

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	<p>Replace secondary temperature range -40°C to 125°C with -40°C to 85°C.</p> <p>Under Table I, make changes to ±15 V, all Drain Leakage Current section, Power Supplies Grounded maximum test limits.</p> <p>Under Table I, make change to ±20 V, tON parameter -55°C to 125°C test limit.</p> <p>Under Table I, make change to ±20 V and ±36 V Total Harmonic Distortion Plus Noise Vs condition limit. Under Table I, make change to ±36 V On Resistance Flatness, with condition Vs = 4.5 V to 28 V, +25°C test limits.</p> <p>Under Table I, make change to ±36 V Drain Leakage Current, With Overvoltage and Power Supplies Grounded test limits.</p> <p>Update document paragraphs to current requirements. - ro</p>	21-04-07	J. ESCHMEYER



Prepared in accordance with ASME Y14.24

Vendor item drawing

REV																						
PAGE																						
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PMIC N/A	PREPARED BY Phu H. Nguyen	DLA LAND AND MARITIME COLUMBUS, OHIO 43218-3990 https://www.dla.mil/LandandMaritime
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Original date of drawing YY-MM-DD 16-04-18	CHECKED BY Phu H. Nguyen		TITLE MICROCIRCUIT, LINEAR-DIGITAL, FAULT PROTECTION AND DETECTION, 10 Ω Ron , QUAD SPST SWITCHES, MONOLITHIC SILICON
	APPROVED BY Muhammad A. Akbar		
	SIZE A	CODE IDENT. NO. 16236	DWG NO. V62/16608
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DISTRIBUTION STATEMENT A. Approved for public release. Distribution is unlimited.

1. SCOPE

1.1 Scope. This drawing documents the general requirements of a high performance fault protection and detection, 10 Ω RON, quad SPST switches microcircuit, with an operating temperature range of -55°C to +125°C.

1.2 Vendor Item Drawing Administrative Control Number. The manufacturer's PIN is the item of identification. The vendor item drawing establishes an administrative control number for identifying the item on the engineering documentation:

<u>V62/16608</u>	-	<u>01</u>	<u>X</u>	<u>E</u>
Drawing number		Device type (See 1.2.1)	Case outline (See 1.2.2)	Lead finish (See 1.2.3)

1.2.1 Device type(s).

<u>Device type</u>	<u>Generic</u>	<u>Circuit function</u> 1/
01	ADG5412F –EP	Fault protection and detection, 10 Ω RON quad SPST switches

1.2.2 Case outline(s). The case outline(s) are as specified herein.

<u>Outline letter</u>	<u>Number of pins</u>	<u>JEDEC PUB 95</u>	<u>Package style</u>
X	16	See figure 1	Lead thin shrink small outline package

1.2.3 Lead finishes. The lead finishes are as specified below or other lead finishes as provided by the device manufacturer:

<u>Finish designator</u>	<u>Material</u>
A	Hot solder dip
B	Tin-lead plate
C	Gold plate
D	Palladium
E	Gold flash palladium
F	Tin-lead alloy (BGA/CGA)
Z	Other

1/ This device has 4 different supply ranges (See table I or manufacturer data sheet). It can be powered in either dual supply or single supply. For dual supply VSS = -16.5 V and for single supply VSS = 0 V.

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1.3 Absolute maximum ratings. ^{2/}

VDD to VSS	48 V
VDD to GND	-0.3 V to +48 V
VSS to GND	-48 V to +0.3 V
Sx Pins to GND.....	-55 V to +55 V
Sx to VDD or VSS	80 V
Vs to Vd	80 V
Dx Pins ^{3/}	VSS – 0.7 V to VDD + 0.7 V or 30 mA, whichever occurs first
Digital Inputs	GND – 0.3 V to +48 V
Peak Current, Sx or Dx pins	288 mA (pulsed at 1 ms, 10% duty cycle maximum)
Continuous Current, Sx or Dx pins.....	Data + 15% ^{4/}
Digital Output	GND – 0.3 V to 6 V or 30 mA, whichever occurs first
Operating temperature range:	-55°C to +125°C
Storage temperature range	-65°C to 150°C
Junction temperature	150°C
Thermal Impedance, θ_{JA}	
16-Lead TSSOP, θ_{JA} Thermal Impedance (4-Layer Board)	112.6°C/W
Reflow soldering peak: Temperature, PB Free	As per JEDEC J-STD 020
Electrostatic discharge (ESD):	
Human body model (HBM: ANSI/ESD STM5.1 – 2007)	
Input/Output port to supplies	5.5 kV
Input/Output port to input/output port	5.5 kV
All other pins	5.5 kV

^{2/} 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 under “recommended operating conditions” is not implied. Exposure to absolute maximum rated conditions for extended periods may affect device reliability.

^{3/} Over voltages at the Dx pins are clamped by internal diodes. Limit current to the maximum ratings given.

^{4/} See Table I – Continuous Current Per Channel, Sx or Dx.

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2. APPLICABLE DOCUMENTS

JEDEC Solid State Technology Association

JEDEC PUB 95 – Registered and Standard Outlines for Semiconductor Devices

(Copies of these documents are available online at <https://www.jedec.org>.)

3. REQUIREMENTS

3.1 Marking. Parts shall be permanently and legibly marked with the manufacturer's part number as shown in 6.3 herein and as follows:

- A. Manufacturer's name, CAGE code, or logo
- B. Pin 1 identifier
- C. ESDS identification (optional)

3.2 Unit container. The unit container shall be marked with the manufacturer's part number and with items A and C (if applicable) above.

3.3 Electrical characteristics. The maximum and recommended operating conditions and electrical performance characteristics are as specified in 1.3, 1.4, and table I herein.

3.4 Design, construction, and physical dimension. The design, construction, and physical dimensions are as specified herein.

3.5 Diagrams.

3.5.1 Case outline. The case outline shall be as shown in 1.2.2 and figure 1.

3.5.2 Terminal connections. The terminal connections shall be as shown in figure 2.

3.5.3 Terminal function. The terminal function shall be as shown in figure 3.

3.5.4 Truth table. The truth table shall be as shown in figure 4.

3.5.5 Functional block diagram. The functional block diagram shall be as shown in figure 5.

3.5.6 On Resistance. The On Resistance shall be as shown in figure 6.

3.5.7 Off Leakage. The Off leakage shall be as shown in figure 7.

3.5.8 On Leakage. The On leakage shall be as shown in figure 8.

3.5.9 Off Isolation. The Off Isolation shall be as shown in figure 9.

3.5.10 Channel-to-Channel Crosstalk. The Channel-to-Channel Crosstalk shall be as shown in figure 10.

3.5.11 Switch Overvoltage Leakage. The Switch Overvoltage Leakage shall be as shown in figure 11.

3.5.12 Switch Unpower Leakage. The Switch Unpower Leakage shall be as shown in figure 12.

3.5.13 Bandwidth. The Bandwidth shall be as shown in figure 13.

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- 3.5.14 THD + N. The THD + N shall be as shown in figure 14.
- 3.5.15 Overvoltage Response Time, $t_{RESPONSE}$. The Overvoltage Response Time, $t_{RESPONSE}$ shall be as shown in figure 15.
- 3.5.16 Overvoltage Recovery Time, $t_{RECOVERY}$. The Overvoltage Recovery Time, $t_{RECOVERY}$ shall be as shown in figure 16.
- 3.5.17 Interrupt Flag Response Time, $t_{DIGRESP}$. The Interrupt Flag Response Time, $t_{DIGRESP}$ shall be as shown in figure 17.
- 3.5.18 Interrupt Flag Recovery Time, t_{DIGREC} . The Interrupt Flag Response Time, t_{DIGREC} shall be as shown in figure 18.
- 3.5.19 Interrupt Flag Recovery Time, t_{DIGREC} , with a 1 k Ω Pull-Up Resistor. The Interrupt Flag Response Time, t_{DIGREC} , with a 1 k Ω Pull-Up Resistor shall be as shown in figure 19.
- 3.5.20 Switching Times, t_{ON} and t_{OFF} . The Switching Times, t_{ON} and t_{OFF} . shall be as shown in figure 20.
- 3.5.21 Charge Injection, Q_{INJ} . The Charge Injection, Q_{INJ} shall be as shown in figure 21.
- 3.5.22 Threshold Voltage (V_T) vs. Temperature. The Threshold Voltage (V_T) vs. Temperature shall be as shown in figure 22.

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TABLE I. Electrical performance characteristics. 1/

Test	Symbol	Test conditions ±15 V Dual Supply 2/	Temperature TA	Limits			Unit
				Min	Typ	Max	
ANALOG SWITCH (VDD = 13.5 V, VSS = -13.5 V, see Figure 6)							
Analog Signal Range			-55°C to 125°C			VDD to VSS	V
On Resistance	RON	Vs = ±10 V, Is = -10 mA	25°C		10	11.2	Ω
			-40°C to 85°C			14	
			-55°C to 125°C			16.5	
		Vs = ±9 V, Is = -10 mA	25°C		9.5	10.7	
			-40°C to 85°C			13.5	
			-55°C to 125°C			16	
On-Resistance Match Between Channels	ΔRON	Vs = ±10 V, Is = -10 mA	25°C		0.05	0.5	Ω
			-40°C to 85°C			0.6	
			-55°C to 125°C			0.7	
		Vs = ±9 V, Is = -10 mA	25°C		0.05	0.35	
			-40°C to 85°C			0.5	
			-55°C to 125°C			0.5	
On-Resistance Flatness	RFLAT(ON)	Vs = ±10 V, Is = -10 mA	25°C		0.6	0.9	Ω
			-40°C to 85°C			1.1	
			-55°C to 125°C			1.1	
		Vs = ±9 V, Is = -10 mA	25°C		0.1	0.4	
			-40°C to 85°C			0.5	
			-55°C to 125°C			0.5	
Threshold Voltage	VT	see Figure 22	25°C		0.7		V
LEAKAGE CURRENTS (VDD = 16.5 V, VSS = -16.5 V)							
Source Off Leakage	IS (Off)	Vs = ±10 V, VD = ∓10 V, see Figure 7	25°C		±0.1	±1.5	nA
			-40°C to 85°C			±5.0	
			-55°C to 125°C			±21.0	
Drain Off Leakage	ID (Off)	Vs = ±10 V, VD = ∓10 V, see Figure 7	25°C		±0.1	±1.5	nA
			-40°C to 85°C			±5.0	
			-55°C to 125°C			±18.0	
Channel On Leakage	ID (On), IS (Off)	Vs = VD = ±10 V, see Figure 8	25°C		±0.3	±1.5	nA
			-40°C to 85°C			±2.0	
			-55°C to 125°C			±4.5	

See footnote at end of table.

