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				APP	ROVI	E D BY Muh	, namma	ad A. /	Akbar			PROTECTION AND DETECTION, 10 Ω R _{ON} , QUAD SPST SWITCHES, MONOLITHIC SILICO				N						
	SIZE CODE IDENT. NO. A 16236				DWG NO. V62/16608																	
				REV	/	•						PAGE 1 OF 29										



	REVISIONS									
LTR	DESCRIPTION	DATE	APPROVED							

1. SCOPE

1.1 <u>Scope</u>. 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 <u>Vendor Item Drawing Administrative Control Number</u>. 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> </u>	Ę	
	Drawing	Device type	Case outline	Lead finish	
	number	(See 1.2.1)	(See 1.2.2)	(See 1.2.3)	
1.2.1	Device type(s).				
	Device type	<u>Generic</u>		Circuit function 1/	
	01	ADG5412F –EP	Fault Pro Quad SP	tection and Detection, 10 Ω R ST Switches	RON
1.2.2	Case outline(s). The cas	e outlines are as specified herein.			
	Outline letter	Number of pins		Package style	
	Х	16	16-Lead Thin S	Shrink Small Outline Package	e
1.2.3	Lead finishes. The lead f	finishes are as specified below or ot	her lead finishes as p	rovided by the device manufa	acturer:

Finish designator	<u>Material</u>
A B C D E Z	Hot solder dip Tin-lead plate Gold plate Palladium Gold flash palladium 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 V_{SS} = -16.5 V and for single supply V_{SS} = 0 V.

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1.3 Absolute maximum ratings. 2/

$\begin{array}{l} V_{DD} \text{ to } V_{SS} \\ V_{DD} \text{ to } GND \\ V_{SS} \text{ to } GND \\ S_X \text{ Pins to } GND \\ S_X \text{ to } V_{DD} \text{ or } V_{SS} \\ V_S \text{ to } V_D \\ D_Z \text{ Pins } \underline{3}/ \\ Digital \text{ Inputs } \\ Peak \text{ Current, } Sx \text{ or } Dx \text{ Pins } \\ Continuous \text{ Current, } Sx \text{ or } Dx \text{ Pins } \\ Digital \text{ Output } \\ Digital \text{ Output } \\ Operating temperature range \\ Storage temperature range \\ Junction temperature \\ Thermal Impedance, \theta_{10} \\ \end{array}$	$\begin{array}{l} 48 \ V \\ -0.3 \ V \ to \ +48 \ V \\ -48 \ V \ to \ +0.3 \ V \\ -55 \ V \ to \ +55 \ V \\ 80 \ V \\ 80 \ V \\ 80 \ V \\ V_{SS} - 0.7 \ V \ to \ V_{DD} \ + \ 0.7 \ V \ or \ 30 \ mA, \ whichever \ occurs \ first \\ GND \ - \ 0.3 \ V \ to \ +48 \ V \\ 288 \ mA \ (pulsed \ at \ 1 \ ms, \ 10\% \ duty \ cycle \ maximum) \\ Data \ + \ 15\% \ \ \underline{4}/ \\ GND \ - \ 0.3 \ V \ to \ 6 \ V \ or \ 30 \ mA, \ whichever \ occurs \ first \\ -55^{\circ}C \ to \ +125^{\circ}C \\ -65^{\circ}C \ to \ 150^{\circ}C \\ 150^{\circ}C \end{array}$
16-Lead TSSOP, θ _{JA} Thermal Impedance (4-Layer Board) Reflow Soldering Peak: Temperature, PB Free ESD (HBM: ANSI/ESD STM5.1 – 2007) Input/Output Port to Supplies Input/Output Port to Input/Output Port All Other Pins	112.6°C/W As per JEDEC J-STD 020 5.5 kV 5.5 kV 5.5 kV

2. APPLICABLE DOCUMENTS

JEDEC - SOLID STATE TECHNOLOGY ASSOCIATION (JEDEC)

JEP95 – Registered and Standard Outlines for Semiconductor Devices

(Copies of these documents are available online at http://www.jedec.org or from JEDEC – Solid State Technology Association, 3103 North 10th Street, Suite 240–S, Arlington, VA 22201-2107).

3. REQUIREMENTS

3.1 <u>Marking</u>. 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 <u>Unit container</u>. The unit container shall be marked with the manufacturer's part number and with items A and C (if applicable) above.

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

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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- 3.4 Design, construction, and physical dimension. The design, construction, and physical dimensions are as specified herein.
- 3.5 Diagrams.
- 3.5.1 <u>Case outline</u>. The case outline shall be as shown in 1.2.2 and figure 1.
- 3.5.2 <u>Terminal connections</u>. The terminal connections shall be as shown in figure 2.
- 3.5.3 <u>Terminal function</u>. The terminal function shall be as shown in figure 3.
- 3.5.4 <u>Truth table</u>. The truth table shall be as shown in figure 4.
- 3.5.5 <u>Functional block diagram</u>. The functional block diagram shall be as shown in figure 5.
- 3.5.6 <u>On Resistance</u>. 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 <u>On Leakage</u>. The On leakage shall be as shown in figure 8.
- 3.5.9 <u>Off Isolation</u>. The Off Isolation shall be as shown in figure 9.
- 3.5.10 <u>Channel-to-Channel Crosstalk</u>. The Channel-to-Channel Crosstalk shall be as shown in figure 10.
- 3.5.11 <u>Switch Overvoltage Leakage</u>. The Switch Overvoltage Leakage shall be as shown in figure 11.
- 3.5.12 <u>Switch Unpower Leakage</u>. The Switch Unpower Leakage shall be as shown in figure 12.
- 3.5.13 <u>Bandwidth</u>. The Bandwidth shall be as shown in figure 13.
- 3.5.14 <u>THD + N</u>. The THD + N shall be as shown in figure 14.
- 3.5.15 <u>Overvoltage Response Time, t_{RESPONGE}</u>. The Overvoltage Response Time, t_{RESPONGE} shall be as shown in figure 15.
- 3.5.16 <u>Overvoltage Recovery Time, t_{RECOVERY}</u>. 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 <u>Charge Injection, Q_{INJ}</u>. The Charge Injection, Q_{INJ} shall be as shown in figure 21.
- 3.5.22 <u>Threshold Voltage (V_T) vs. Temperature</u>. The Threshold Voltage (V_T) vs. Temperature shall be as shown in figure 22.

