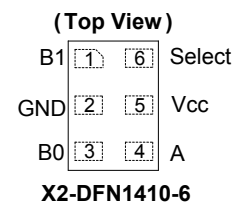
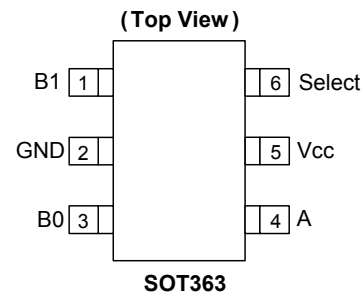


## Description

The 74LVC1G3157 is a single-pole, double-throw analog switch. The device is designed for operation with a power supply range of 1.65V to 5.5V. The bidirectional switch can handle signal amplitudes between V<sub>CC</sub> and Ground. The OFF state impedance of the switch is typically 50MΩ while the ON state is typically 6Ω.

## Pin Assignments



Packages not to scale

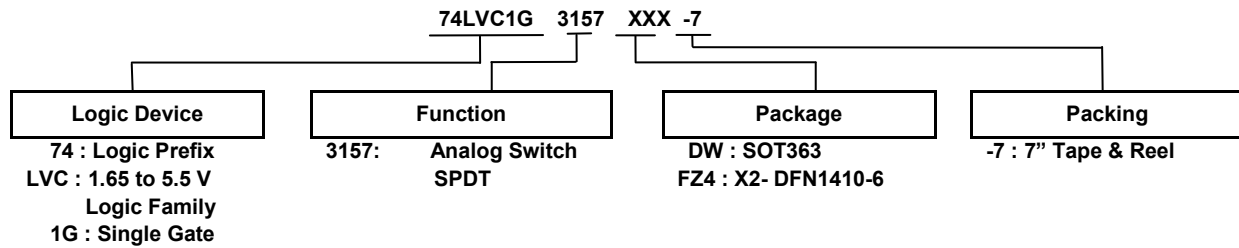
## Features

- Wide Supply Voltage Range from 1.65 to 5.5V
  - Control Pin Includes Hysteresis Allowing for Slower Input Rise and Fall Times
  - CMOS Low Power Consumption
  - Very Low ON-State Resistance
  - 7.5Ω (typical) at V<sub>CC</sub> = 2.7V
  - 6.5Ω (typical) at V<sub>CC</sub> = 3.3V
  - 6Ω (typical) at V<sub>CC</sub> = 4.5V
  - Break Before Make Switching
  - Control Input accepts up to 5.5V Regardless of V<sub>CC</sub>.
  - Direct Interface with TTL Levels when V<sub>CC</sub> = 3.3V
  - ESD Protection Tested per JESD 22
  - Exceeds 2,000-V Human Body Model (A114)
  - Exceeds 1,000-V Charged Device Model (C101)
  - Latch-Up Exceeds 100mA per JESD 78, Class I
  - Range of Package Options
  - **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
  - **Halogen and Antimony Free. "Green" Device (Note 3)**
  - **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](https://www.diodes.com/quality/product-definitions/) or your local Diodes representative.**
- <https://www.diodes.com/quality/product-definitions/>

## Applications

- Multiplexing of Analog Signals
- Multiplexing of Digital Signals
- Wide array of products such as:
  - Tablets, E-readers, Wearables
  - Cell Phones, Personal Navigation / GPS
  - MP3 Players, Cameras, Video Recorders
  - Computer Peripherals, Hard Drives, CD/DVD ROMs
  - TV, DVD, DVR, Set Top Boxes
  - PCs, Networking, Notebooks, Netbooks, PDAs

Notes: 1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.  
 2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.  
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

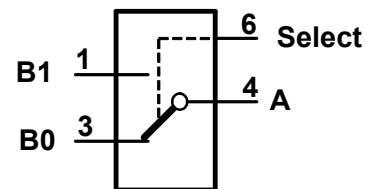
**Ordering Information** (Note 4)