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TABLE I. Electrical performance characteristics - Continued. 1/

Test	Symbol	Test conditions ±15 V Dual Supply 2/	Temperature TA	Limits			Unit
				Min	Typ	Max	
FAULT							
Source Leakage Current, IS							
With Overvoltage		VDD = 16.5 V VSS = -16.5 V, GND = 0 V, VS = ±55 V, see Figure 11	-55°C to 125°C		±78		µA
Power Supplies Grounded or Floating		VDD = 0 V or floating, VSS = 0 V or floating, GND = 0 V, INx = 0 V or floating, VS = ±55 V, see Figure 12	-55°C to 125°C		±40		µA
Drain Leakage Current, ID							
With Overvoltage		VDD = 16.5 V, VSS = -16.5 V, GND = 0 V, VS = ±55 V, see Figure 11	25°C		±2.0	±20	nA
			-40°C to 85°C			±30	
			-55°C to 125°C			±65	
Power Supplies Grounded		VDD = 0 V, VSS = 0 V, GND = 0 V, VS = ±55 V, INx = 0 V, see Figure 12	25°C		±10	±30	nA
			-40°C to 85°C			±50	
			-55°C to 125°C			±100	
Power Supplies Floating		VDD = floating, VSS = floating, GND = 0 V, VS = ±55 V, INx = 0 V, see Figure 36	25°C		±10		nA
			-40°C to 85°C		±10		
			-55°C to 125°C		±10		
DIGITAL INPUTS/OUTPUTS							
Input Voltage High	VINH		-55°C to 125°C	2.0			V
Input Voltage Low,	VINL		-55°C to 125°C			0.8	V
Input Current	IINL or IINH	VIN = VGND or VDD	25°C		±0.7		µA
			-55°C to 125°C			±1.2	
Digital Input Capacitance	CIN		25°C		5.0		pF
Output Voltage High	VOH		25°C	2.0			V
Output Voltage Low	VOL		25°C			0.8	V

See footnote at end of table.

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TABLE I. Electrical performance characteristics - Continued. 1/

Test	Symbol	Test conditions ± 15 V Dual Supply <u>2/</u>	Temperature T _A	Limits			Unit
				Min	Typ	Max	
DYNAMIC CHARACTERISTICS <u>3/</u>							
t _{ON}		R _L = 300 Ω , C _L = 35 pF, V _S = 10 V, see Figure 20	25°C -40°C to 85°C -55°C to 125°C		400	495 525 550	ns
t _{OFF}		R _L = 300 Ω , C _L = 35 pF, V _S = 10 V, V _{S1} = V _{S2} = 10 V, see Figure 20	25°C -40°C to 85°C -55°C to 125°C		410 185	510 545 555	ns
Overvoltage Response Time	t _{RESPONSE}	R _L = 1 k Ω , C _L = 2 pF, see Figure 15	25°C -40°C to 85°C -55°C to 125°C		460	585 615 630	ns
Overvoltage Recovery Time	t _{RECOVERY}	R _L = 1 k Ω , C _L = 2 pF, see Figure 16	25°C -40°C to 85°C -55°C to 125°C		720	930 1050 1100	ns
Interrupt Flag Response Time	t _{DIGRESP}	C _L = 10 pF, see Figure 17	25°C -55°C to 125°C		85	115	ns
Interrupt Flag Recovery Time	t _{DIGREC}	C _L = 10 pF, see Figure 18	25°C -55°C to 125°C		60	85	μ s
		C _L = 10 pF, R _{PULLUP} = 1 k Ω , see Figure 19	25°C		600		ns
Charge Injection	Q _{INJ}	V _S = 0 V, R _S = 0 Ω , C _L = 1 nF, see Figure 21	25°C		680		pC
Off Isolation		R _L = 50 Ω , C _L = 5 pF, f = 1 MHz, see Figure 9	25°C		-70		dB
Channel-to-Channel Crosstalk		R _L = 50 Ω , C _L = 5 pF, f = 1 MHz, see Figure 10	25°C		-90		dB
Total Harmonic Distortion Plus Noise	THD + N	R _L = 10 k Ω , V _S = 15 V p-p, f = 20 Hz to 20 kHz, see Figure 14	25°C		0.0015		%

See footnote at end of table.

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TABLE I. Electrical performance characteristics - Continued. 1/

Test	Symbol	Test conditions ±15 V Dual Supply 2/	Temperature TA	Limits			Unit
				Min	Typ	Max	
DYNAMIC CHARACTERISTICS – Continued 3/							
-3 dB Bandwidth		RL = 50 Ω, CL = 5 pF, see Figure 13	25°C		270		MHz
Insertion Loss		RL = 50 Ω, CL = 5 pF, f = 1 MHz, see Figure 13	25°C		-0.72		dB
CS (Off)		VS = 0 V, f = 1 MHz	25°C		13		pF
CD (Off)		VS = 0 V, f = 1 MHz	25°C		12		pF
CD (On), CS (On)		VS = 0 V, f = 1 MHz	25°C		14		pF
POWER REQUIREMENTS (VDD = 16.5 V, VSS = -16.5 V, GND = 0 V, digital inputs = 0 V, 5 V, or VDD)							
Normal Mode							
IDD			25°C		0.9	1.2	mA
			-55°C to 125°C			1.3	
IGND			25°C		0.4	0.55	mA
			-55°C to 125°C			0.6	
ISS			25°C		0.5	0.65	mA
			-55°C to 125°C			0.7	
Fault Mode VS = ±55 V							
IDD			25°C		1.2	1.6	mA
			-55°C to 125°C			1.8	
IGND			25°C		0.8	1.0	mA
			-55°C to 125°C			1.1	
ISS			25°C		0.5	1.0	mA
			-55°C to 125°C			1.8	
VDD/VSS		GND = 0 V	-55°C to 125°C	±5		±22	V

See footnote at end of table.

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TABLE I. Electrical performance characteristics - Continued. 1/

Test	Symbol	Test conditions ±20 V Dual Supply 4/	Temperature TA	Limits			Unit
				Min	Typ	Max	
ANALOG SWITCH (VDD = 18 V, VSS = -18 V, see figure 6)							
Analog Signal Range			-55°C to 125°C			VDD to VSS	V
On Resistance	RON	Vs = ±15 V, Is = -10 mA	25°C		10	11.5	Ω
			-40°C to 85°C			14.5	
			-55°C to 125°C			16.5	
		Vs = ±13.5 V, Is = -10 mA	25°C		9.5	11	
			-40°C to 85°C			14	
			-55°C to 125°C			16.5	
On-Resistance Match Between Channels,	ΔRON	Vs = ±15 V, Is = -10 mA	25°C		0.05	0.35	Ω
			-40°C to 85°C			0.5	
			-55°C to 125°C			0.5	
		Vs = ±13.5 V, Is = -10 mA	25°C		0.05	0.35	
			-40°C to 85°C			0.5	
			-55°C to 125°C			0.5	
On-Resistance Flatness,	RFLAT(ON)	Vs = ±15 V, Is = -10 mA	25°C		1.0	1.4	Ω
			-40°C to 85°C			1.5	
			-55°C to 125°C			1.5	
		Vs = ±13.5 V, Is = -10 mA	25°C		0.1	0.4	
			-40°C to 85°C			0.5	
			-55°C to 125°C			0.5	
Threshold Voltage	VT	see Figure 22	25°C		0.7		V
LEAKAGE CURRENTS (VDD = 22 V, VSS = -22 V)							
Source Off Leakage	IS (Off)	Vs = ±15 V, VD = ∓15 V, see Figure 7	25°C		±0.1	±1.5	nA
			-40°C to 85°C			±5.0	
			-55°C to 125°C			±21.0	
Drain Off Leakage	ID (Off)	Vs = ±15 V, VD = ∓15 V, see Figure 7	25°C		±0.1	±1.5	nA
			-40°C to 85°C			±5.0	
			-55°C to 125°C			±18.0	
Channel On Leakage	ID (On), IS (Off)	Vs = VD = ±15 V, see Figure 8	25°C		±0.3	±1.5	nA
			-40°C to 85°C			±2.0	
			-55°C to 125°C			±4.5	

See footnote at end of table.

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TABLE I. Electrical performance characteristics - Continued. 1/

Test	Symbol	Test conditions ±20 V Dual Supply <u>4/</u>	Temperature T _A	Limits			Unit
				Min	Typ	Max	
FAULT							
Source Leakage Current,							
With Overvoltage	I _S	V _{DD} = 22 V, V _{SS} = -22 V, GND = 0 V, V _S = ±55 V, see Figure 11	-55°C to 125°C		±78		µA
Power Supplies Grounded or Floating		V _{DD} = 0 V or floating, V _{SS} = 0 V or floating, GND = 0 V, I _{Nx} = 0 V or floating, V _S = ±55 V, see Figure 12	-55°C to 125°C		±40		µA
Drain Leakage Current, ID							
With Overvoltage		V _{DD} = 22 V, V _{SS} = -22 V, GND = 0 V, V _S = ±55 V, see Figure 11	25°C		±5.0		nA
Power Supplies Grounded		V _{DD} = 0 V, V _{SS} = 0 V, GND = 0 V, V _S = ±55 V, I _{Nx} = 0 V, see Figure 12	25°C		±10		nA
			25°C			±1.0	µA
			-40°C to 85°C			±1.0	
			-55°C to 125°C			±1.0	
Power Supplies Floating		V _{DD} = floating, V _{SS} = floating, GND = 0 V, V _S = ±55 V, I _{Nx} = 0 V, see Figure 12	25°C			±30	nA
			-40°C to 85°C			±50	
			-55°C to 125°C			±100	
			25°C		±10		µA
			-40°C to 85°C		±10		
			-55°C to 125°C		±10		
DIGITAL INPUTS							
Input Voltage High	V _{INH}		-55°C to 125°C	2.0			V
Input Voltage Low,	V _{INL}		-55°C to 125°C			0.8	V
Input Current	I _{INL} or I _{INH}	V _{IN} = V _{GND} or V _{DD}	25°C		±0.7		µA
			-55°C to 125°C			±1.2	
Digital Input Capacitance	C _{IN}		25°C		5.0		pF
Output Voltage High	V _{OH}		25°C	2.0			V
Output Voltage Low	V _{OL}		25°C			0.8	V

See footnotes at end of table.