DLA LAND AND MARITIME	SIZE	CODE IDENT NO.	DWG NO. V62/16608
COLUMBUS, OHIO	A	16236	
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Test	Symbol	Test conditions	Temperature		Limits		Unit
	± 15 V Dual Supply <u>2</u> / I _A				Тур	Max	
ANALOG SWITCH (V_{DD} = 13.5 V,	$V_{SS} = -13.5$	V, See Figure 6)					
Analog Signal Range			-55°C to 125°C			V_{DD} to V_{SS}	V
		$V_{S} = \pm 10 V$, $I_{S} = -10 mA$	25°C		10	11.2	Ω
			-40°C to 125°C			14	
			-55°C to 125°C			16.5	
On Resistance	Ron	$V_{S} = \pm 9 V$, $I_{S} = -10 mA$	25°C		9.5	10.7	Ω
			-40°C to 125°C			13.5	
			-55°C to 125°C			16	
		$V_{S} = \pm 10 V$, $I_{S} = -10 mA$	25°C		0.05	0.5	Ω
			-40°C to 125°C			0.6	
On-Resistance Match Between	ΔR_{ON}		-55°C to 125°C			0.7	
Channels,		$V_{S} = \pm 9 V$, $I_{S} = -10 mA$	25°C		0.05	0.35	Ω
			-40°C to 125°C			0.5	
			-55°C to 125°C			0.5	
		$V_{S} = \pm 10 V$, $I_{S} = -10 mA$	25°C		0.6	0.9	Ω
			-40°C to 125°C			1.1	
			-55°C to 125°C			1.1	
On-Resistance Flatness,	R _{FLAT(ON)}	$V_{S} = \pm 9 V$, $I_{S} = -10 mA$	25°C		0.1	0.4	Ω
			-40°C to 125°C			0.5	
			-55°C to 125°C			0.5	
Threshold Voltage	VT	See Figure 22	25°C		0.7		V
LEAKAGE CURRENTS (V _{DD} = 16.5	5 V, V _{SS} = -	16.5 V)					
		$V_{s} = \pm 10 V, V_{D} = \mp 10 V,$	25°C		±0.1	±1.5	nA
Source Off Leakage	I _S (Off)	See Figure 7	-40°C to 125°C			±5.0	
			-55°C to 125°C			±21.0	
		$V_{s} = +10 V V_{p} = \mp 10 V$	25°C		±0.1	±1.5	nA
Drain Off Leakage	I _D (Off)	See Figure 7	-40°C to 125°C			±5.0	
			-55°C to 125°C			±18.0	
			2500		+0.3	+1.5	n۸
Channel On Leakage	l _D (On),	$V_{S} = V_{D} = \pm 10 V,$	25°C		±0.3	±1.5	IIA
	I _S (Off)	See Figure 8	-40°C to 125°C			+4.5	
			-55 C 10 125 C			1.0	
FAULT							
Source Leakage Current	Is	$V_{DD} = 16.5 V, V_{SS} = -16.5 V,$					
With Overvoltage		$GND = 0 V, VS = \pm 55 V,$ See Figure 11	-55°C to 125°C		±/8		μA
		Geerigure II					
		$V_{DD} = 0 V$ or floating,			+40		
Floating		$V_{ss} = 0 V \text{ or floating},$	-55°C 10 125°C		±40		μΑ
i loaing		GND = 0 V, $INx = 0 V or$					
		See Figure 12					
							L

TABLE I. Electrical performance characteristics. 1/

DLA LAND AND MARITIME	SIZE	CODE IDENT NO.	DWG NO.
COLUMBUS, OHIO	A	16236	V62/16608
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Test	Symbol	Test conditions	Temperature		Limits		Unit
		± 15 V Dual Supply 2/	T _A	Min	Тур	Max	
FAULT-Continued							
Drain Leakage Current, With Overvoltage	ID	V _{DD} = 16.5 V, V _{SS} = -16.5 V, GND = 0 V, V _S = ±55 V, See Figure 11	25°C		±2.0		nA
Power Supplies Grounded		$V_{DD} = 0 V, V_{SS} = 0 V,$ $GND = 0 V, V_S = \pm 55 V,$ INx = 0 V, See Figure 12	25°C -40°C to 125°C -55°C to 125°C		±10	±8.0 ±15.0 ±49.0	nA
		V_{DD} = floating, V_{SS} = floating, GND = 0 V, V_S = ±55 V, INx = 0 V, Soo Figure 26	-40°C to 125°C -55°C to 125°C		±10 ±10	+30	
Power Supplies Floating			-40°C to 125°C -55°C to 125°C			±50 ±50 ±100	μΑ
DIGITAL INPUTS/OUTPUTS							
Input Voltage High	VINH		-55°C to 125°C	2.0			V
Input Voltage Low,	V _{INL}		-55°C to 125°C			0.8	V
Input Current	Inl or Inh	$V_{IN} = V_{GND} \text{ or } V_{DD}$	25°C -55°C to 125°C		±0.7	±1.2	μA
Digital Input Capacitance	CIN		25°C		5.0		pF
Output Voltage High	Vон		25°C	2.0			V
Output Voltage Low	Vol		25°C			0.8	V
DYNAMIC CHARACTERISTICS	<u>3</u> /						
ton		R_L = 300 Ω, C_L = 35 pF Vs = 10 V, See Figure 20	25°C -40°C to 125°C -55°C to 125°C		400	495 525 550	ns
toff			25°C -40°C to 125°C -55°C to 125°C	185	410	510 545 555	ns
Overvoltage Response Time	tresponse	$R_L = 1 k\Omega$, $C_L = 2 pF$, See Figure 15	25°C -40°C to 125°C -55°C to 125°C		460	585 615 630	ns
Overvoltage Recovery Time	t _{RECOVERY}	$R_L = 1 k\Omega$, $C_L = 2 pF$, See Figure 16	25°C -40°C to 125°C -55°C to 125°C		720	930 1050 1100	ns
Interrupt Flag Response Time	t DIGRESP	C∟= 10 pF, See Figure 17	25°C -55°C to 125°C		85 115		ns
Interrupt Flag Recovery Time	tdigrec	C∟= 10 pF, See Figure 18	25°C -55°C to 125°C		60 85		μs
		$C_L = 10 \text{ pF}, \text{ R}_{PULLUP} = 1 \text{ k}\Omega,$ See Figure 19	25°C		600		ns

