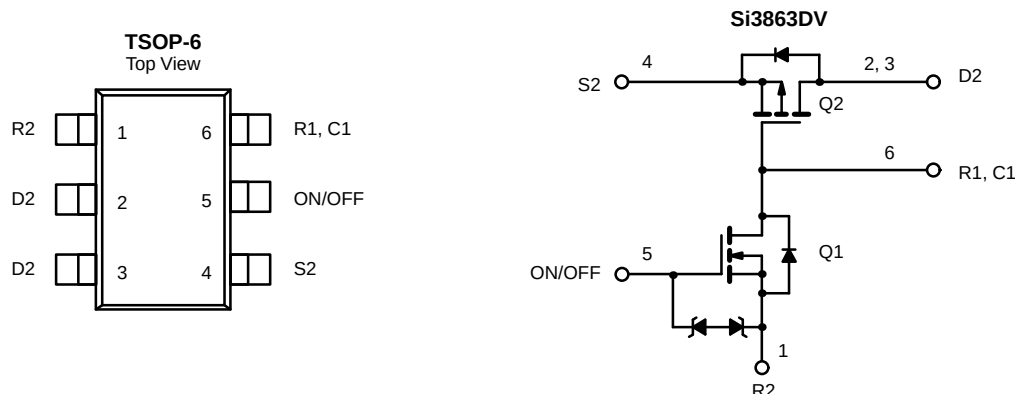


FUNCTIONAL BLOCK DIAGRAM

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

Parameter	Symbol	Limit	Unit
Input Voltage	V_{IN}	12	V
ON/OFF Voltage	$V_{ON/OFF}$	8	
Load Current	Continuous ^{a, b}	± 2.5	A
	Pulsed ^{b, c}	± 5	
Continuous Intrinsic Diode Conduction ^a	I_S	-1	
Maximum Power Dissipation ^a	P_D	0.83	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