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TABLE I. Electrical performance characteristics - Continued. 1/

Test	Symbol	Test conditions ± 20 V Dual Supply <u>4/</u>	Temperature T _A	Limits			Unit
				Min	Typ	Max	
DYNAMIC CHARACTERISTICS <u>3/</u>							
t _{ON}		R _L = 300 Ω , C _L = 35 pF V _S = 10 V, see Figure 20	25°C		400	500	ns
			-40°C to 85°C			530	
			-55°C to 125°C			555	
t _{OFF}		R _L = 300 Ω , C _L = 35 pF V _S = 10 V, V _{S1} = V _{S2} = 10 V, see Figure 20	25°C		415	515	ns
			-40°C to 85°C			550	
			-55°C to 125°C	200		565	
Overshoot Response Time	t _{RESPONSE}	R _L = 1 k Ω , C _L = 2 pF, see Figure 15	25°C		370	480	ns
			-40°C to 85°C			500	
			-55°C to 125°C			515	
Overshoot Recovery Time	t _{RECOVERY}	R _L = 1 k Ω , C _L = 2 pF, see Figure 16	25°C		840	1200	ns
			-40°C to 85°C			1400	
			-55°C to 125°C			1700	
Interrupt Flag Response Time	t _{DIGRESP}	C _L = 10 pF, see Figure 17	25°C		85		ns
			-55°C to 125°C		115		
Interrupt Flag Recovery Time	t _{DIGREC}	C _L = 10 pF, see Figure 18	25°C		60		μ s
			-55°C to 125°C		85		
			25°C		600		
Charge Injection	Q _{INJ}	V _S = 0 V, R _S = 0 Ω , C _L = 1 nF, see Figure 21	25°C		640		pC
Off Isolation		R _L = 50 Ω , C _L = 5 pF, f = 1 MHz, see Figure 9	25°C		-70		dB
Channel-to-Channel Crosstalk		R _L = 50 Ω , C _L = 5 pF, f = 1 MHz, see Figure 10	25°C		-90		dB
Total Harmonic Distortion Plus Noise	THD + N	R _L = 10 k Ω , V _S = 20 V p-p, f = 20 Hz to 20 kHz, see Figure 14	25°C		0.001		%
-3 dB Bandwidth		R _L = 50 Ω , C _L = 5 pF, see Figure 13	25°C		270		MHz

See footnote at end of table.

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TABLE I. Electrical performance characteristics - Continued. 1/

Test	Symbol	Test conditions ±20 V Dual Supply 4/	Temperature T _A	Limits			Unit
				Min	Typ	Max	
DYNAMIC CHARACTERISTICS – Continued 3/							
Insertion Loss		R _L = 50 Ω, C _L = 5 pF, f = 1 MHz, see Figure 13	25°C		-0.73		dB
C _S (Off)		V _S = 0 V, f = 1 MHz	25°C		12		pF
C _D (Off)		V _S = 0 V, f = 1 MHz	25°C		11		pF
C _D (On), C _S (On)		V _S = 0 V, f = 1 MHz	25°C		23		pF
POWER REQUIREMENTS (V _{DD} = 22 V, V _{SS} = -22 V, GND = 0 V, digital inputs = 0 V, 5 V, or V _{DD})							
Normal Mode							
I _{DD}			25°C		0.9	1.2	mA
			-55°C to 125°C			1.3	
I _{GND}			25°C		0.4	0.55	mA
			-55°C to 125°C			0.6	
I _{SS}			25°C		0.5	0.65	mA
			-55°C to 125°C			0.7	
Fault Mode V _S = ±55 V							
I _{DD}			25°C		1.2	1.6	mA
			-55°C to 125°C			1.8	
I _{GND}			25°C		0.8	1.0	mA
			-55°C to 125°C			1.1	
I _{SS}			25°C		0.5	1.0	mA
			-55°C to 125°C			1.8	
V _{DD} /V _{SS}		GND = 0 V	-55°C to 125°C	±5		±22	V

See footnote at end of table.

DLA LAND AND MARITIME COLUMBUS, OHIO	SIZE A	CODE IDENT NO. 16236	DWG NO. V62/16608
		REV A	PAGE 13

TABLE I. Electrical performance characteristics - Continued. 1/

Test	Symbol	Test conditions ±12 V Single Supply 5/	Temperature TA	Limits			Unit
				Min	Typ	Max	
ANALOG SWITCH (VDD = 10.8 V, VSS = 0 V, see figure 6)							
Analog Signal Range			-55°C to 125°C			0 V to VDD	V
On Resistance	RON	VS = 0 to 10 V, IS = -10 mA	25°C		22	24.5	Ω
			-40°C to 85°C			31	
			-55°C to 125°C			37	
		VS = 3.5 V to 8.5 V, IS = -10 mA	25°C		10	11.2	
			-40°C to 85°C			14	
			-55°C to 125°C			16.5	
On-Resistance Match Between Channels,	ΔRON	VS = 0 V to 10 V, IS = -10 mA	25°C		0.05	0.5	Ω
			-40°C to 85°C			0.6	
			-55°C to 125°C			0.7	
		VS = 3.5 V to 8.5 V, IS = -10 mA	25°C		0.05	0.5	
			-40°C to 85°C			0.6	
			-55°C to 125°C			0.7	
On-Resistance Flatness	RFLAT(ON)	VS = 0 V to 10 V, IS = -10 mA	25°C		12.5	14.5	Ω
			-40°C to 85°C			19	
			-55°C to 125°C			23	
		VS = 3.5 V to 8.5 V, IS = -10 mA	25°C		0.6	0.9	
			-40°C to 85°C			1.1	
			-55°C to 125°C			1.3	
Threshold Voltage	VT	See Figure 22	25°C		0.7		V
LEAKAGE CURRENTS (VDD = 13.2 V, VSS = 0 V)							
Source Off Leakage	IS (Off)	VS = 1 V/10 V, VD = 10 V/1 V, see Figure 7	25°C		±0.1	±1.5	nA
			-40°C to 85°C			±5.0	
			-55°C to 125°C			±21.0	
Drain Off Leakage	ID (Off)	VS = 1 V/10 V, VD = 10 V/1 V, see Figure 7	25°C		±0.1	±1.5	nA
			-40°C to 85°C			±5.0	
			-55°C to 125°C			±18.0	
Channel On Leakage	ID (On), IS (Off)	VS = VD = 1 V/10 V, see Figure 8	25°C		±0.3	±1.5	nA
			-40°C to 85°C			±2.0	
			-55°C to 125°C			±4.5	

See footnote at end of table.

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		REV A	PAGE 14

TABLE I. Electrical performance characteristics - Continued. 1/

Test	Symbol	Test conditions ± 12 V Single Supply 5/	Temperature T _A	Limits			Unit
				Min	Typ	Max	
FAULT							
Source Leakage Current, I _S							
With Overvoltage		V _{DD} = 13.2 V, V _{SS} = 0 V, GND = 0 V, V _S = ± 55 V, see Figure 11	-55°C to 125°C		± 78		μ A
Power Supplies Grounded or Floating		V _{DD} = 0 V or floating, V _{SS} = 0 V or floating, GND = 0 V, I _{Nx} = 0 V or floating, V _S = ± 55 V, see Figure 12	-55°C to 125°C		± 40		μ A
Drain Leakage Current, I _D							
With Overvoltage		V _{DD} = 13.2 V, V _{SS} = 0 V or floating, GND = 0 V, V _S = ± 55 V, see Figure 11	25°C		± 2.0	± 20	nA
			-40°C to 125°C			± 30	
			-55°C to 125°C			± 65	
Power Supplies Grounded		V _{DD} = 0 V, V _{SS} = 0 V, GND = 0 V, V _S = ± 55 V, I _{Nx} = 0 V, see Figure 12	25°C		± 10	± 30	nA
			-40°C to 125°C			± 50	
			-55°C to 125°C			± 100	
Power Supplies Floating		V _{DD} = floating, V _{SS} = floating, GND = 0 V, V _S = ± 55 V, I _{Nx} = 0 V, see Figure 12	25°C		± 10		μ A
			-40°C to 125°C		± 10		
			-55°C to 125°C		± 10		
DIGITAL INPUTS							
Input Voltage High	V _{INH}		-55°C to 125°C	2.0			V
Input Voltage Low,	V _{INL}		-55°C to 125°C			0.8	V
Input Current	I _{INL} or I _{INH}	V _{IN} = V _{GND} or V _{DD}	25°C		± 0.7		μ A
			-55°C to 125°C			± 1.2	
Digital Input Capacitance	C _{IN}		25°C		5.0		pF
Output Voltage High	V _{OH}		25°C	2.0			V
Output Voltage Low	V _{OL}		25°C			0.8	V

See footnote at end of table.

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TABLE I. Electrical performance characteristics - Continued. 1/

Test	Symbol	Test conditions ±12 V Single Supply <u>5/</u>	Temperature TA	Limits			Unit
				Min	Typ	Max	
DYNAMIC CHARACTERISTICS <u>3/</u>							
tON		RL = 300 Ω, CL = 35 pF VS = 8 V, see Figure 20	25°C -40°C to 125°C -55°C to 125°C		400 515 540	485	ns
tOFF		RL = 300 Ω, CL = 35 pF VS = 8 V, VS1 = VS2 = 8 V, see Figure 20	25°C -40°C to 125°C -55°C to 125°C		375 495 520	460	ns
Overvoltage Response Time	tRESPONSE	RL = 1 kΩ, CL = 2 pF, see Figure 15	25°C -40°C to 125°C -55°C to 125°C		560 700 720	660	ns
Overvoltage Recovery Time	tRECOVERY	RL = 1 kΩ, CL = 2 pF, see Figure 16	25°C -40°C to 125°C -55°C to 125°C		640 865 960	800	ns
Interrupt Flag Response Time	tDIGRESP	CL = 10 pF, see Figure 17	25°C -55°C to 125°C		85 115		ns
Interrupt Flag Recovery Time	tDIGREC	CL = 10 pF, see Figure 18	25°C		60		μs
			-55°C to 125°C		85		
		CL = 10 pF, RPULLUP = 1 kΩ, see Figure 19	25°C		600		ns
Charge Injection	QINJ	VS = 6 V, RS = 0 Ω, CL = 1 nF, see Figure 21	25°C		340		pC
Off Isolation		RL = 50 Ω, CL = 5 pF, f = 1 MHz, see Figure 9	25°C		-65		dB
Channel-to-Channel Crosstalk		RL = 50 Ω, CL = 5 pF, f = 1 MHz, see Figure 10	25°C		-90		dB
Total Harmonic Distortion Plus Noise	THD + N	RL = 10 kΩ, VS = 6 Vp-p, f = 20 Hz to 20 kHz, see Figure 14	25°C		0.007		%

See footnote at end of table.