DLA LAND AND MARITIME	SIZE	CODE IDENT NO.	DWG NO.
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Test	Symbol	Test conditions	Temperature	Limits			Unit
		± 15 V Dual Supply 2/	T _A	Min	Тур	Max	
DYNAMIC CHARACTERISTICS -	Continued	<u>3</u> /	•				
Charge Injection	QINJ	Vs = 0 V, Rs = 0 Ω, C∟= 1 nF, See Figure 21	25°C		680		рС
Off Isolation		R_{L} = 50 Ω , C_{L} = 5 pF, f = 1 MHz, See Figure 9	25°C		-70		dB
Channel-to-Channel Crosstalk		$R_L = 50 \Omega$, $C_L = 5 pF$, $f = 1 MHz$, See Figure 10	25°C		-90		dB
Total Harmonic Distortion Plus Noise	THD + N	R∟= 10 kΩ, Vs = 15 V p-p, f = 20 Hz to 20 kHz, See Figure 14	25°C		0.0015		%
-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			-0.72		dB
Cs (Off)		Vs=0 V, f=1 MHz	25°C		13		pF
C _D (Off)		Vs=0 V, f=1 MHz	25°C		12		pF
C _D (On), C _S (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 V _{DD})	1		1
Normal Mode							
DD			25°C		0.9	1.2	mA
			-55°C to 125°C			1.3	
IGND			25°C		0.4	0.55	
			-55°C to 125°C		0.5	0.65	
lss			25°C		0.5	0.05	
			-55°C to 125°C			0.7	
Fault Mode		$V_s = \pm 55 V$	0500		4.0	4.0	
DD			25°C		1.2	1.6	mA
			-55°C to 125°C		0.8	1.0	
Ignd					0.0	1.0	
			-55°C to 125°C		0.5	1.0	
ISS			20°0			1.8	
VDD/Vss		GND = 0 V	-55°C to 125°C	±5		±22	V

DLA LAND AND MARITIME	SIZE	CODE IDENT NO.	DWG NO. V62/16608
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Test	Symbol	Test conditions	Temperature	Limits		5	Unit
		± 20 V Dual Supply 4/	T _A	Min	Тур	Max	
ANALOG SWITCH ($V_{DD} = 18 V$, V	_{ss} = -18 V,	See figure 6)					
Analog Signal Range			-55°C to 125°C			V_{DD} to V_{SS}	V
		$V_{S} = \pm 15 V$, $I_{S} = -10 mA$	25°C		10	11.5	Ω
			-40°C to 125°C			14.5	
			-55°C to 125°C			16.5	
On Resistance	Ron	$V_{S} = \pm 13.5 \text{ V}, I_{S} = -10 \text{ mA}$	25°C		9.5	11	Ω
			-40°C to 125°C			14	
			-55°C to 125°C			16.5	
		$V_{S} = \pm 15 V$, $I_{S} = -10 mA$	25°C		0.05	0.35	Ω
			-40°C to 125°C			0.5	
On-Resistance Match Between	ΔR_{ON}		-55°C to 125°C			0.5	
Channels,		$V_{S} = \pm 13.5 \text{ V}, I_{S} = -10 \text{ mA}$	25°C		0.05	0.35	Ω
			-40°C to 125°C			0.5	
			-55°C to 125°C			0.5	
		$V_{S} = \pm 15 V$, $I_{S} = -10 mA$	25°C		1.0	1.4	Ω
			-40°C to 125°C			1.5	
			-55°C to 125°C			1.5	
On-Resistance Flatness,	R _{FLAT(ON)}	$V_{\rm S} = \pm 13.5 \text{ V}, I_{\rm S} = -10 \text{ mA}$	25°C		0.1	0.4	Ω
			-40°C to 125°C			0.5	
			-55°C to 125°C			0.5	
Threshold Voltage	VT	See Figure 22	25°C		0.7		V
LEAKAGE CURRENTS (V _{DD} = 22 \	/, V _{SS} = -22	2 V)				•	
		Vs=±15 V, V⊳=∓15 V,	25°C		±0.1	±1.5	nA
Source Off Leakage	I _S (Off)	See Figure 7	-40°C to 125°C			±5.0	
			-55°C to 125°C			±21.0	
-		Vo = +15 V/ Vo = ∓15 V/	25°C		±0.1	±1.5	nA
Drain Off Leakage	I _D (Off)	$VS = \pm 13 V$, $VD = \pm 13 V$,	-40°C to 125°C			±5.0	
		See Figure 7	-55°C to 125°C			±18.0	
						.4.5	
Channel On Leakage	I _D (On),	$V_S = V_D = \pm 15 V$,	25°C		±0.3	±1.5	nA
channel en Leakage	I _S (Off)	See Figure 8	-40°C to 125°C			±2.0	
			-55°C to 125°C			±4.5	
FAULT	1	1			[1	r
Source Leakage Current	ls	$V_{DD} = 22 V, V_{SS} = -22 V,$					
With Overvoltage		$GND = 0 V, Vs = \pm 55 V,$	-55°C to 125°C		±78		μA
		$V_{DD} = 0 V$ or floating.			. 40		
Power Supplies Grounded or		$V_{ss} = 0 V \text{ or floating},$	-55°C to 125°C		±40		μΑ
Floating		GND = 0 V, $INx = 0 V or$					
		Toating, $V_s = \pm 55 V$,					
		See Figure 12					

