

1



ABSOLUTE MAXIMUM RATINGS

V ₊ to V ₋	44 V
GND to V ₋	25 V
Digital Inputs ^a V _S , V _D	(V ₋) -2 V to (V ₊) +2 V or 20 mA, whichever occurs first
Current, Any Terminal	30 mA
Peak Current, S or D (Pulsed at 1 ms, 10% duty cycle max)	100 mA
Storage Temperature (DY Suffix)	-65 to 150°C
(CJ Suffix)	-65 to 125°C

Power Dissipation (Package) ^b	
16-Pin Plastic DIP ^c	470 mW
16-Pin Plastic Narrow SOIC ^d	600 mW

Notes:

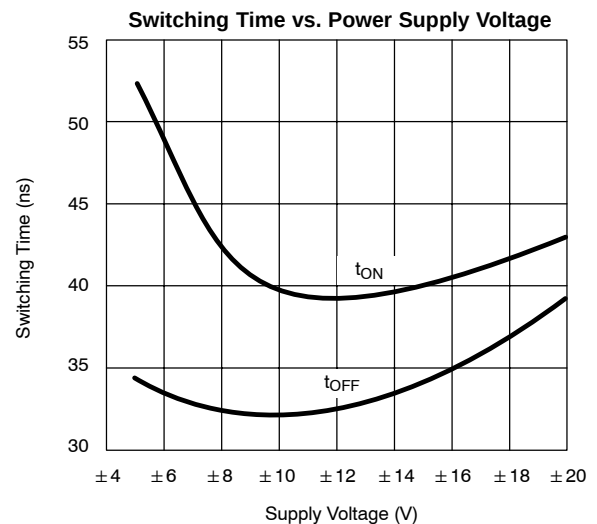
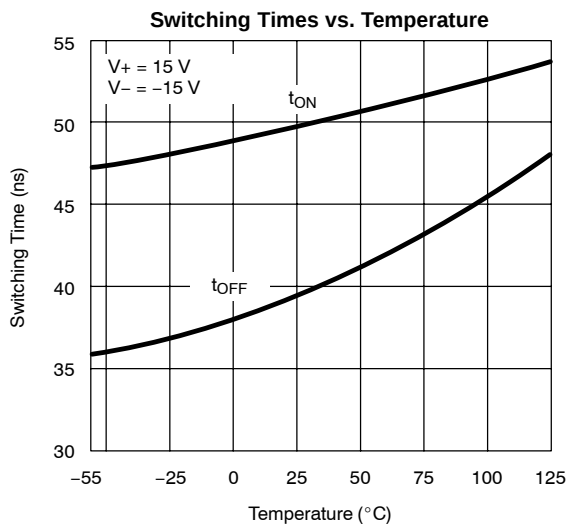
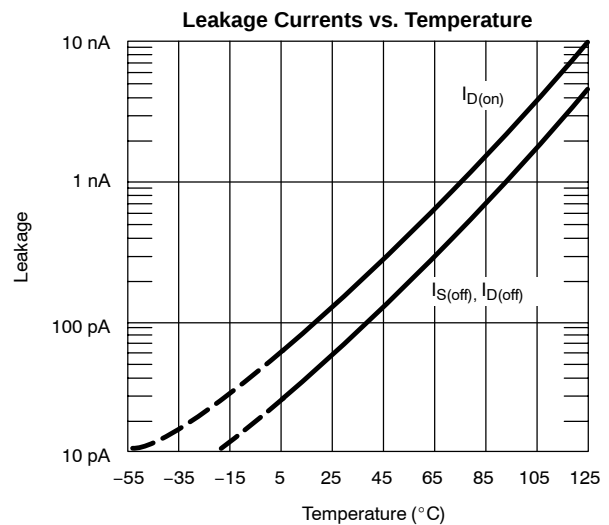
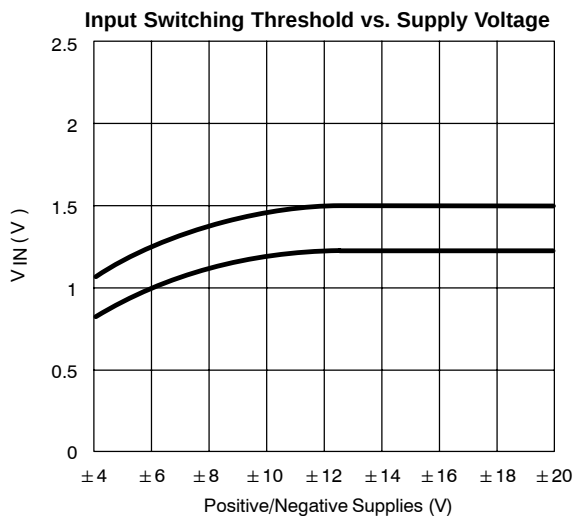
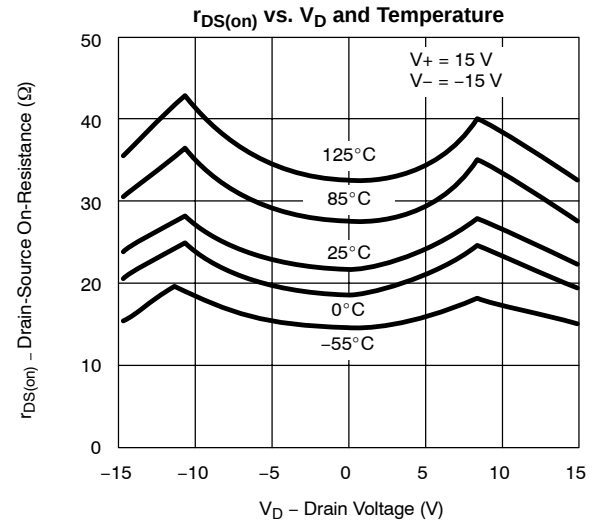
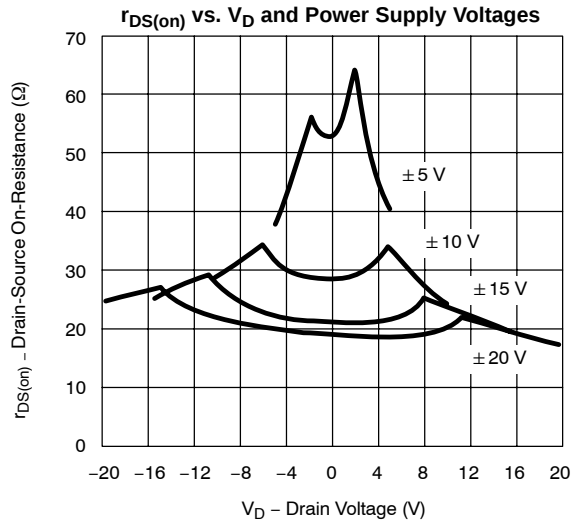
- Signals on S_X, D_X, or IN_X exceeding V₊ or V₋ will be clamped by internal diodes. Limit forward diode current to maximum current ratings.
- All leads welded or soldered to PC Board.
- Derate 6.5 mW/°C above 75°C
- Derate 7.6 mW/°C above 75°C

Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

SPECIFICATIONS ^a							
Parameter	Symbol	Test Conditions Unless Specified V ₊ = 15 V, V ₋ = -15 V V _{IN} = 2.4 V, 0.8 V ^f	Temp ^b	C, D Suffix 0 to 70°C -40 to 85°C			Unit
				Min ^d	Typ ^c	Max ^d	
Analog Switch							
Analog Signal Range ^e	V _{ANALOG}		Full	-15		15	V
Drain-Source On-Resistance	r _{DS(on)}	I _S = 1 mA, V _D = ±10 V	Room Full		32	50 75	Ω
Switch Off Leakage Current	I _{S(off)}	V _D = ±14 V, V _S = ∓14 V	Room Full	-1 -20	±0.05	1 20	nA
	I _{D(off)}		Room Full	-1 -20	±0.05	1 20	
Channel On Leakage Current	I _{D(on)} + I _{S(on)}	V _S = V _D = ±14 V	Room Full	-1 -20	±0.05	1 20	
Digital Control							
Input Current with Voltage High	I _{INH}	V _{IN} = 2 V	Full	-1	0.010	1	μA
		V _{IN} = 15 V	Full	-1	0.010	1	
Input Current with Voltage Low	I _{INL}	V _{IN} = 0 V	Full	-1	0.010	1	
Dynamic Characteristics							
Turn-On Time	t _{ON}	V _S = ±10 V See Figure 3	Room Full		55	65 80	ns
Turn-Off Time	t _{OFF}		Room Full		50	65 80	
Charge Injection	Q	C _L = 1 nF, V _S = 0 V V _{gen} = 0 V, R _{gen} = 0 Ω See Figure 3	Room		-5		pC
Source Off Capacitance	C _{S(off)}	V _S = 0 V, V _{IN} = 5 V f = 1 MHz	Room		8		pF
Drain Off Capacitance	C _{D(off)}		Room		8		
Channel On Capacitance	C _{D(on)}	V _D = V _S = 0 V, V _{IN} = 0 V	Room		30		
Off Isolation	OIRR	C _L = 10 pF, R _L = 1 kΩ f = 100 kHz See Figures 4 and 5	Room		85		dB
Crosstalk	X _{TALK}		Room		100		
Supply							
Positive Supply Current	I ₊	All Channels On or Off V _{IN} = 5 V or 0 V	Room Full		5.5	7.5 9	mA
Negative Supply Current	I ₋		Room Full	-6 -8	-3.4		