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TABLE I. Electrical performance characteristics - Continued. 1/

Test	Symbol	Test conditions ± 12 V Single Supply <u>5/</u>	Temperature T _A	Limits			Unit
				Min	Typ	Max	
DYNAMIC CHARACTERISTICS – Continued <u>3/</u>							
-3 dB Bandwidth		R _L = 50 Ω , C _L = 5 pF, see Figure 13	25°C		270		MHz
Insertion Loss		R _L = 50 Ω , C _L = 5 pF, f = 1 MHz, see Figure 13	25°C		-0.74		dB
C _S (Off)		V _S = 6 V, f = 1 MHz	25°C		16		pF
C _D (Off)		V _S = 6 V, f = 1 MHz	25°C		15		pF
C _D (On), C _S (On)		V _S = 6 V, f = 1 MHz	25°C		25		pF

POWER REQUIREMENTS (V_{DD} = 13.2 V, V_{SS} = 0 V, Digital inputs = 0 V, 5 V, or V_{DD})

Normal Mode

I _{DD}			25°C		0.9	1.2	mA
			-55°C to 125°C			1.3	
I _{GND}			25°C		0.4	0.55	mA
			-55°C to 125°C			0.6	
I _{SS}			25°C		0.5	0.65	mA
			-55°C to 125°C			0.7	

Fault mode

I _{DD}		V _S = ± 55 V	25°C		1.2	1.6	mA
			-55°C to 125°C			1.8	
I _{GND}		V _S = ± 55 V	25°C		0.8	1.0	mA
			-55°C to 125°C			1.1	
I _{SS}		Digital inputs = 5 V	25°C		0.5	1.0	mA
		V _S = ± 55 V, V _D = 0 V	-55°C to 125°C			1.8	
V _{DD}		GND = 0 V	-55°C to 125°C	8		44	V

See footnote at end of table.

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TABLE I. Electrical performance characteristics - Continued. 1/

Test	Symbol	Test conditions ±36 V Single Supply 6/	Temperature T _A	Limits			Unit
				Min	Typ	Max	
ANALOG SWITCH (V _{DD} = 32.4 V, V _{SS} = 0 V, see figure 6)							
Analog Signal Range			-55°C to 125°C			0 V to V _{DD}	V
On Resistance	R _{ON}	V _S = 0 to 30 V, I _S = -10 mA	25°C		22	24.5	Ω
			-40°C to 85°C			31	
			-55°C to 125°C			37	
		V _S = 4.5 V to 28 V, I _S = -10 mA	25°C		10	11	
			-40°C to 85°C			14	
			-55°C to 125°C			16.5	
On-Resistance Match Between Channels,	ΔR _{ON}	V _S = 0 V to 30 V, I _S = -10 mA	25°C		0.05	0.5	Ω
			-40°C to 85°C			0.6	
			-55°C to 125°C			0.7	
		V _S = 4.5 V to 28 V, I _S = -10 mA	25°C		0.05	0.35	
			-40°C to 85°C			0.5	
			-55°C to 125°C			0.5	
On-Resistance Flatness	R _{FLAT(ON)}	V _S = 0 V to 30 V, I _S = -10 mA	25°C		12.5	14.5	Ω
			-40°C to 85°C			19	
			-55°C to 125°C			23	
		V _S = 4.5 V to 28 V, I _S = -10 mA	25°C		0.1	0.4	
			-40°C to 85°C			0.5	
			-55°C to 125°C			0.5	
Threshold Voltage	V _T	See Figure 22	25°C		0.7		V
LEAKAGE CURRENTS (V _{DD} = 39.6 V, V _{SS} = 0 V)							
Source Off Leakage	I _S (Off)	V _S = 1 V/30 V, V _D = 30 V/1 V, see Figure 7	25°C		±0.1	±1.5	nA
			-40°C to 85°C			±5.0	
			-55°C to 125°C			±21.0	
Drain Off Leakage	I _D (Off)	V _S = 1 V/30 V, V _D = 30 V/1 V, see Figure 7	25°C		±0.1	±1.5	nA
			-40°C to 85°C			±5.0	
			-55°C to 125°C			±18.0	
Channel On Leakage	I _D (On), I _S (Off)	V _S = V _D = 1 V/30 V, see Figure 8	25°C		±0.3	±1.5	nA
			-40°C to 85°C			±2.0	
			-55°C to 125°C			±4.5	

See footnote at end of table.

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TABLE I. Electrical performance characteristics - Continued. 1/

Test	Symbol	Test conditions ±36 V Single Supply 6/	Temperature TA	Limits			Unit
				Min	Typ	Max	
FAULT							
Source Leakage Current, IS							
With Overvoltage		VDD = 39.6 V, VSS = 0 V, GND = 0 V, VS = +55 V, -40 V, see Figure 11	-55°C to 125°C		±78		µA
Power Supplies Grounded or Floating		VDD = 0 V or floating, VSS = 0 V or floating, GND = 0 V, INx = 0 V or floating, VS = +55 V, -40 V, see Figure 12	-55°C to 125°C		±40		µA
Drain Leakage Current, ID							
With Overvoltage		VDD = 39.6 V, VSS = 0 V or floating, GND = 0 V, VS = +55 V, -40 V, see Figure 11	25°C		±2.0	±20	nA
			-40°C to 85°C			±30	
			-55°C to 125°C			±65	
Power Supplies Grounded		VDD = 0 V, VSS = 0 V, GND = 0 V, VS = +55 V, -40 V, INx = 0 V, see Figure 12	25°C		±10	±30	nA
			-40°C to 85°C			±50	
			-55°C to 125°C			±100	
Power Supplies Floating		VDD = floating, VSS = floating, GND = 0 V, VS = +55 V, -40 V, INx = 0 V, see Figure 12	25°C		±10		µA
			-40°C to 85°C		±10		
			-55°C to 125°C		±10		
DIGITAL INPUTS							
Input Voltage High	VINH		-55°C to 125°C	2.0			V
Input Voltage Low,	VINL		-55°C to 125°C			0.8	V
Input Current	IINL or IINH	VIN = VGND or VDD	25°C		±0.7		µA
			-55°C to 125°C			±1.2	
Digital Input Capacitance	CIN		25°C		5.0		pF
Output Voltage High	VOH		25°C	2.0			V
Output Voltage Low	VOL		25°C			0.8	V

See footnote at end of table.

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TABLE I. Electrical performance characteristics - Continued. 1/

Test	Symbol	Test conditions ± 36 V Single Supply <u>6/</u>	Temperature T _A	Limits			Unit
				Min	Typ	Max	
DYNAMIC CHARACTERISTICS <u>3/</u>							
t _{ON}		RL = 300 Ω , CL = 35 pF VS = 18 V, see Figure 20	25°C		400	490	ns
			-40°C to 85°C			520	
			-55°C to 125°C			545	
t _{OFF}		RL = 300 Ω , CL = 35 pF VS = 18 V, VS1 = VS2 = 18 V, see Figure 20	25°C		375	460	ns
			-40°C to 85°C			485	
			-55°C to 125°C	195		510	
Overvoltage Response Time	t _{RESPONSE}	RL = 1 k Ω , CL = 2 pF, see Figure 15	25°C		250	350	ns
			-40°C to 85°C			360	
			-55°C to 125°C			375	
Overvoltage Recovery Time	t _{RECOVERY}	RL = 1 k Ω , CL = 2 pF, see Figure 16	25°C		1500	2000	ns
			-40°C to 85°C			2300	
			-55°C to 125°C			2700	
Interrupt Flag Response Time	t _{DIGRESP}	CL = 10 pF, see Figure 17	25°C		85		ns
			-55°C to 125°C		115		
Interrupt Flag Recovery Time	t _{DIGREC}	CL = 10 pF, see Figure 18	25°C		60		μ s
			-55°C to 125°C		85		
			CL = 10 pF, RPULLUP = 1 k Ω , see Figure 19	25°C		600	
Charge Injection	Q _{INJ}	VS = 18 V, RS = 0 Ω , CL = 1 nF, see Figure 21	25°C		610		pC
Off Isolation		RL = 50 Ω , CL = 5 pF, f = 1 MHz, see Figure 9	25°C		-70		dB
Channel-to-Channel Crosstalk		RL = 50 Ω , CL = 5 pF, f = 1 MHz, see Figure 10	25°C		-90		dB
Total Harmonic Distortion Plus Noise	THD + N	RL = 10 k Ω , VS = 18 Vp-p, f = 20 Hz to 20 kHz, see Figure 14	25°C		0.001		%

See footnote at end of table.

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TABLE I. Electrical performance characteristics - Continued. 1/

Test	Symbol	Test conditions ±36 V Single Supply 6/	Temperature T _A	Limits			Unit
				Min	Typ	Max	
DYNAMIC CHARACTERISTICS – Continued 3/							
-3 dB Bandwidth		R _L = 50 Ω, C _L = 5 pF, see Figure 13	25°C		270		MHz
Insertion Loss		R _L = 50 Ω, C _L = 5 pF, f = 1 MHz, see Figure 13	25°C		-0.75		dB
C _S (Off)		V _S = 18 V, f = 1 MHz	25°C		12		pF
C _D (Off)		V _S = 18 V, f = 1 MHz	25°C		11		pF
C _D (On), C _S (On)		V _S = 18 V, f = 1 MHz	25°C		23		pF
POWER REQUIREMENTS (V _{DD} = 39.6 V, V _{SS} = 0 V, Digital inputs = 0 V, 5 V, or V _{DD})							
Normal Mode							
I _{DD}			25°C		0.9	1.2	mA
			-55°C to 125°C			1.3	
I _{GND}			25°C		0.4	0.55	mA
			-55°C to 125°C			0.6	
I _{SS}			25°C		0.5	0.65	mA
			-55°C to 125°C			0.7	
Fault Mode V _S = ±55 V							
I _{DD}			25°C		1.2	1.6	mA
			-55°C to 125°C			1.8	
I _{GND}			25°C		0.8	1.0	mA
			-55°C to 125°C			1.1	
I _{SS}			25°C		0.5	1.0	mA
			-55°C to 125°C			1.8	
V _{DD}		GND = 0 V	-55°C to 125°C	8		44	V

See footnote at end of table.