TABLE I.	Electrical	performance	characteristics	- Continued.	1/

DLA LAND AND MARITIME COLUMBUS, OHIO	SIZE CODE IDENT NO. A 16236		DWG NO. V62/16608	
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Test	Symbol	DI Test conditions Tempe			Limits		Unit
		± 20 V Dual Supply <u>4</u> /	T _A	Min	Тур	Max	
FAULT-Continued		·					
Drain Leakage Current, With Overvoltage	Ι _D	V _{DD} = 22 V, V _{SS} = -22 V, GND = 0 V, V _S = ±55 V, See Figure 11	25°C		±5.0		nA
			25°C		±10		nA
Power Supplies Grounded		$V_{DD} = 0 V, V_{SS} = 0 V,$	25°C			±1.0	μA
		$INx = 0 V$, $Vs = \pm 35 V$, INx = 0 V, See Figure 12	-40°C to 125°C			±1.0	
			-55°C to 125°C			±1.0	
			25°C			±30	nA
Power Supplies Floating		V_{DD} = floating, V_{SS} = floating,	-40°C to 125°C			±50	
		$GND = 0 V, Vs = \pm 55 V,$	-55°C to 125°C			±100	
		INx = 0 V,	25°C		±10		μA
		See Figure 12	-40°C to 125°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,	V _{INL}		-55°C to 125°C			0.8	V
Input Current		$V_{IN} = V_{GND} or V_{DD}$	25°C		±0.7		μA
			-55°C to 125°C			±1.2	
Digital Input Capacitance	CIN		25°C		5.0		pF
Output Voltage High	Vон		25°C	2.0			V
Output Voltage Low	Vol		25°C			0.8	V
DYNAMIC CHARACTERISTICS	<u>3</u> /		1				
ton		R∟= 300 Ω, C∟= 35 pF Vs = 10 V,	25°C -40°C to 125°C		400	500 530	ns
		See Figure 20	-55°C to 125°C			550	
		R _L = 300 Ω, C _L = 35 pF	25°C		415	515	ns
toff		$V_{S} = 10 V$, $V_{S1} = V_{S2} = 10 V$,	-40°C to 125°C			550	
		See Figure 20	-55°C to 125°C	200		565	
		$B_{i} = 1 k \Omega C_{i} - 2 p E$	25°C		370	480	ns
Overvoltage Response Time	tresponse	$\mathbf{R} = \mathbf{r} \mathbf{R} \mathbf{S}_{\mathbf{r}}, \mathbf{C} = \mathbf{Z} \mathbf{p} \mathbf{r},$	-40°C to 125°C			500	
		See Figure 15	-55°C to 125°C			515	
		$R_{I} = 1 kO_{1} C_{I} = 2 pF$	25°C		840	1200	ns
Overvoltage Recovery Time	tRECOVERY		-40°C to 125°C			1400	
		See Figure 16	-55°C to 125°C			1700	
Interrupt Flag Response Time		C∟= 10 pF,	25°C		85		ns
		See Figure 17	-55°C to 125°C		115		

DLA LAND AND MARITIME	SIZE	CODE IDENT NO.	DWG NO.	
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Test	Symbol	Test conditions	Temperature		Limits		Unit
		± 20 V Dual Supply <u>4</u> /	T _A	Min	Тур	Max	
DYNAMIC CHARACTERISTICS - 0	Continued	<u>3</u> /					
		C∟= 10 pF, See Figure 18	25°C		60		μs
Interrupt Flag Recovery Time	t DIGREC		-55°C to 125°C		85		
		$C_L = 10 \text{ pF}, \text{ RPULLUP} = 1 \text{ K}\Omega,$	25°C		600		ns
			2500		640		
Charge Injection	QINJ	$V_S = 0 V$, $R_S = 0 \Omega$, $C_L = 1 nF$, See Figure 21	25°C		640		рС
		$B_1 = 50 \text{ O}$, $C_1 = 5 \text{ pF}$, $f = 1 \text{ MHz}$.	25°C		-70		dB
Off Isolation		See Figure 9	20 0				
Channel-to-Channel Crosstalk		R_L = 50 Ω, C_L = 5 pF, f = 1 MHz,	25°C		-90		dB
		See Figure 10					
Total Harmonic Distortion Plus	THD + N	R∟= 10 kΩ, Vs = 15 V p-p,	25°C		0.001		%
Noise		f = 20 Hz to 20 kHz,					
		See Figure 14					
−3 dB Bandwidth		$R_{L} = 50 \Omega, C_{L} = 5 pF,$	25°C		270		MHz
					0.70		JD
Insertion Loss		$R_L = 50 \Omega$, $C_L = 5 pF$, $f = 1 MHz$, See Figure 13			-0.73		dB
Cs (Off)		Vs = 0 V, f = 1 MHz	25°C		12		pF
C _D (Off)		Vs = 0 V, f = 1 MHz	25°C		11		pF
C _D (On), C _S (On)		Vs = 0 V, f = 1 MHz	25°C		23		pF
POWER REQUIREMENTS (VDD =	22 V, Vss = -	-22 V, GND = 0 V, digital inputs = 0	V, 5 V, or V _{DD})				
Normal Mode							
DD			25°C		0.9	1.2	mA
			-55°C to 125°C			1.3	
GND			25°C		0.4	0.55	
			-55°C to 125°C			0.6	
lss			25°C		0.5	0.65	
			-55°C to 125°C			0.7	
Fault Mode		$V_s = \pm 55 V$					
ldd			25°C		1.2	1.6	mA
			-55°C to 125°C			1.8	
IGND			25°C		0.8	1.0	
			-55°C to 125°C		0.5	1.1	
lss			25°C		0.5	1.0	
			-55°C to 125°C			1.8	
VDD/Vss		GND = 0 V	-55°C to 125°C	±5		±22	V