Device	Package Code	Package (Note 5)	Package Size	7" Tape and Reel (Note 6)	
				Quantity	Part Number Suffix
74LVC1G3157DW-7	DW	SOT363	2.0mm x 2.0mm x 1.1mm 0.65 mm lead pitch	3,000/Tape & Reel	-7
74LVC1G3157FZ4-7	FZ4	X2-DFN1410-6	1.4mm x 1.0mm x 0.4mm 0.5 mm pad pitch	5,000/Tape & Reel	-7

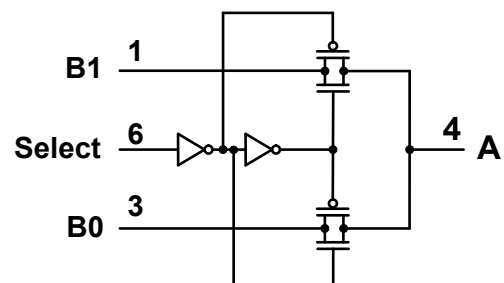
- Notes:
- For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.
  - Pad layout as shown in Diodes Incorporated's package outline PDFs, which can be found on our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.
  - The taping orientation is located on our website at <https://www.diodes.com/assets/Packaging-Support-Docs/ap02007.pdf>.

**Pin Descriptions**

Pin Name	Description
B1	Selectable Data I/O
GND	Ground
B0	Selectable Data I/O
A	Common Data I/O
V <sub>CC</sub>	Supply Voltage
Select	Selection Pin

**Logic Diagram**

**Function Table**

Select	Status
H	B1 connected to A; B0 high impedance
L	B0 connected to A; B1 high impedance

**Simplified Schematic**


### Absolute Maximum Ratings (Note 7)

Symbol	Description	Rating	Unit
ESD HBM	Human Body Model ESD Protection	2	kV
ESD CDM	Charged Device Model ESD Protection	1	kV
V <sub>CC</sub>	Supply Voltage Range	-0.5 to 6.5	V
V <sub>IN</sub>	Input Voltage Range Applicable to Select Pin	-0.5 to 6.5	V
V <sub>SW</sub>	Voltage Range Applicable to B0, B1, and A Pins	-0.5 to V <sub>CC</sub> +0.5	V
I <sub>IK</sub>	Input Clamp Current V <sub>I</sub> <0 Applicable to Select Pin	-50	mA
I <sub>IO</sub>	Continuous Current Applicable to B0,B1, and A Pins	±50	mA
I <sub>CC</sub> , I <sub>GND</sub>	Continuous current through V <sub>CC</sub> or GND	±100	mA
T <sub>J</sub>	Operating Junction Temperature	-40 to +150	°C
T <sub>STG</sub>	Storage Temperature	-65 to +150	°C

Note: 7. Stresses beyond the absolute maximum may result in immediate failure or reduced reliability. These are stress values and device operation should be within recommend values.

### Recommended Operating Conditions

Symbol	Parameter		Min	Max	Unit
V <sub>CC</sub>	Operating Voltage	Operating	1.65	5.5	V
V <sub>IN</sub>	Select Input Voltage		0	5.5	V
V <sub>SW</sub>	Switch Voltage (applicable to pins B0,B1,A)		-0.2	V <sub>CC</sub>	V
Δt/ΔV	Input Transition Rise or Fall Rate – Select Pin	V <sub>CC</sub> = 1.65 to 2.7V	-	20	ns/V
		V <sub>CC</sub> = 2.7V to 5.5V	-	10	
T <sub>A</sub>	Operating Free-Air Temperature	-	-40	+125	°C

