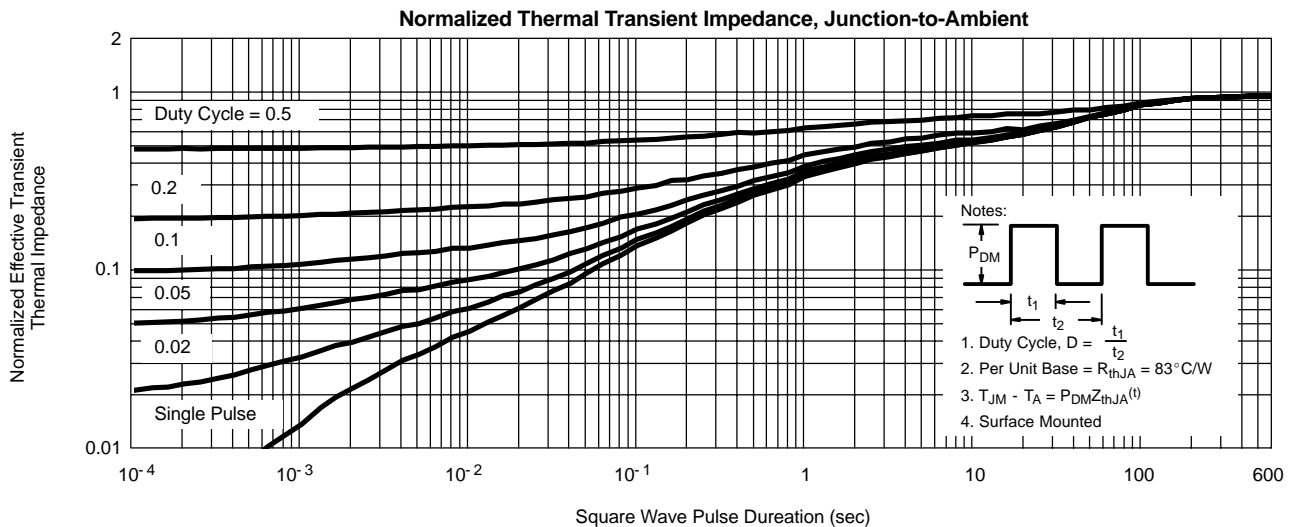
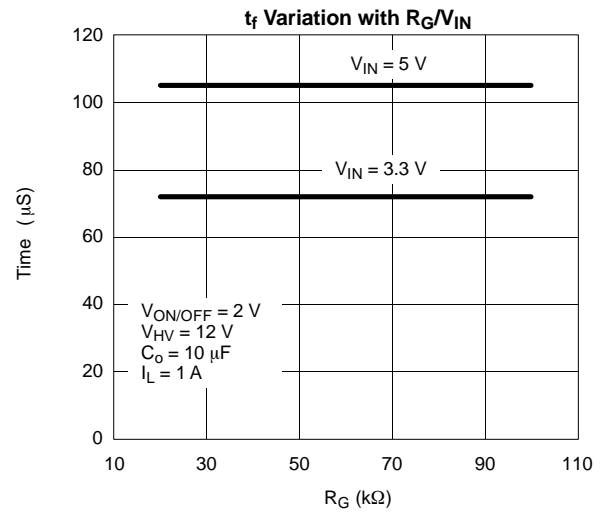
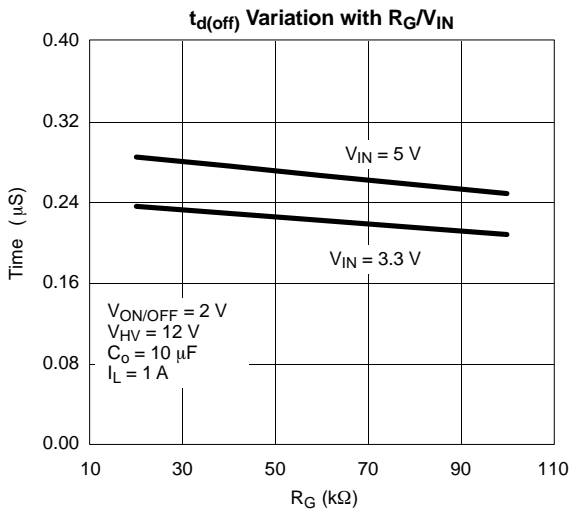
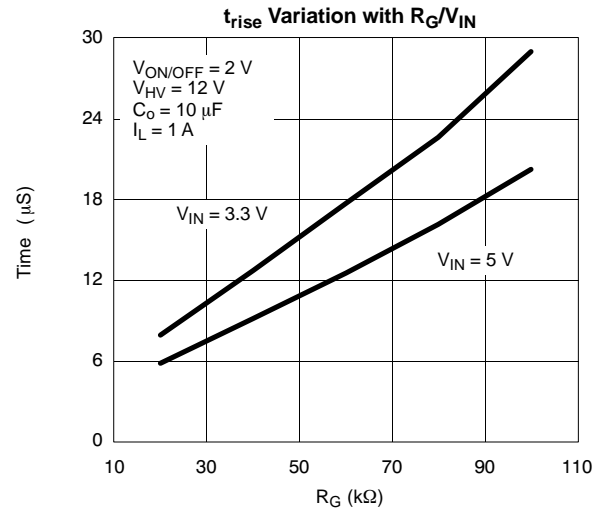
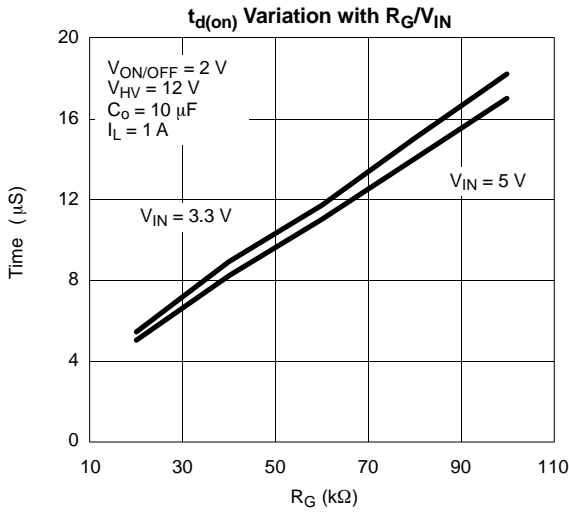
- a. Surface Mounted on FR4 Board.
- b. Pulse test: pulse width ≤ 300 μs , duty cycle $\leq 2\%$.

TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)

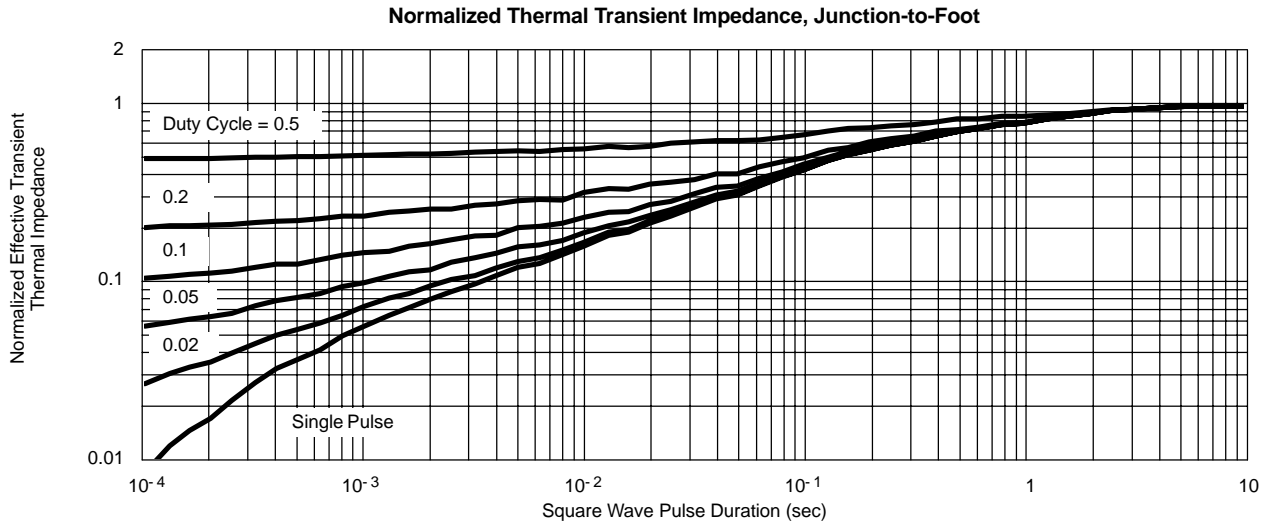




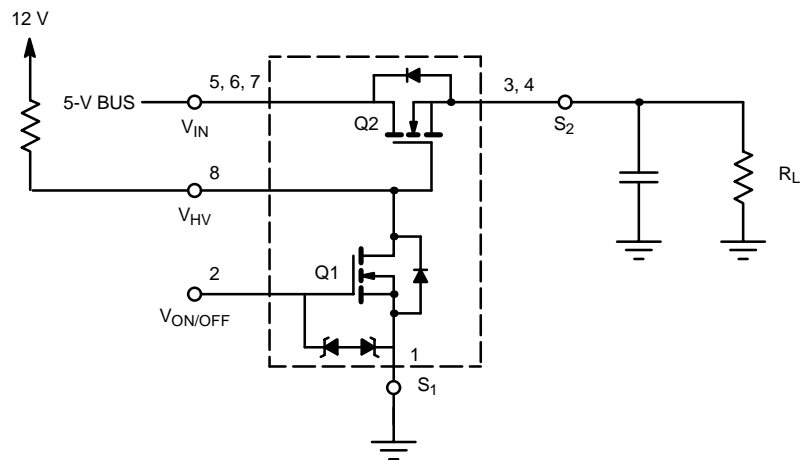
TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)



TYPICAL CHARACTERISTICS (25 °C UNLESS NOTED)



TYPICAL APPLICATION CIRCUIT



NOTE: Voltage difference between pull-up voltage, 12 V, and BUS voltage, 5 V, should be greater than 4.5 V.