Notes:

- Refer to PROCESS OPTION FLOWCHART.
- Room = 25°C, Full = as determined by the operating temperature suffix.
- Typical values are for DESIGN AID ONLY, not guaranteed nor subject to production testing.
- The algebraic convention whereby the most negative value is a minimum and the most positive a maximum, is used in this data sheet.
- Guaranteed by design, not subject to production test.
- V_{IN} = input voltage to perform proper function.

TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)




SCHEMATIC DIAGRAM (TYPICAL CHANNEL)

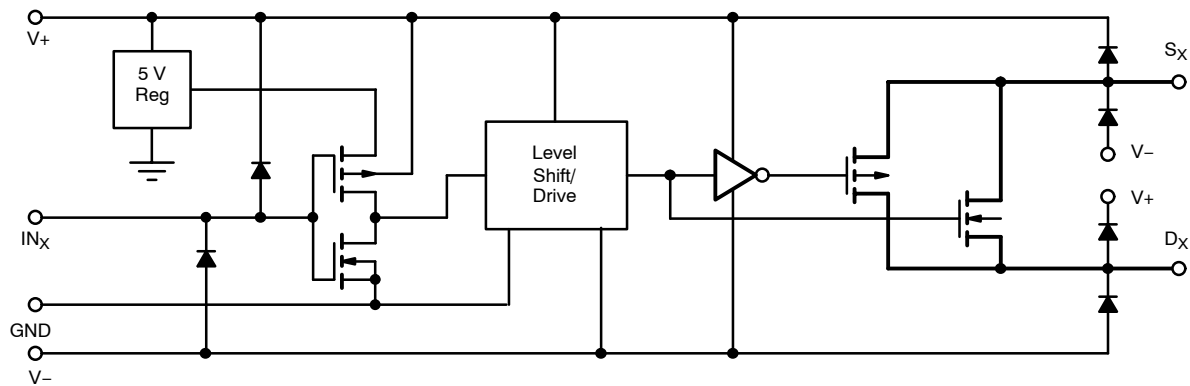


FIGURE 1.

TEST CIRCUITS

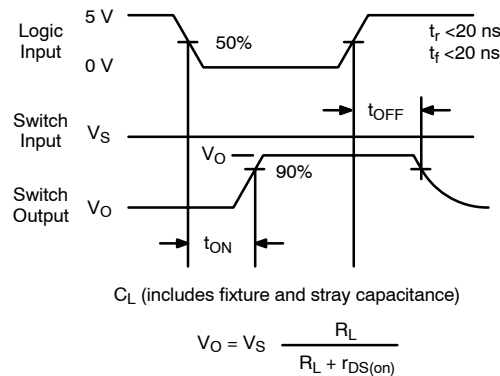
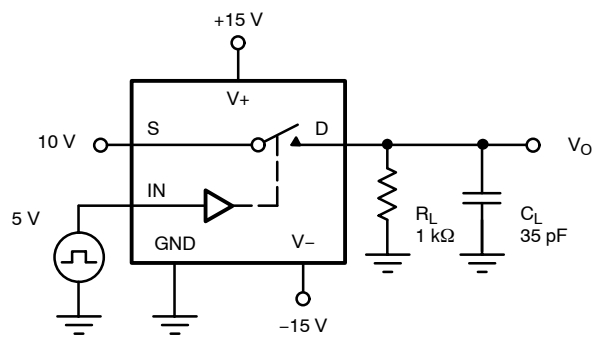


FIGURE 2. Switching Time

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