TABLE I. Electrical performance characteristics - Continued	. <u>1</u> /
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DLA LAND AND MARITIME	SIZE	CODE IDENT NO.	DWG NO.
COLUMBUS, OHIO	A	16236	V62/16608
		REV	PAGE 10

Test	Symbol	Test conditions	Temperature	Limits		S	Unit
		± 12 V Single Supply 5/	T _A	Min	Тур	Max	
ANALOG SWITCH (V _{DD} = 10.8 V,	$V_{SS} = 0 V,$	See figure 6)					
Analog Signal Range			-55°C to 125°C			0 V to V _{DD}	V
		$V_{\rm S} = 0$ to 10 V, $I_{\rm S} = -10$ mA	25°C		22	24.5	Ω
			-40°C to 125°C			31	
			-55°C to 125°C			37	
On Resistance	R _{ON}	$V_{\rm S} = 3.5 \text{ V}$ to 8.5 V,	25°C		10	11.2	Ω
		I _S = -10 mA	-40°C to 125°C			14	
			-55°C to 125°C			16.5	
		$V_{\rm S} = 0 \ V \ to \ 10 \ V,$	25°C		0.05	0.5	Ω
		I _S = -10 mA	-40°C to 125°C			0.6	
On-Resistance Match Between	ΔR_{ON}		-55°C to 125°C			0.7	
Channels,		$V_{\rm S} = 3.5 \text{ V}$ to 8.5 V,	25°C		0.05	0.5	Ω
		I _S = -10 mA	-40°C to 125°C			0.6	
			-55°C to 125°C			0.7	
		$V_{\rm S} = 0$ V to 10 V,	25°C		12.5	14.5	Ω
		I _s = -10 mA	-40°C to 125°C			19	
			-55°C to 125°C			23	
On-Resistance Flatness,	R _{FLAT(ON)}	$V_{S} = 3.5 V \text{ to } 8.5 V.$	25°C		0.6	0.9	Ω
		$I_{S} = -10 \text{ mA}$	-40°C to 125°C			1.1	
			-55°C to 125°C			1.3	
Threshold Voltage	Vτ	See Figure 22	25°C		0.7		V
LEAKAGE CURRENTS (VDD = 13	.2 V. Vss =	0 V)			-		1
	,	$V_{s} = 1 V/10 V. V_{p} = 10 V/1 V.$	25°C		±0.1	±1.5	nA
Source Off Leakage	I _S (Off)	See Figure 7	-40°C to 125°C			±5.0	
-	,	Georigaion	-55°C to 125°C			±21.0	
		$V_{\rm S} = 1 \text{ V}/10 \text{ V}$, $V_{\rm D} = 10 \text{ V}/1 \text{ V}$.	25°C		+0.1	+1.5	nA
Drain Off Leakage	I _D (Off)	See Figure 7	-40°C to 125°C			±5.0	
		Gee Figure 7	-55°C to 125°C			±18.0	
			25°C		±0.3	+1.5	n۸
Channel On Leakage	I _D (On),	$V_{S} = V_{D} = 1 V/10 V,$	25°C		±0.3	±1.5	ПА
	I _S (Off)	See Figure 8	-40 C to 125 C			+4 5	
			-55 C 10 125 C				
FAULT			Г Г				
Source Leakage Current	Is	$V_{DD} = 13.2 \text{ V}, \text{ Vss} = 0 \text{ V},$					
With Overvoltage		$GND = 0$ V, $VS = \pm 33$ V,	-55°C to 125°C		±/8		μA
Deurez Curziliae Creuradad ez		$V_{DD} = 0 V$ or floating,	5500 to 10500		+40		
Floating		$V_{SS} = 0 V \text{ or floating},$	-00-0 10 1250		<u>+</u> +0		μΛ
. ioung		GND = 0 V, $INx = 0 V or$					
		See Figure 12					

