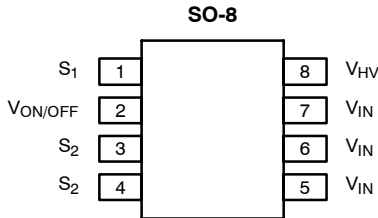




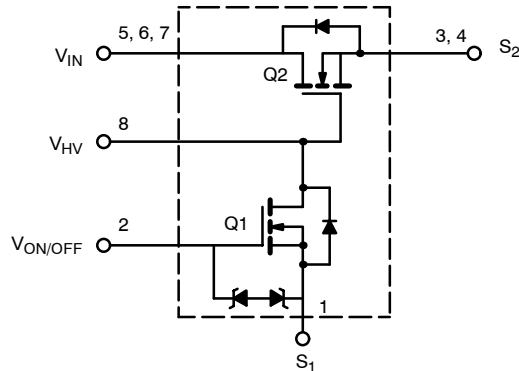
Load Switch with Level-Shift

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



Ordering Information: Si4702DY
Si4702DY-T1 (with Tape and Reel)



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

Parameter		Symbol	Limit	Unit
Input Voltage		V_{IN}	30	V
Q2 Gate-Drive Voltage Referenced to S1 or S2		V_{HV}	20	
ON/OFF Voltage		$V_{ON/OFF}$	8	
Load Current	Continuous ^a	I_L	5.5	A
	Pulsed ^b		± 20	
Continuous Intrinsic Diode Conduction ^a		I_S	-1.15	W
Maximum Power Dissipation ^a		P_D	1.25	
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 ($t = \text{steady state}$) ^a	R_{thJA}	83	100	$^\circ\text{C/W}$
Maximum Junction-to-Foot (Q2)	R_{thJC}	25	30	