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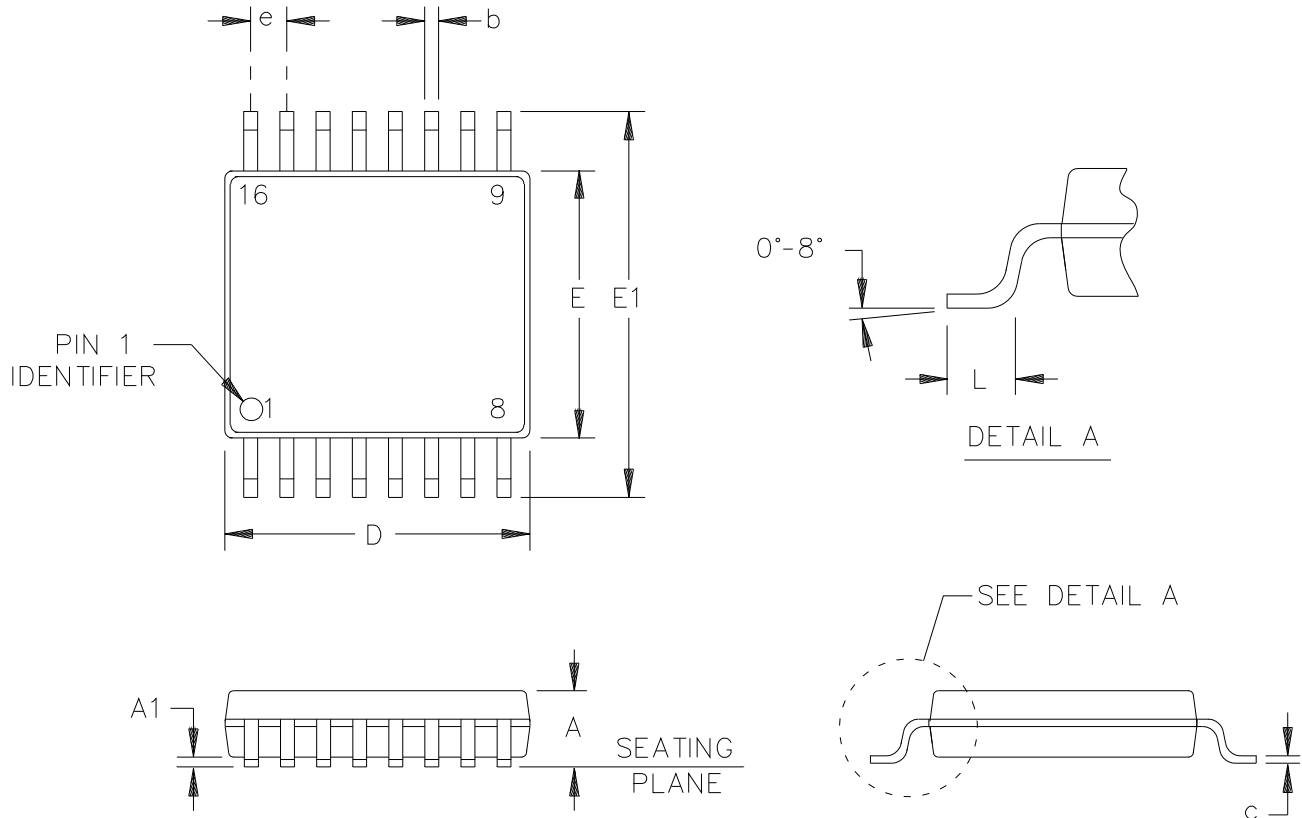
TABLE I. Electrical performance characteristics - Continued. 1/

Test	Symbol	Test conditions	Temperature TA	Limits			Unit
				Min	Typ	Max	
CONTINUOUS CURRENT PER CHANNEL, Sx OR Dx							
16-LEAD TSSOP $\theta_{JA} = 112.6^{\circ}\text{C/W}$		VS = VSS + 4.5 V to VDD - 4.5 V	25°C			83	mA
			85°C			59	
			125°C			39	
		VS = VSS to VDD	25°C			64	
			85°C			48	
			125°C			29	

- 1/ Testing and other quality control techniques are used to the extent deemed necessary to assure product performance over the specified temperature range. Product may not necessarily be tested across the full temperature range and all parameters may not necessarily be tested. In the absence of specific parametric testing, product performance is assured by characterization and/or design.
- 2/ Unless otherwise noted, VDD = 15 V ±10%, VSS = - 15 V ±10%, GND = 0 V, CDECOUPLING = 0.1 µF.
- 3/ Guaranteed by design, not subject to production test.
- 4/ Unless otherwise noted, VDD = 20 V ±10%, VSS = - 20 V ±10%, GND = 0 V, CDECOUPLING = 0.1 µF.
- 5/ Unless otherwise noted, VDD = 12 V ±10%, VSS = 0 V, GND = 0 V, CDECOUPLING = 0.1 µF.
- 6/ Unless otherwise noted, VDD = 36 V ±10%, VSS = 0 V, GND = 0 V, CDECOUPLING = 0.1 µF.

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Case X



Dimensions					
Symbol	Millimeters		Symbol	Millimeters	
	Min	Max		Min	Max
A		1.20	E	4.30	4.50
A1	0.05	0.15	E1	6.40 BSC	
b	0.19	0.30	e	0.65 BSC	
c	0.09	0.20	L	0.45	0.75
D	4.90	5.10			

NOTES:

1. All linear dimensions are in millimeters.

FIGURE 1. Case outline.

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Case outline X			
Terminal number	Terminal symbol	Terminal number	Terminal symbol
1	IN1	16	IN2
2	D1	15	D2
3	S1	14	S2
4	VSS	13	VDD
5	GND	12	FF
6	S4	11	S3
7	D4	10	D3
8	IN4	9	IN3

FIGURE 2. Terminal connections.

Terminal number	Terminal symbol	Description
1	IN1	Logic Control Input.
2	D1	Drain Terminal. This pin can be an input or an output
3	S1	Overvoltage Protected Source Terminal. This pin can be an input or an output.
4	VSS	Most Negative Power Supply Potential.
5	GND	Ground (0 V) Reference.
6	S4	Overvoltage Protected Source Terminal. This pin can be an input or an output.
7	D4	Drain Terminal. This pin can be an input or an output.
8	IN4	Logic Control Input.
9	IN3	Logic Control Input.
10	D3	Drain Terminal. This pin can be an input or an output.
11	S3	Overvoltage Protected Source Terminal. This pin can be an input or an output.
12	FF	Fault Flag Digital Output. This pin has a high output when the device is in normal operation or a low output when a fault condition occurs on any of the Sx inputs.
13	VDD	Most Positive Power Supply Potential.
14	S2	Overvoltage Protected Source Terminal. This pin can be an input or an output.
15	D2	Drain Terminal. This pin can be an input or an output.
16	IN2	Logic Control Input.

FIGURE 3. Terminal function.

INx	Switch Condition (S1 to S4)
1	On
0	Off

FIGURE 4. Truth table.

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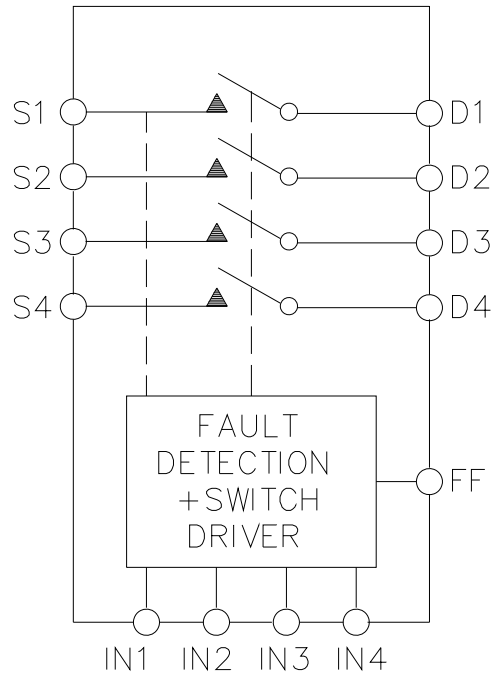


FIGURE 5. Functional block diagram.

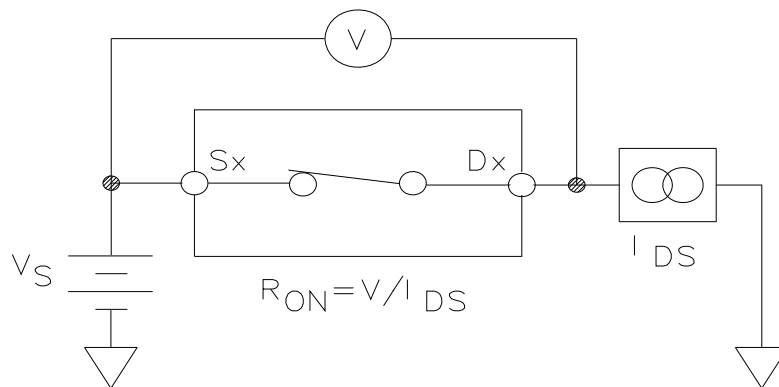


FIGURE 6. On Resistance.

<p>DLA LAND AND MARITIME COLUMBUS, OHIO</p>	<p>SIZE A</p>	<p>CODE IDENT NO. 16236</p>	<p>DWG NO. V62/16608</p>
		<p>REV A</p>	<p>PAGE 25</p>

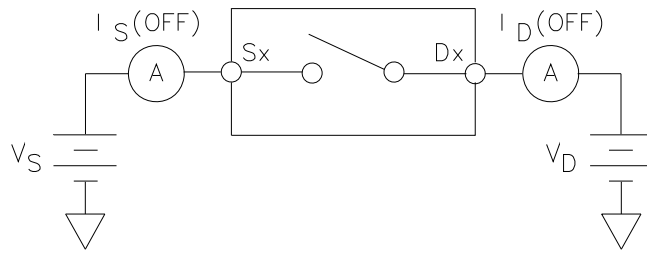


FIGURE 7. Off Leakage.

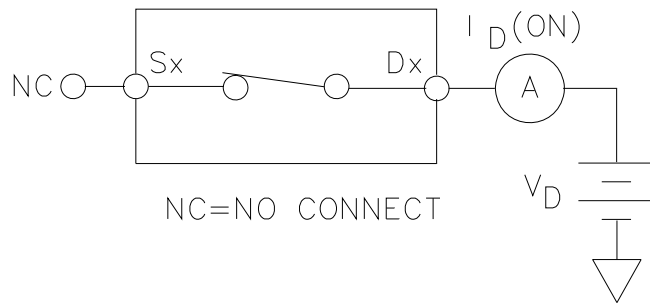


FIGURE 8. On Leakage.