DLA LAND AND MARITIME	SIZE	CODE IDENT NO.	IO. DWG NO. V62/16608	
COLUMBUS, OHIO	A	16236		
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Test	Symbol Test conditions Temperature Limits			Unit			
		± 12 V Single Supply 5/	T _A	Min	Тур	Max	
FAULT-Continued							
Drain Leakage Current, With Overvoltage	Ι _D	V _{DD} = 13.2 V, V _{SS} = 0 V, GND = 0 V, V _S = ±55 V, See Figure 11	25°C		±2.0		nA
Power Supplies Grounded		V _{DD} = 0 V, V _{SS} = 0 V, GND = 0 V, V _S = ±55 V, INx = 0 V, See Figure 12	25°C -40°C to 125°C -55°C to 125°C		±10	±8.0 ±15.0 ±49.0	nA
Power Supplies Floating		V_{DD} = floating, V_{SS} = floating, GND = 0 V, V_S = ±55 V, INx = 0 V, See Figure 12	25°C -40°C to 125°C -55°C to 125°C 25°C		±10 ±10 ±10	+30	μA
			-40°C to 125°C -55°C to 125°C			±50 ±100	
DIGITAL INPUTS	1				1		1
Input Voltage High	VINH		-55°C to 125°C	2.0			V
Input Voltage Low,	V _{INL}		-55°C to 125°C			0.8	V
Input Current	Inl or Inh	$V_{IN} = V_{GND} \text{ or } V_{DD}$	25°C -55°C to 125°C		±0.7	±1.2	μA
Digital Input Capacitance	CIN		25°C		5.0		pF
Output Voltage High	Vон		25°C	2.0			V
Output Voltage Low	Vol		25°C			0.8	V
DYNAMIC CHARACTERISTICS	<u>3</u> /	•					
ton		R_L = 300 Ω, C_L = 35 pF Vs = 8 V, See Figure 20	25°C -40°C to 125°C -55°C to 125°C		400	485 515 540	ns
toff			25°C -40°C to 125°C -55°C to 125°C	170	375	460 495 520	ns
Overvoltage Response Time	tresponse	$R_L = 1 k\Omega$, $C_L = 2 pF$, See Figure 15	25°C -40°C to 125°C -55°C to 125°C		560	660 700 720	ns
Overvoltage Recovery Time	t _{RECOVERY}	$R_L = 1 k\Omega$, $C_L = 2 pF$, See Figure 16	25°C -40°C to 125°C -55°C to 125°C		640	800 865 960	ns
Interrupt Flag Response Time	tdigresp	C∟= 10 pF, See Figure 17	25°C -55°C to 125°C		85 115		ns

DLA LAND AND MARITIME	SIZE	CODE IDENT NO.	DWG NO.
COLUMBUS, OHIO	A	16236	V62/16608
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Test	Symbol	Test conditions	Temperature		Limits		Unit
		± 12 V Single Supply 5/	T _A	Min	Тур	Max	-
DYNAMIC CHARACTERISTICS -	Continued	<u>3/</u>			-	-	
			25°C		60		μs
Interrupt Flag Recovery Time	tDIGREC	C∟= 10 pF, See Figure 18	-55°C to 125°C		85		
		$C_L = 10 \text{ pF}$. Revelue = 1 k Ω .	0500				
		See Figure 19	25°C		600		ns
Charge Injection	Qinj	$V_{S} = 6 V, R_{S} = 0 \Omega, C_{L} = 1 nF,$	25°C		340		рС
		See Figure 21					
Off Isolation		R _L = 50 Ω , C _L = 5 pF, f = 1 MHz, See Figure 9	25°C		-65		dB
		$R_{\downarrow} = 50 \Omega, C_{\downarrow} = 5 pF, f = 1 MHz.$	25°C		-90		dB
		See Figure 10					-
Total Harmonic Distortion Plus	THD + N	R_L = 10 k Ω , V_S = 6 Vp-p,	25°C		0.007		%
Noise		f = 20 Hz to 20 kHz,					
		See Figure 14					-
−3 dB Bandwidth		$R_{L} = 50 \Omega, C_{L} = 5 pF,$	25°C		270		MHz
		See Figure 13					
Insertion Loss		$R_{L} = 50 \Omega$, $C_{L} = 5 p_{F}$, $f = 1 MHz$, See Figure 13			-0.74		dB
Cs (Off)		Vs=6 V, f=1 MHz	25°C		16		pF
CD (Off)		Vs = 6 V, f = 1 MHz	25°C		15		pF
C _D (On), C _S (On)		Vs = 6 V, f = 1 MHz	25°C		25		pF
POWER REQUIREMENTS (VDD =	13.2 V, Vss=	= 0 V, Digital inputs = 0 V, 5 V, or V	dd)		1	1	T
Normal Mode							
DD			25°C		0.9	1.2	mA
			-55°C to 125°C			1.3	
Ignd			25°C		0.4	0.55	
			-55°C to 125°C		0.5	0.6	
lss			25°C		0.5	0.05	
			-55°C to 125°C			0.7	
Fault Mode		$V_s = \pm 55 V$	0500		4.0	1.0	
lod			25°C		1.2	1.6	mΑ
			-55°C to 125°C		0.8	1.0	
Ignd			25°C		0.0	1.0	
			-55°C to 125°C		0.5	1.0	
ISS		Digital inputs = 5 V Vs = ± 55 V, Vp = 0 V	25°C		0.0	1.8	
				0		44	
00 עט			-55°C to 125°C	ō		44	V