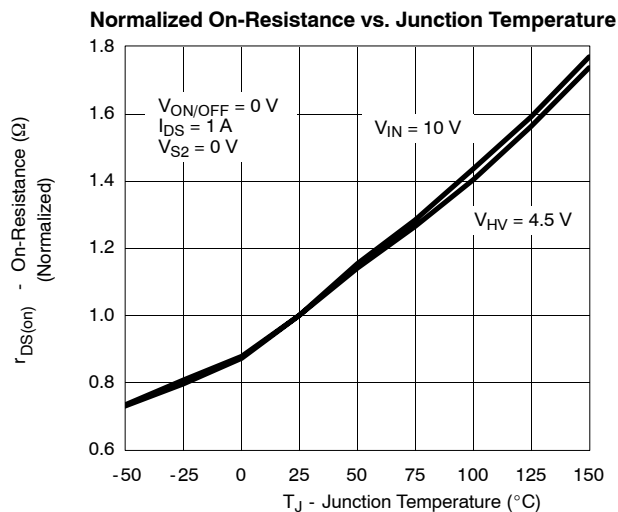
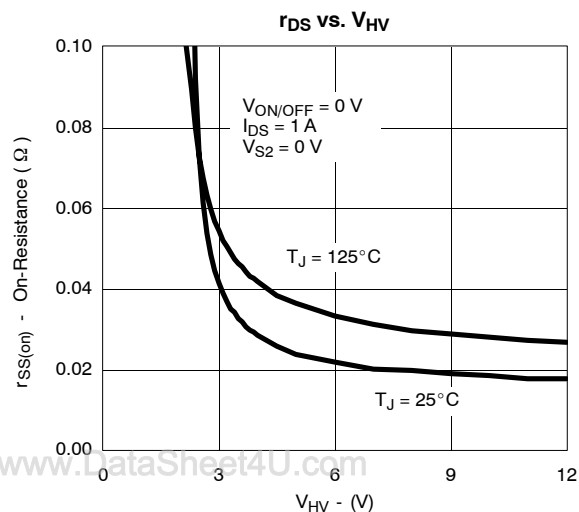
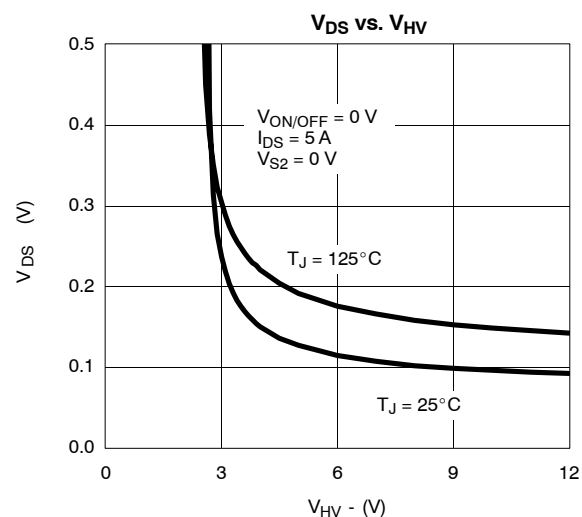
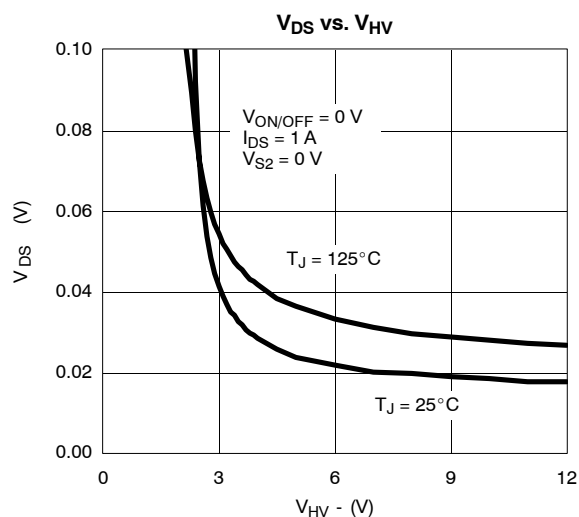
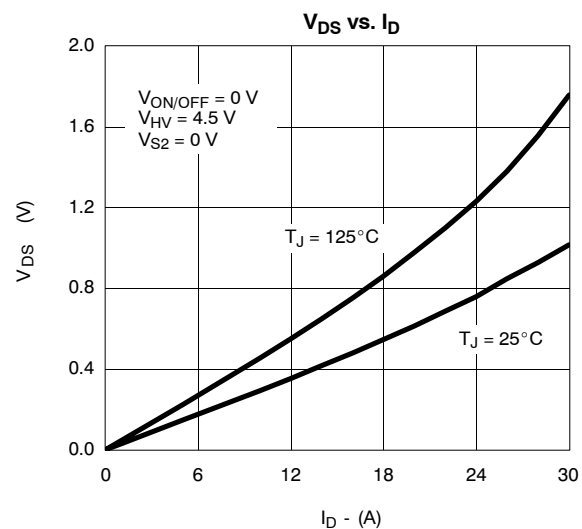
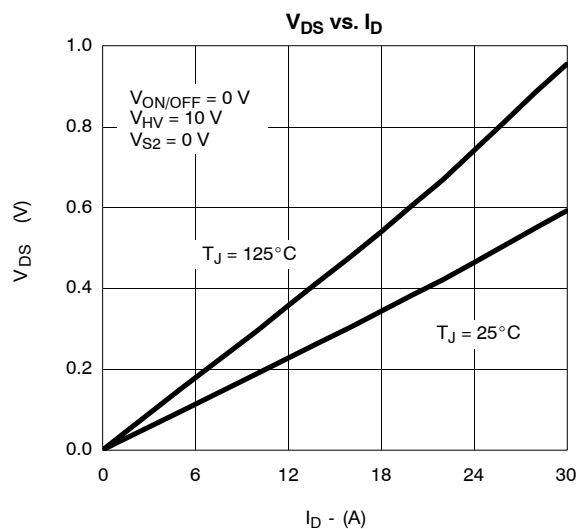
SPECIFICATIONS ($T_J = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