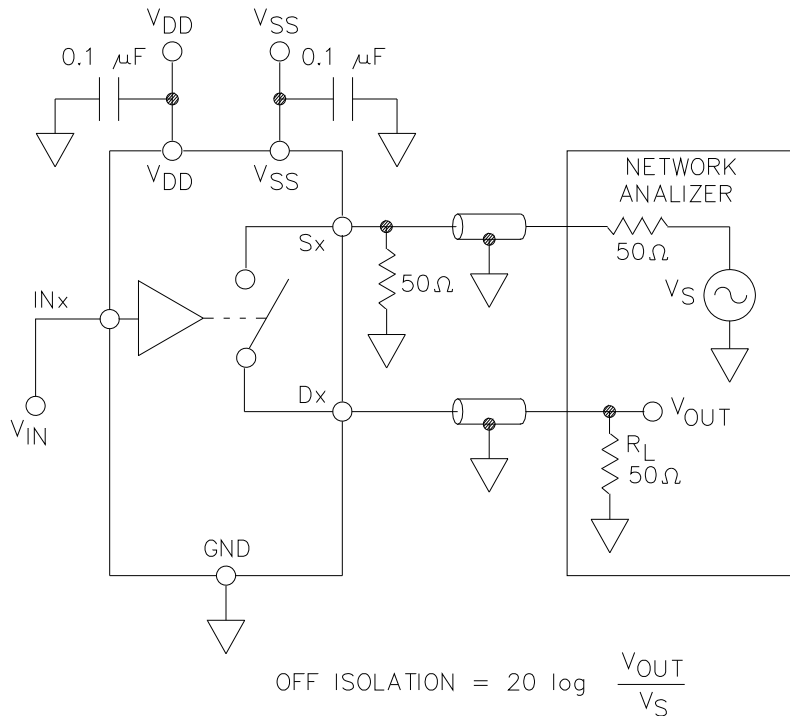
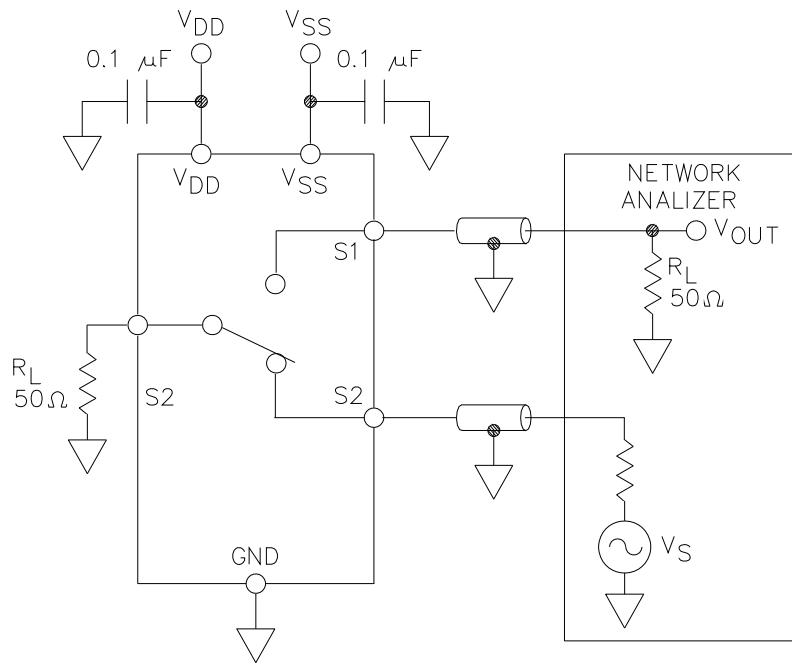


FIGURE 9. Off Isolation.

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$$\text{CHANNEL-TO-CHANNEL CROSSTALK} = 20 \log \frac{V_{OUT}}{V_S}$$

FIGURE 10. Channel-to-Channel Crosstalk.

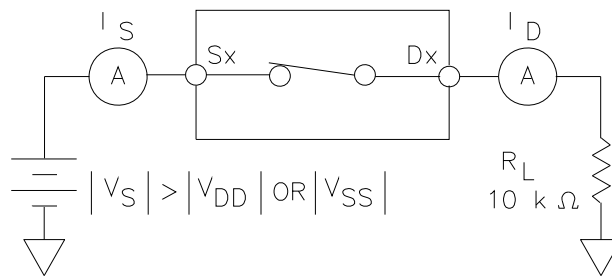


FIGURE 11. Switch Overvoltage Leakage.

<p>DLA LAND AND MARITIME COLUMBUS, OHIO</p>	<p>SIZE A</p>	<p>CODE IDENT NO. 16236</p>	<p>DWG NO. V62/16608</p>
		<p>REV A</p>	<p>PAGE 27</p>

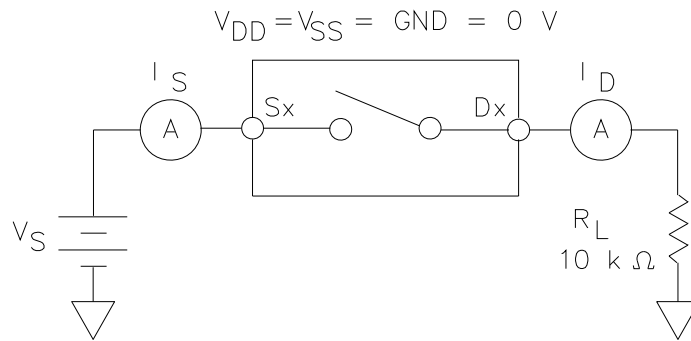
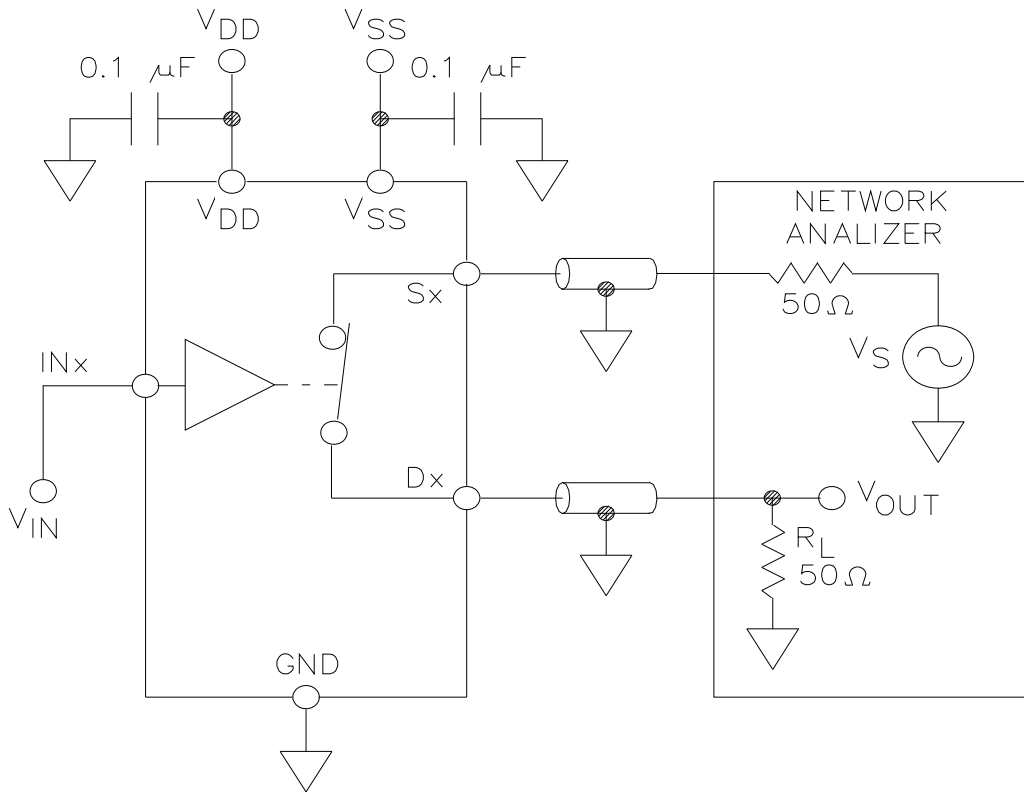


FIGURE 12. Switch Unpowered Leakage.



$$\text{ISOLATION LOSS} = 20 \log \frac{V_{\text{OUT WITH SWITCH}}}{V_{\text{OUT WITHOUT SWITCH}}}$$

FIGURE 13. Bandwidth.

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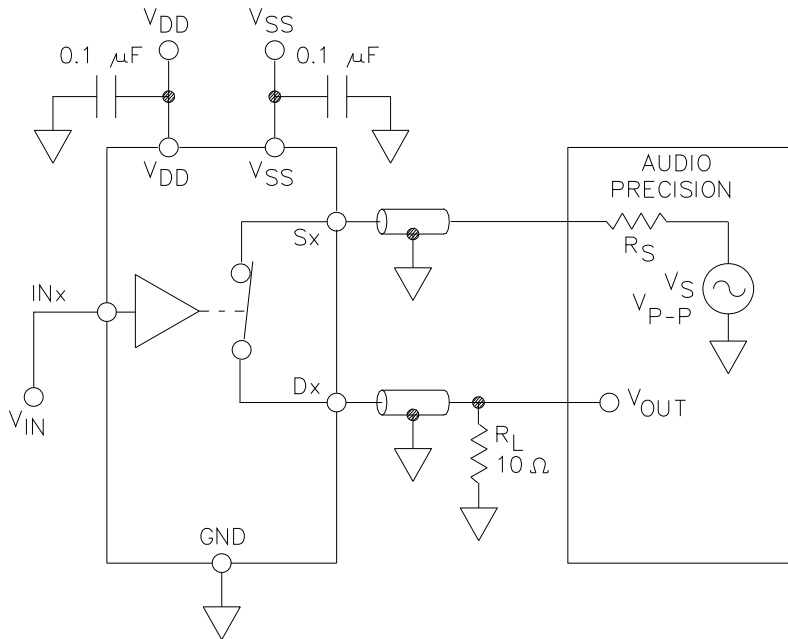


FIGURE 14. THD + N.