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

Test	Symbol	Test conditions	Temperature		Limits	;	Unit
		± 36 V Single Supply <u>6</u> /	T _A	Min	Тур	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
		$V_{\rm S} = 0$ to 30 V, $I_{\rm S} = -10$ mA	25°C		22	24.5	Ω
			-40°C to 125°C			31	
			-55°C to 125°C			37	
On Resistance	Ron	$V_{\rm S} = 4.5 \text{ V}$ to 28 V,	25°C		10	11	Ω
		I _S = -10 mA	-40°C to 125°C			14	
			-55°C to 125°C			16.5	
		$V_{\rm S} = 0 \ V \ {\rm to} \ 30 \ V,$	25°C		0.05	0.5	Ω
		I _S = -10 mA	-40°C to 125°C			0.6	
On-Resistance Match Between	ΔR_{ON}		-55°C to 125°C			0.7	
Channels,		$V_{\rm S} = 4.5 \text{ V}$ to 28 V,	25°C		0.05	0.35	Ω
		I _S = -10 mA	-40°C to 125°C			0.5	
			-55°C to 125°C			0.5	
		$V_{\rm S} = 0 \text{V} \text{ to } 30 \text{V},$	25°C		12.5	14.5	Ω
		I _S = -10 mA	-40°C to 125°C			19	
			-55°C to 125°C			23	
On-Resistance Flatness,	R _{FLAT(ON)}	$V_{\rm S} = 4.5 \text{ V}$ to 28 V,	25°C		0.4	0.5	Ω
		I _S = -10 mA	-40°C to 125°C			0.5	
			-55°C to 125°C			0.5	
Threshold Voltage	VT	See Figure 22	25°C		0.7		V
LEAKAGE CURRENTS (V _{DD} = 39	.6 V, V _{SS} =	0 V)					
		$V_{S} = 1 V/30 V, V_{D} = 30 V/1 V,$	25°C		±0.1	±1.5	nA
Source Off Leakage	I _S (Off)	See Figure 7	-40°C to 125°C			±5.0	
			-55°C to 125°C			±21.0	
		Vs = 1 V/30 V, Vp = 30 V/1 V,	25°C		±0.1	±1.5	nA
Drain Off Leakage	I _D (Off)	See Figure 7	-40°C to 125°C			±5.0	
			-55°C to 125°C			±18.0	
		$V_{c} = V_{c} = 1 V/30 V$	25°C		±0.3	±1.5	nA
Channel On Leakage	$I_D(On),$		-40°C to 125°C			±2.0	
	Is (OII)	See Figure 8	-55°C to 125°C			±4.5	
ΕΛΙΗ Τ							
Source Leakage Current	la	$V_{DD} = 39.6 V V_{CS} = 0.V$					
With Overvoltage	15	$GND = 0 V V_{S} = +55 V -40 V_{S}$	-55°C to 125°C		+78		μА
that ever tenage		See Figure 11	00 0 10 120 0				μ. τ
Power Supplies Grounded or		$V_{DD} = 0 V \text{ or floating},$	-55°C to 125°C		±40		μA
Floating		$V_{ss} = 0 V \text{ or floating},$					
		floating, $V_s = +55 V -40 V$					
		See Figure 12					

DLA LAND AND MARITIME	SIZE	CODE IDENT NO.	DWG NO.
COLUMBUS, OHIO	A	16236	V62/16608
		REV	PAGE 14

Test	Symbol	Test conditions	Temperature		Limits		Unit
		± 36 V Single Supply 6/	T _A	Min	Тур	Max	
FAULT-Continued							
Drain Leakage Current,	I _D						
With Overvoltage		$V_{DD} = 39.6 V, V_{SS} = 0 V,$	25°C		±2.0		nA
		$GND = 0 V, Vs = \pm 55 V, -40 V$					
		See Figure 11					
Power Supplies Grounded		$V_{DD} = 0 V, V_{SS} = 0 V,$	25°C		±10	±8.0	nA
		$GND = 0 V, Vs = \pm 55 V,$	-40°C to 125°C			±15.0	
		INx = 0 V, See Figure 12	-55°C to 125°C			±49.0	
			25°C		±10		μΑ
Power Supplies Floating		V_{DD} = floating, V_{SS} = floating,	-40°C to 125°C		±10		
		$GND = 0 V, V_s = \pm 55 V, -40 V$	-55°C to 125°C		±10		
		IIIX = 0 V, See Figure 12	25°C			±30	nA
			-40°C to 125°C			±50	
			-55°C to 125°C			±100	
DIGITAL INPUTS							
Input Voltage High	VINH		-55°C to 125°C	2.0			V
Input Voltage Low,	V _{INL}		-55°C to 125°C			0.8	V
Input Current	In or In	$V_{IN} = V_{GND} \text{ or } V_{DD}$	25°C		±0.7		μA
			-55°C to 125°C			±1.2	
Digital Input Capacitance	CIN		25°C		5.0		pF
Output Voltage High	Vон		25°C	2.0			V
Output Voltage Low	Vol		25°C			0.8	V
DYNAMIC CHARACTERISTICS	<u>3</u> /						
		$R_{L} = 300 \ \Omega, \ C_{L} = 35 \ pF$	25°C		400	490	ns
ton		Vs = 18 V,	-40°C to 125°C			520	
		See Figure 20	-55°C to 125°C			545	
		R_L = 300 Ω , C_L = 35 pF	25°C		375	460	ns
toff		$V_{S} = 18 V$, $V_{S1} = V_{S2} = 18 V$,	-40°C to 125°C			485	
		See Figure 20	-55°C to 125°C	195		510	
		$B_1 = 1 k \Omega C_1 = 2 p E$	25°C		250	350	ns
Overvoltage Response Time	t RESPONSE		-40°C to 125°C			360	
		See Figure 15	-55°C to 125°C			375	
		$B_1 = 1 k \Omega C_1 = 2 p E$	25°C		1500	2000	ns
Overvoltage Recovery Time	t _{RECOVERY}		-40°C to 125°C			2300	
		See Figure 16	-55°C to 125°C			2700	
Interrupt Flag Response Time	TDICPESP	C _L = 10 pF,	25°C		85		ns
	UNICITEOF	See Figure 17	-55°C to 125°C		115		