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

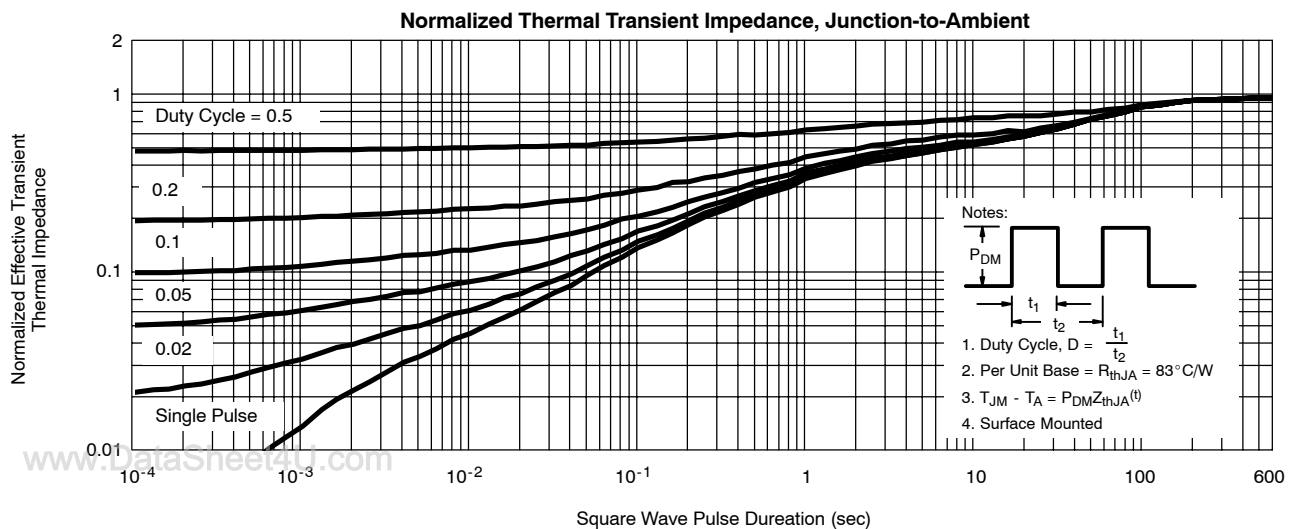
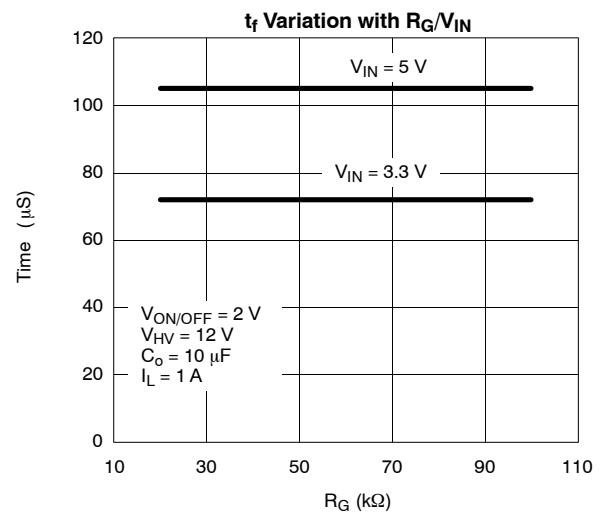
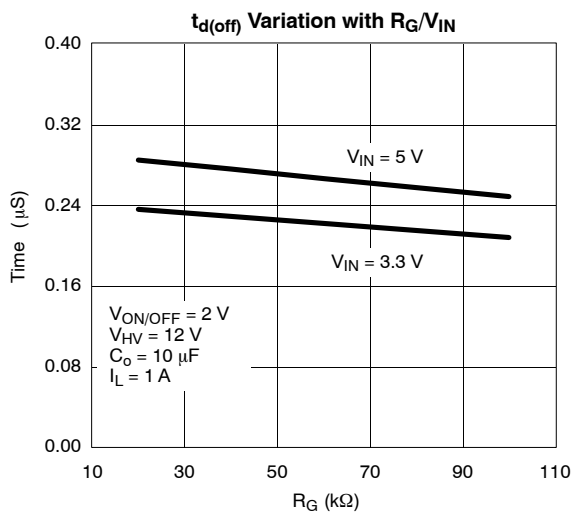
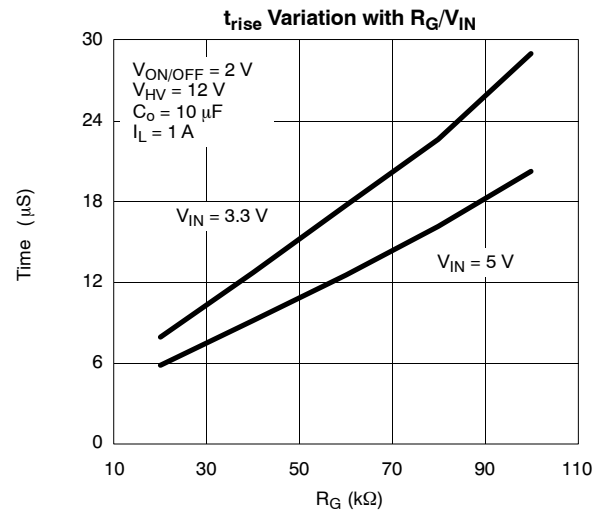
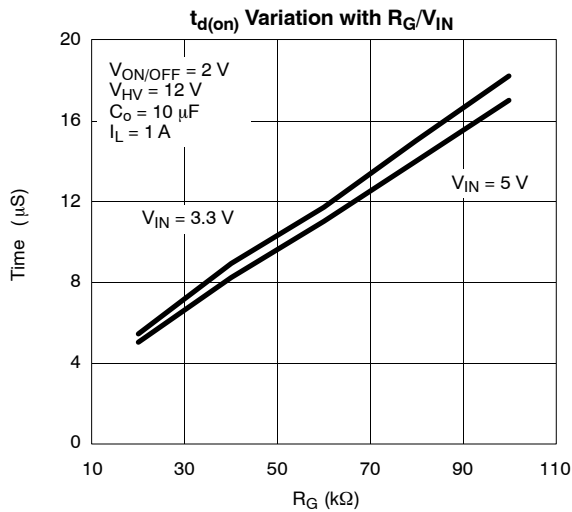
- a. Surface Mounted on FR4 Board.
b. Pulse test: pulse width ≤ 300 μs , duty cycle $\leq 2\%$.