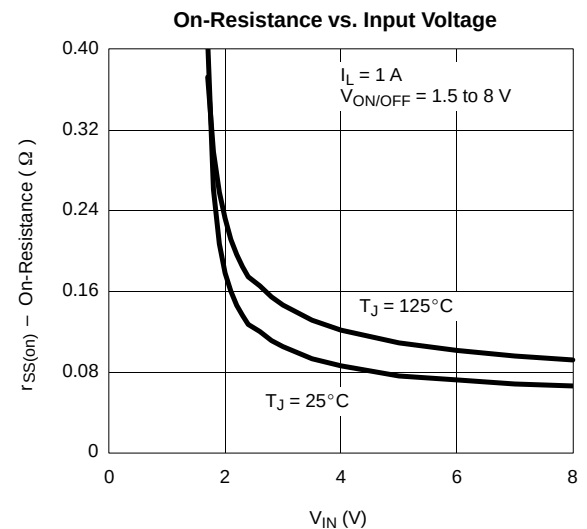
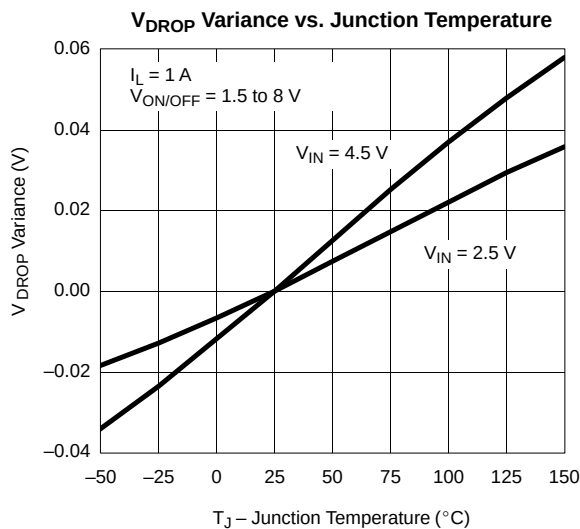
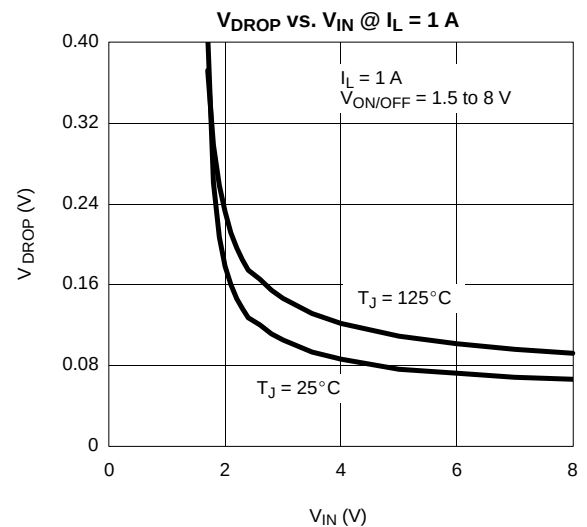
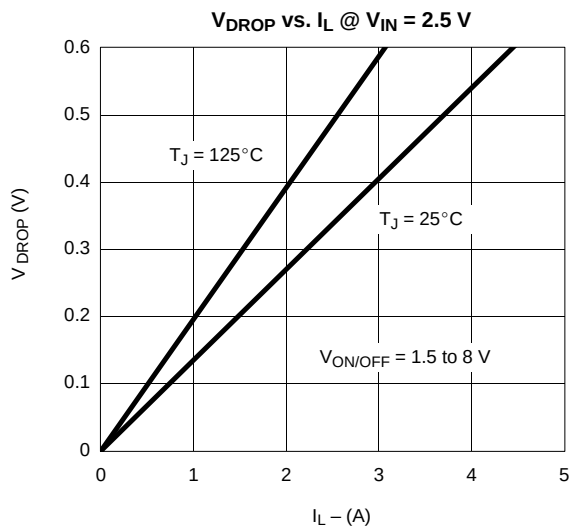
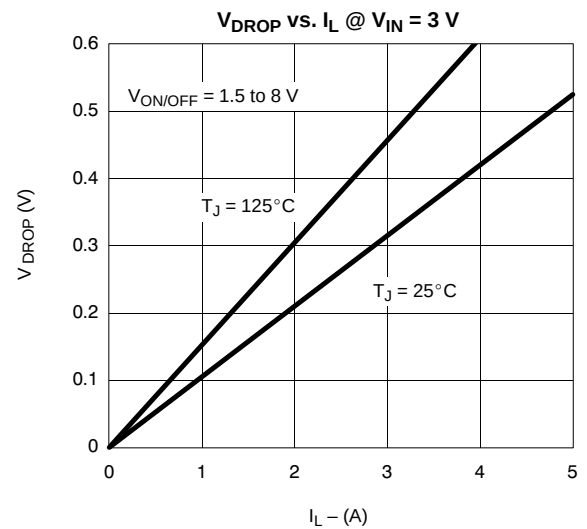
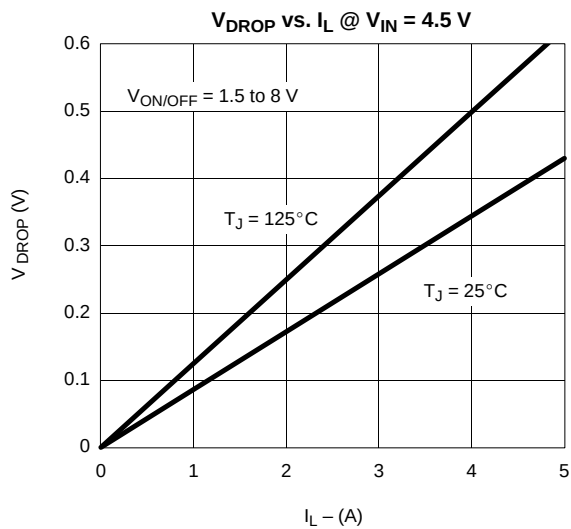
Parameter	Symbol	Typical	Maximum	Unit
Maximum Junction-to-Ambient (continuous current) ^a	R_{thJA}	120	150	$^\circ\text{C/W}$
Maximum Junction-to-Foot (Q2)	R_{thJC}	35	50	