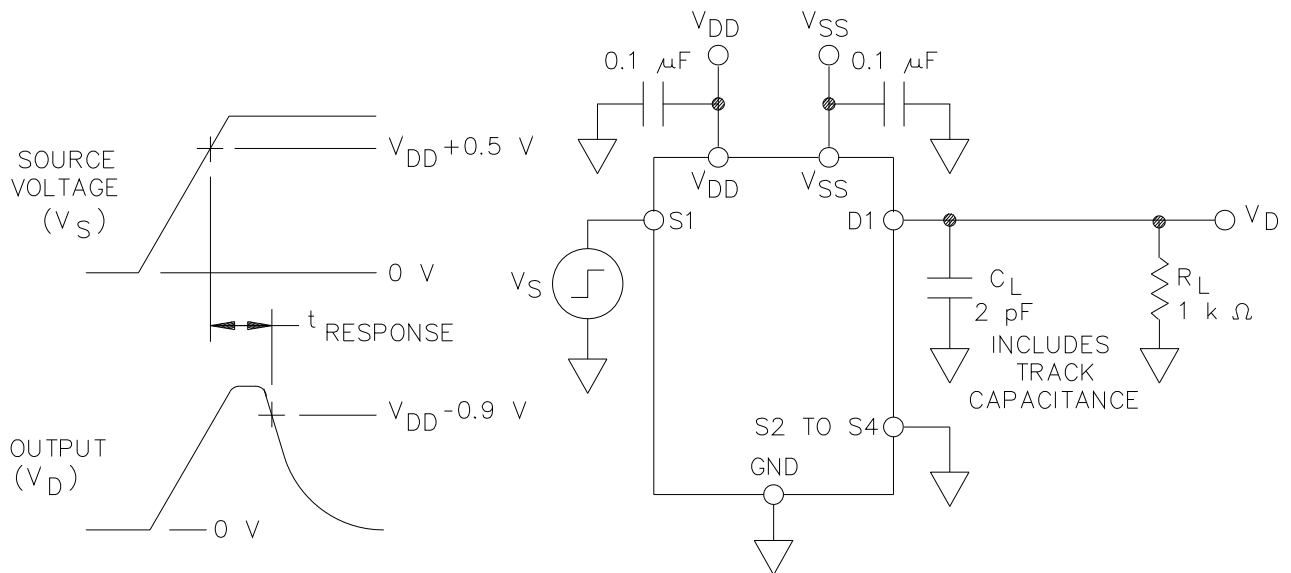


FIGURE 15. Overvoltage Response Time, $t_{RESPONSE}$.

<p>DLA LAND AND MARITIME COLUMBUS, OHIO</p>	<p>SIZE A</p>	<p>CODE IDENT NO. 16236</p>	<p>DWG NO. V62/16608</p>
		<p>REV A</p>	<p>PAGE 29</p>

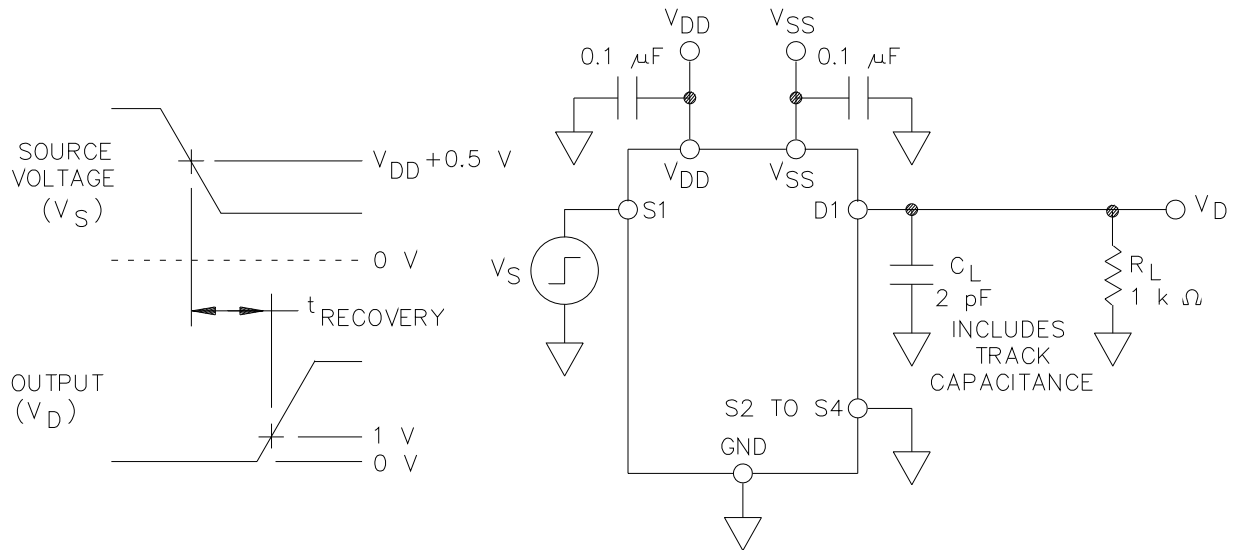


FIGURE 16. Overvoltage Recovery Time, $t_{RECOVERY}$.

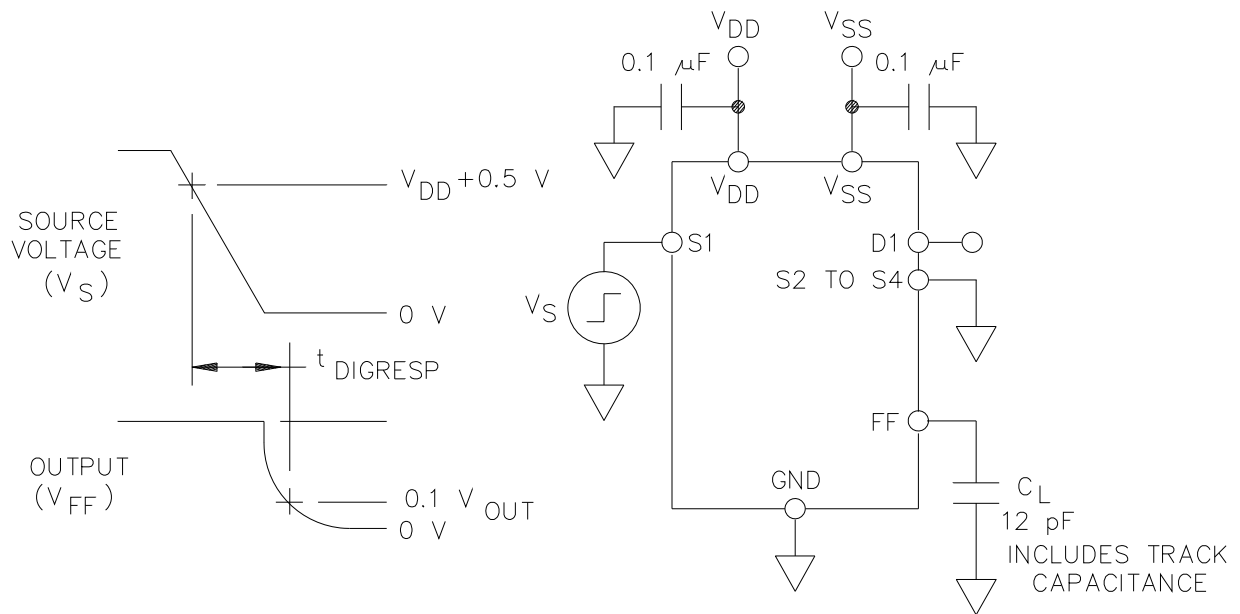


FIGURE 17. Interrupt Flag Response Time, $t_{DIGRESP}$.

<p>DLA LAND AND MARITIME COLUMBUS, OHIO</p>	<p>SIZE A</p>	<p>CODE IDENT NO. 16236</p>	<p>DWG NO. V62/16608</p>
		<p>REV A</p>	<p>PAGE 30</p>

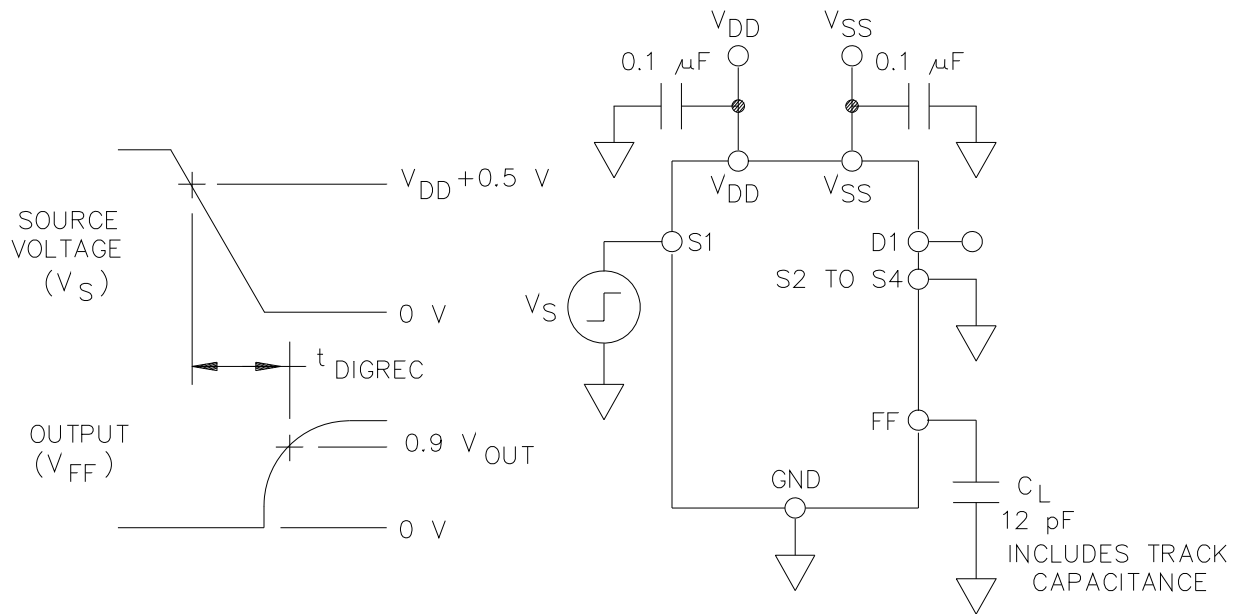


FIGURE 18. Interrupt Flag Recovery Time, t_{DIGREC} .