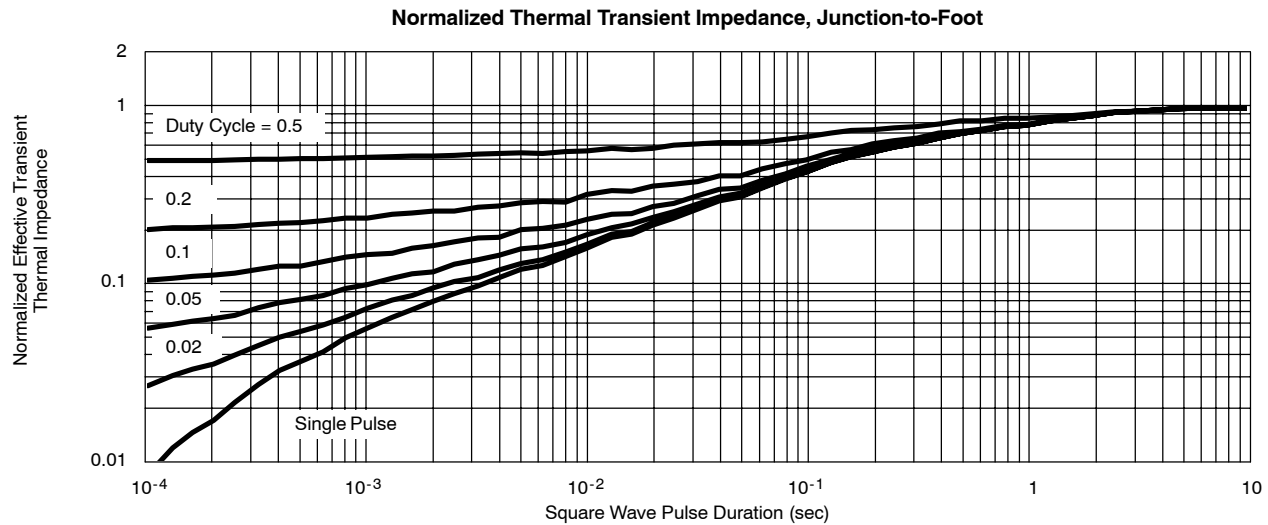
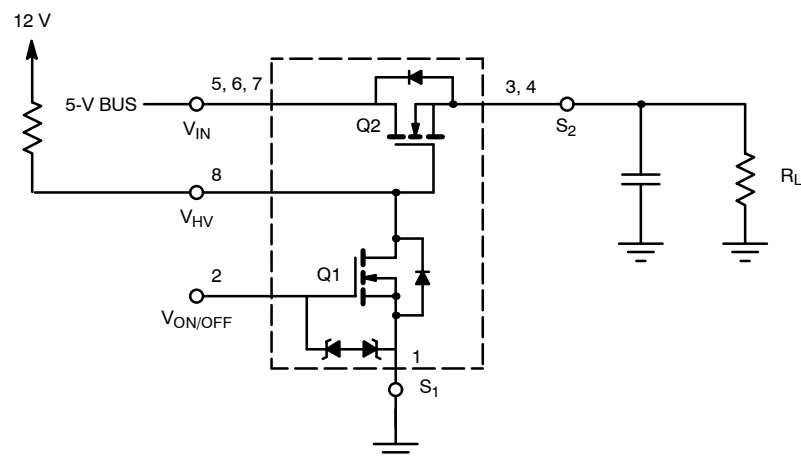
TYPICAL CHARACTERISTICS (25 °C UNLESS NOTED)





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.