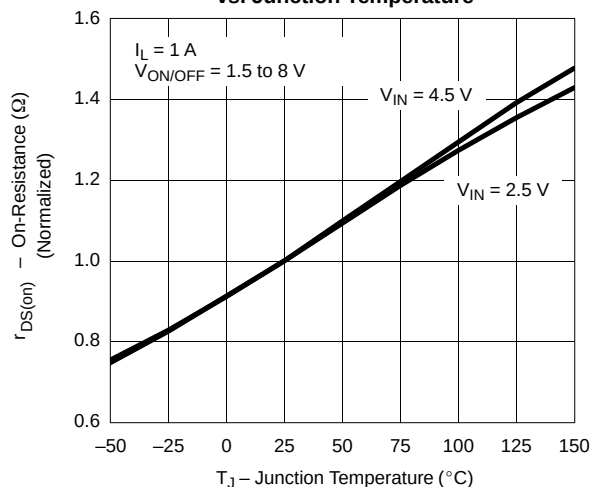
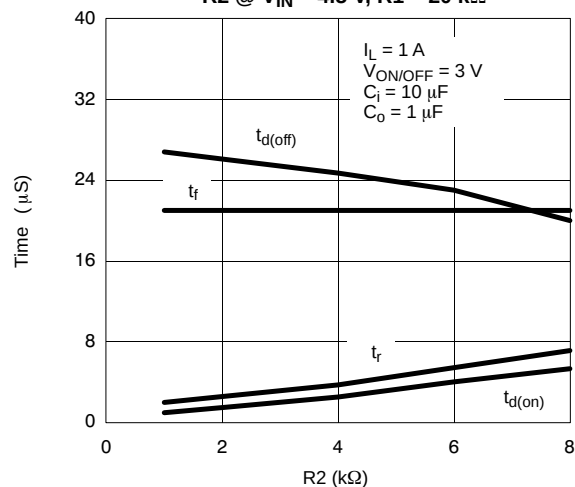
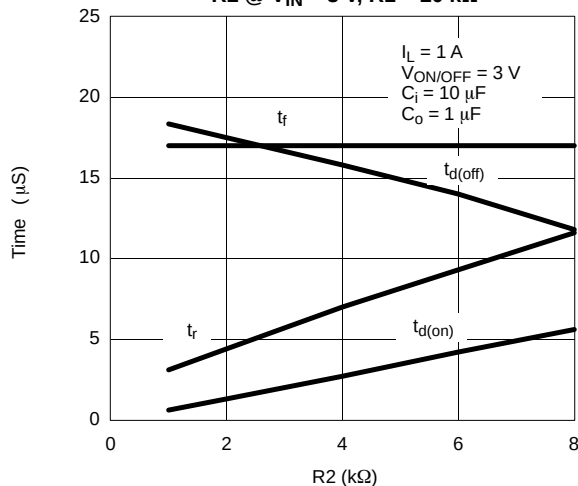
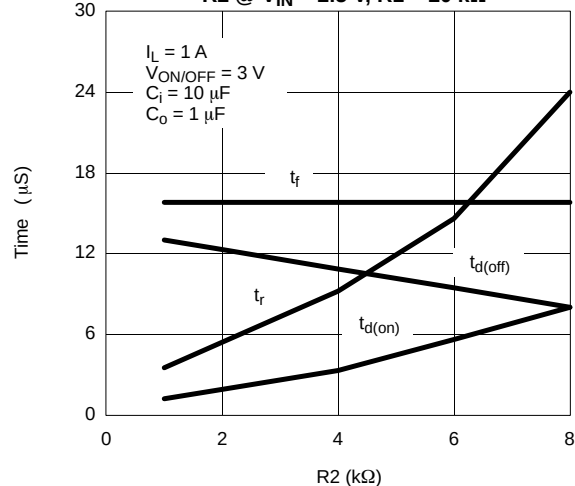
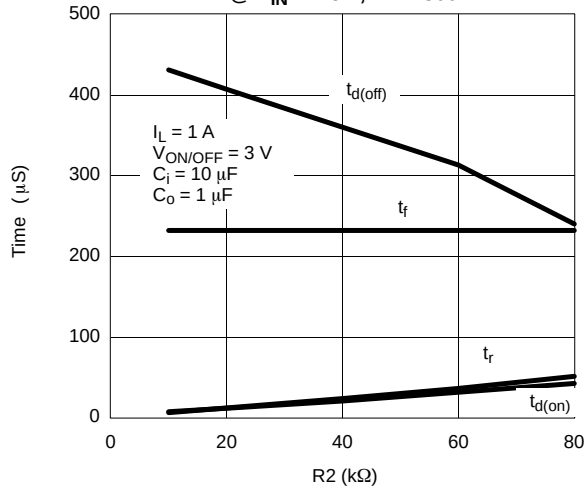
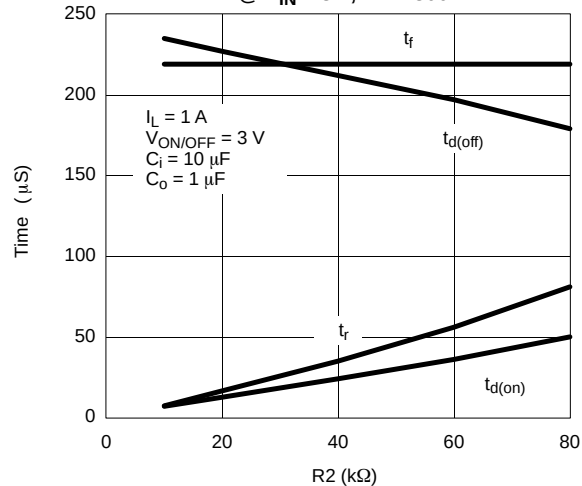
SPECIFICATIONS ($T_J = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