TABLE I. Electrical performance characteristics - Continued. 1/

DLA LAND AND MARITIME	SIZE	CODE IDENT NO.	DWG NO.
COLUMBUS, OHIO	A	16236	V62/16608
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Test	Symbol	Test conditions	Temperature		Limits		Unit
		± 36 V Single Supply <u>6</u> /	T _A	Min	Тур	Max	
DYNAMIC CHARACTERISTICS - 0	Continued	<u>3</u> /					
		C∟= 10 pF, See Figure 18	25°C		60		μs
Interrupt Flag Recovery Time	t DIGREC		-55°C to 125°C		85		
		$C_L = 10 \text{ pF}, \text{ RPULLUP} = 1 \text{ k}\Omega,$	25°C		600		ns
		See Figure 19					
Charge Injection	Qinj	$V_s = 18 V, R_s = 0 \Omega, C_L = 1 nF,$	25°C		610		рС
		$B_{i} = 50.0$ $C_{i} = 5 \text{ pF}$ $f = 1 \text{ MHz}$	25°C		-70		dB
Off Isolation		See Figure 9	23 0		10		ЧÐ
Channel-to-Channel Crosstalk		R_L = 50 Ω , C_L = 5 pF, f = 1 MHz,	25°C		-90		dB
		See Figure 10	_				
Total Harmonic Distortion Plus	THD + N	$R_{L} = 10 \text{ k}\Omega, \text{ Vs} = 6 \text{ Vp-p},$	25°C		0.001		%
Noise		f = 20 Hz to 20 kHz,					
			2500		070		N 41 1-
−3 dB Bandwidth		$RL = 50 \Omega$, $CL = 5 pF$,	25°C		270		IVIHZ
		$\frac{1}{2} = 500 \text{Or} = 5 \text{ pc} \text{f} = 1 \text{ MHz}$			0.75		dD
Insertion Loss		See Figure 13			-0.75		uБ
Cs (Off)		Vs = 18 V, f = 1 MHz	25°C		12		pF
C _D (Off)		Vs = 18 V, f = 1 MHz	25°C		11		рF
C _D (On), C _S (On)		Vs = 18 V, f = 1 MHz	25°C		23		рF
POWER REQUIREMENTS (VDD =	39.6 V, Vss=	= 0 V, Digital inputs = 0 V, 5 V, or V) (DD				
Normal Mode							
DD			25°C		0.9	1.2	mA
			-55°C to 125°C			1.3	
Ignd			25°C		0.4	0.55	
			-55°C to 125°C			0.6	
lss			25°C		0.5	0.65	
			-55°C to 125°C			0.7	
Fault Mode		Vs=±55 V					
DD			25°C		1.2	1.6	mA
			-55°C to 125°C			1.8	
Ignd			25°C		0.8	1.0	
			-55°C to 125°C			1.1	
lss		Digital inputs = 5 V	25°C		0.5	1.0	
		$V_{s} = \pm 55 V, V_{D} = 0 V$	-55°C to 125°C			1.8	
Vdd			-55°C to 125°C	8		44	V

DLA LAND AND MARITIME	SIZE	CODE IDENT NO.	DWG NO.
COLUMBUS, OHIO	A	16236	V62/16608
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Test	Symbol	Symbol Test conditions Ter	Temperature	Limits			Unit
	T _A	T _A	Min	Тур	Max		
CONTINUOUS CURRENT PER CH	ANNEL, Sx	OR Dx					
16-LEAD TSSOP θ _{JA} = 112.6°C/W			25°C			83	mA
		$V_{s} = V_{ss} + 4.5 V$ to $V_{DD} - 4.5 V$	85°C			59	
		125°C			39		
		25°C			64		
		$V_S = V_{SS} to V_{DD}$	85°C			48	
			125°C			29	

- <u>1/</u> 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.
- <u>2</u>/ $V_{DD} = 15 \text{ V} \pm 10\%, V_{SS} = -15 \text{ V} \pm 10\%, \text{ GND} = 0 \text{ V}, \text{ } C_{DECOUPLING} = 0.1 \text{ } \mu\text{F},$ unless otherwise noted.
- Guaranteed by design, not subject to production test.
- unless otherwise noted.
- <u>3/</u> <u>4/</u> <u>5/</u> <u>6/</u> $\begin{array}{l} V_{DD} = 20 \ V \pm 10\%, \ V_{SS} = -20 \ V \pm 10\%, \ GND = 0 \ V, \ C_{DECOUPLING} = 0.1 \ \mu F, \\ V_{DD} = 12 \ V \pm 10\%, \ V_{SS} = 0 \ V, \ GND = 0 \ V, \ C_{DECOUPLING} = 0.1 \ \mu F, \\ V_{DD} = 36 \ V \pm 10\%, \ V_{SS} = 0 \ V, \ GND = 0 \ V, \ C_{DECOUPLING} = 0.1 \ \mu F, \\ \end{array}$ unless otherwise noted.
- unless otherwise noted.

DLA LAND AND MARITIME	SIZE	CODE IDENT NO.	DWG	NO.
COLUMBUS, OHIO	A	16236	V62/1	6608
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Dimensions						
Symbol	Millimeters		Symbol	Milli	meters	
	Min	Max		Min	Max	
Α		1.20	E	4.30	4.50	
A1	0.05	0.15	E1	6.40 BSC		
b	0.19	0.30	е	0.65	5 BSC	
С	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.





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FIGURE 7. Off Leakage.









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





FIGURE 11. Switch Overvoltage Leakage.

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FIGURE 12. Switch Unpowered Leakage.



FIGURE 13. Bandwidth.

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FIGURE 14. THD + N.



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

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FIGURE 16. Overvoltage Recovery Time, tRECOVERY.



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

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



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

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FIGURE 20. Switching Times, ton and toFF.



FIGURE 21. Charge Injection, QINJ.

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FIGURE 22. Threshold Voltage (V_T) vs, Temperature.

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4. VERIFICATION

4.1 <u>Product assurance requirements</u>. 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 <u>Packaging</u>. 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 <u>Configuration control</u>. 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 <u>Suggested source(s) of supply</u>. 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 <u>http://www.landandmaritime.dla.mil/Programs/Smcr/</u>.

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 1 Technology Way P.O. Box 9106 Norwood, MA 02062-9106

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