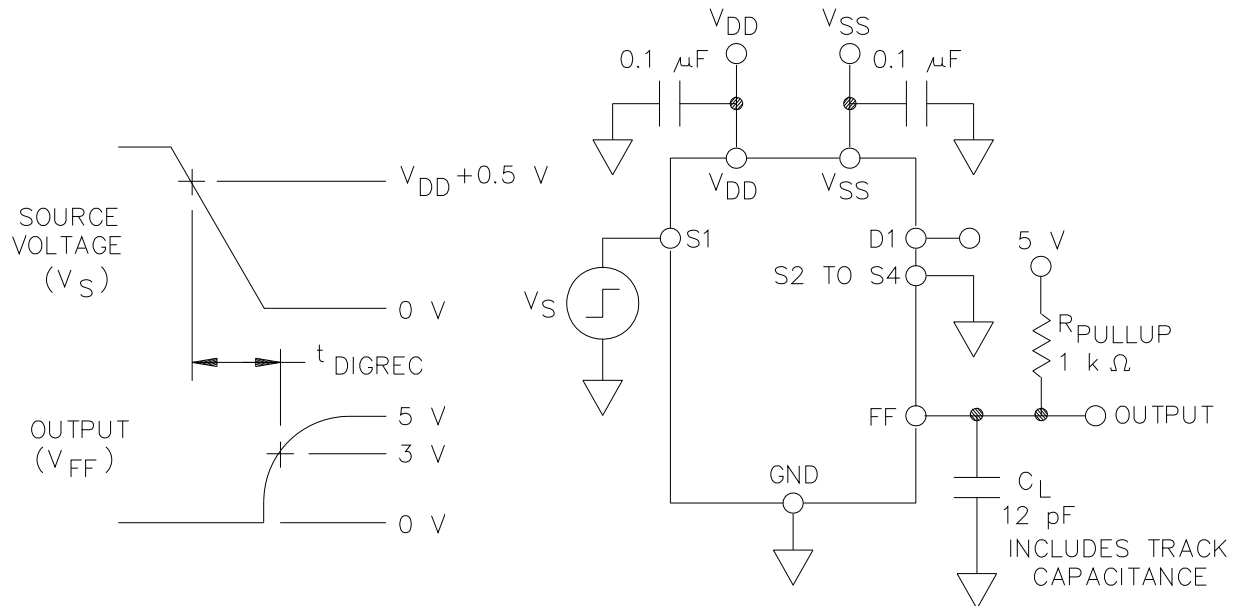


FIGURE 19. Interrupt Flag Recovery Time, t_{DIGREC} , with a 1 kΩ Pull-Up Resistor.

<p>DLA LAND AND MARITIME COLUMBUS, OHIO</p>	<p>SIZE A</p>	<p>CODE IDENT NO. 16236</p>	<p>DWG NO. V62/16608</p>
		<p>REV A</p>	<p>PAGE 31</p>

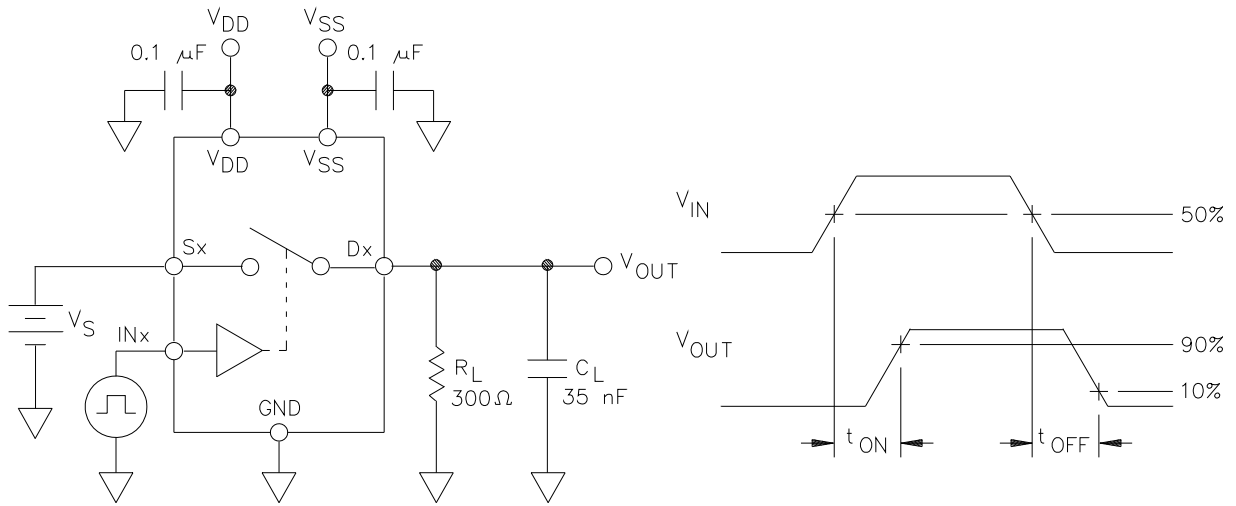


FIGURE 20. Switching Times, t_{ON} and t_{OFF} .

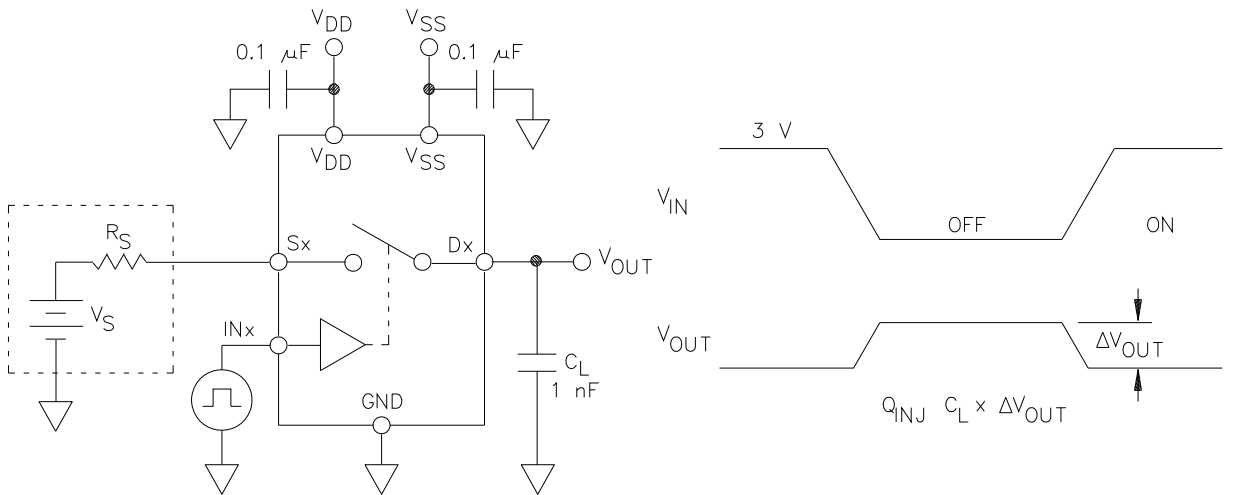


FIGURE 21. Charge Injection, Q_{INJ} .

<p>DLA LAND AND MARITIME COLUMBUS, OHIO</p>	<p>SIZE A</p>	<p>CODE IDENT NO. 16236</p>	<p>DWG NO. V62/16608</p>
		<p>REV A</p>	<p>PAGE 32</p>

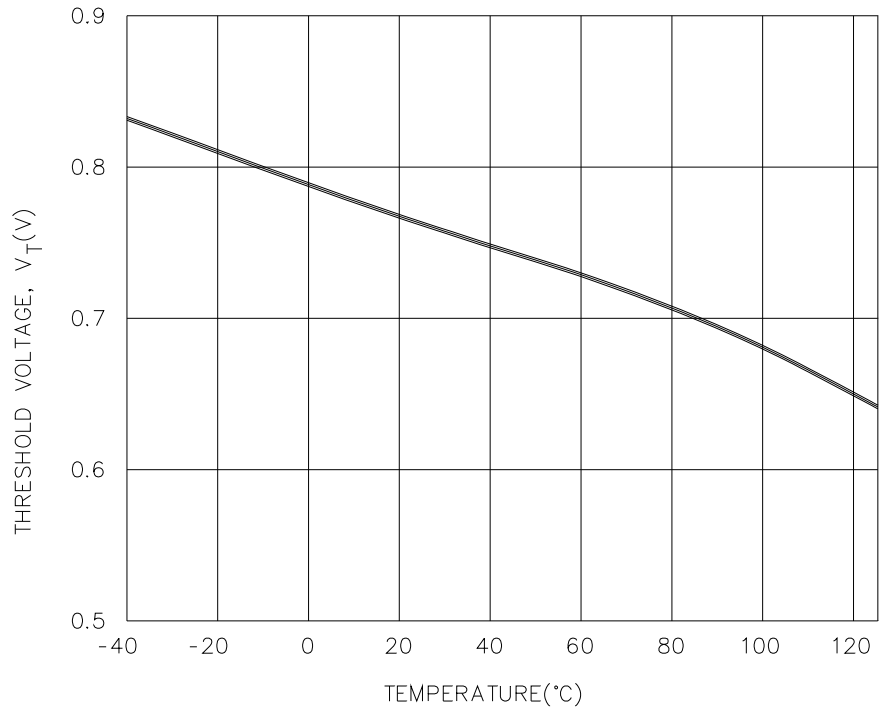


FIGURE 22. Threshold Voltage (Vr) vs. Temperature.

<p align="center">DLA LAND AND MARITIME COLUMBUS, OHIO</p>	<p align="center">SIZE A</p>	<p align="center">CODE IDENT NO. 16236</p>	<p align="center">DWG NO. V62/16608</p>
		<p align="center">REV A</p>	<p align="center">PAGE 33</p>

4. VERIFICATION

4.1 Product assurance requirements. The manufacturer is responsible for performing all inspection and test requirements as indicated in their internal documentation. Such procedures should include proper handling of electrostatic sensitive devices, classification, packaging, and labeling of moisture sensitive devices, as applicable.

5. PREPARATION FOR DELIVERY

5.1 Packaging. Preservation, packaging, labeling, and marking shall be in accordance with the manufacturer's standard commercial practices for electrostatic discharge sensitive devices.

6. NOTES

6.1 ESDS. Devices are electrostatic discharge sensitive and are classified as ESDS class 1 minimum.

6.2 Configuration control. The data contained herein is based on the salient characteristics of the device manufacturer's data book. The device manufacturer reserves the right to make changes without notice. This drawing will be modified as changes are provided.

6.3 Suggested source(s) of supply. Identification of the suggested source(s) of supply herein is not to be construed as a guarantee of present or continued availability as a source of supply for the item. DLA Land and Maritime maintains an online database of all current sources of supply at <https://landandmaritimeapps.dla.mil/programs/smcr/>.

Vendor item drawing administrative control number <u>1/</u>	Device manufacturer CAGE code	Mode of transportation and quantity	Vendor part number
V62/16608-01XE	24355	Tube, 98 units	ADG5412FTRUZ-EP
V62/16608-01XE	24355	Reel, 1,000 units	ADG5412FTRUZ-EP-R7

1/ The vendor item drawing establishes an administrative control number for identifying the item on the engineering documentation.

CAGE code

24355

Source of supply

Analog Devices
 Route 1 Industrial Park
 P.O. Box 9106
 Norwood, MA 02062
 Point of contact: 20 Alpha Road
 Chelmsford, MA 01824-4123

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