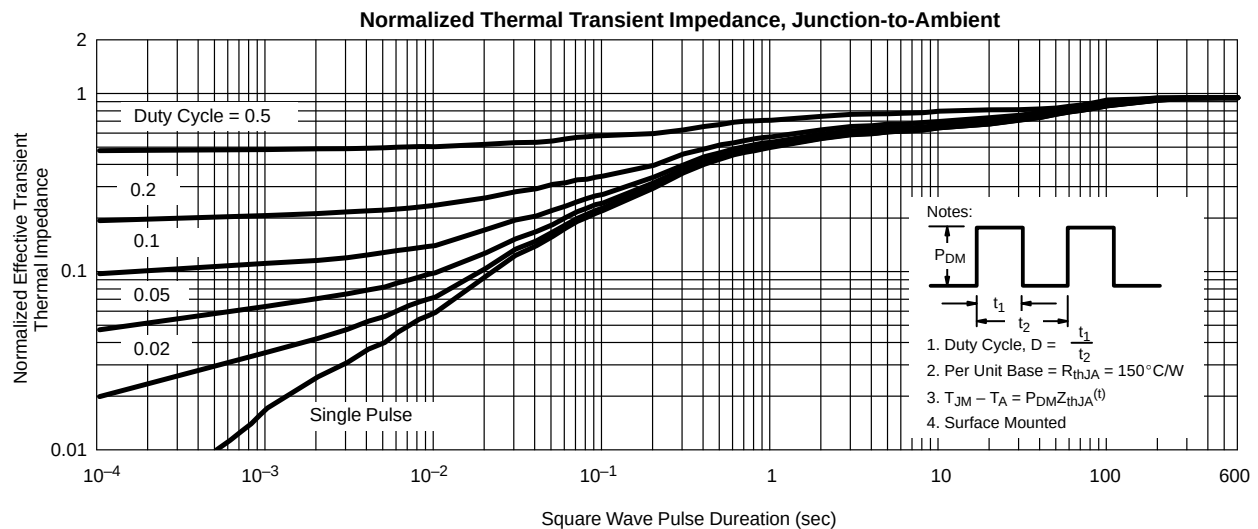
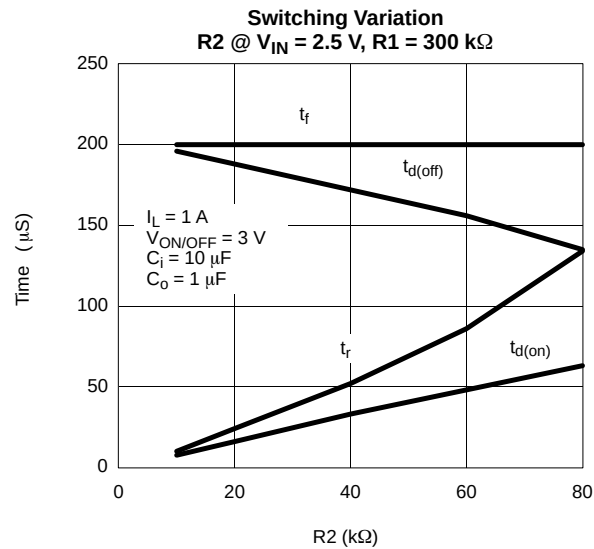
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
OFF Characteristics						
Reverse Leakage Current	I_{FL}	$V_{IN} = 12\text{ V}, V_{ON/OFF} = 0\text{ V}$			1	μA
Diode Forward Voltage	V_{SD}	$I_S = -1\text{ A}$		-0.75	-1	V
ON Characteristics						
Input Voltage Range	V_{IN}		2.5		12	V
On-Resistance (p-channel) @ 1 A	$r_{DS(on)}$	$V_{ON/OFF} = 1.5\text{ V}$ $I_D = 1\text{ A}$	$V_{IN} = 4.5\text{ V}$	0.086	0.105	Ω
			$V_{IN} = 3.0\text{ V}$	0.105	0.125	
			$V_{IN} = 2.5\text{ V}$	0.135	0.165	
On-State (p-channel) Drain-Current	$I_{D(on)}$	$V_{IN-OUT} \leq 0.2\text{ V}, V_{IN} = 5\text{ V}, V_{ON/OFF} = 1.5\text{ V}$	1			A
		$V_{IN-OUT} \leq 0.3\text{ V}, V_{IN} = 3\text{ V}, V_{ON/OFF} = 1.5\text{ V}$	1			

Notes

- a. Surface Mounted on FR4 Board.
b. $V_{IN} = 12\text{ V}, V_{ON/OFF} = 8\text{ V}, T_A = 25^\circ\text{C}$.
c. Pulse test: pulse width $\leq 300\text{ }\mu\text{s}$, duty cycle $\leq 2\%$.

**TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)**

TYPICAL CHARACTERISTICS (25 °C UNLESS NOTED)
**Normalized On-Resistance
vs. Junction Temperature**

**Switching Variation
R2 @ $V_{IN} = 4.5 \text{ V}$, R1 = 20 k Ω**

**Switching Variation
R2 @ $V_{IN} = 3 \text{ V}$, R1 = 20 k Ω**

**Switching Variation
R2 @ $V_{IN} = 2.5 \text{ V}$, R1 = 20 k Ω**

**Switching Variation
R2 @ $V_{IN} = 4.5 \text{ V}$, R1 = 300 k Ω**

**Switching Variation
R2 @ $V_{IN} = 3 \text{ V}$, R1 = 300 k Ω**


**TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)**



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