**Electrical Characteristics** (All typical values are at,  $T_J = +25^\circ\text{C}$ )

Symbol	Parameter	Test Condition	$V_{CC}$ (V)	$T_A = -40$ to $+85^\circ\text{C}$			$T_A = -40$ to $+125^\circ\text{C}$		Unit
				Min	Typical (Note 8)	Max	Min	Max	
$V_{IH}$	High Level Input Voltage Select Pin	-	1.65 to 1.95	$0.65V_{CC}$	-	-	$0.65V_{CC}$	-	V
			2.3 to 2.7	1.7	-	-	1.7	-	
			3 to 3.6	2.0	-	-	2.0	-	
			4.5 to 5.5	$0.7V_{CC}$	-	-	$0.7V_{CC}$	-	
$V_{IL}$	Low Level Input Voltage Select Pin	-	1.65 to 1.95	-	-	$0.35V_{CC}$	-	$0.35V_{CC}$	V
			2.3 to 2.7	-	-	0.7	-	0.7	
			3 to 3.6	-	-	0.8	-	0.8	
			4.5 to 5.5	-	-	$0.3V_{CC}$	-	$0.3V_{CC}$	
$I_{IN}$	Input Leakage Current Select Pin	$0 \leq \text{Select} \leq 5.5\text{V}$	0 to 5.5	-	$\pm 0.05$	$\pm 1$	-	$\pm 10$	$\mu\text{A}$
$I_{S(OFF)}$	OFF State Leakage Current	$0\text{V} \leq A, B_n \leq V_{CC}$ Figure 1	1.65 to 5.5	-	$\pm 0.05$	$\pm 1$	-	$\pm 10$	$\mu\text{A}$
$I_{S(ON)}$	ON State Leakage Current	$0\text{V} \leq A, B_n \leq V_{CC}$ Figure 2	1.65 to 5.5	-	$\pm 0.05$	$\pm 1$	-	$\pm 10$	$\mu\text{A}$
$I_{S(ON)}$	ON State Leakage Current	$-0.1\text{V} \leq A, B_n \leq V_{CC}$ Figure 2	1.65 to 5.5	-	$\pm 0.05$	$\pm 2$	-	$\pm 20$	$\mu\text{A}$
$I_{CC}$	Quiescent Supply Current	Select = $V_{CC}$ or GND A, B <sub>n</sub> = $V_{CC}$ or GND $I_{OUT} = 0$	5.5	-	1.0	10	-	40	$\mu\text{A}$
$\Delta I_{CC}$	Additional Supply Current	Select = $V_{CC} - 0.6\text{V}$ A, B <sub>n</sub> = $V_{CC}$ or GND $I_{OUT} = 0$	5.5	-	30	500	-	5,000	$\mu\text{A}$
$C_I$	Input Capacitance Select Pin	-	3.3	-	2.5	-	-	-	pF
$C_{S(OFF)}$	OFF State Capacitance	Select = $V_{CC}$ or GND A, B <sub>n</sub> = $V_{CC}$ or GND $I_{OUT} = 0$	3.3	-	6.0	-	-	-	pF
$C_{S(ON)}$	ON State Capacitance	Select = $V_{CC}$ or GND A, B <sub>n</sub> = $V_{CC}$ or GND $I_{OUT} = 0$	3.3	-	18	-	-	-	pF

Note: 8. Typical performance information is included in figures 11 to 34 on pages 11 to 14.

**Electrical Characteristics** (All typical values are at  $T_J = +25^\circ\text{C}$ )

Symbol	Parameter	Test Condition (Note 9)	$V_{CC}$ (V)	$T_A = -40$ to $+85^\circ\text{C}$			$T_A = -40$ to $+125^\circ\text{C}$		Unit
				Min	Typ	Max	Min	Max	
$R_{ON}$	ON Resistance	$V_I = 0\text{V}, I_O = 4\text{mA}$	1.65	-	12.5	18	-	27	$\Omega$
		$V_I = 1.65\text{V}, I_O = -4\text{mA}$		-	14	18	-	35	
		$V_I = 0\text{V}, I_O = 8\text{mA}$	2.3	-	9.0	16	-	24	
		$V_I = 2.3\text{V}, I_O = -8\text{mA}$		-	9.0	16	-	30	
		$V_I = 0\text{V}, I_O = 12\text{mA}$	2.7	-	8.0	14	-	21	
		$V_I = 2.7\text{V}, I_O = -12\text{mA}$		-	8.0	14	-	27	
		$V_I = 0\text{V}, I_O = 24\text{mA}$	3.0	-	7.0	12	-	18	
		$V_I = 3.0\text{V}, I_O = -24\text{mA}$		-	7.0	12	-	23	
		$V_I = 0\text{V}, I_O = 32\text{mA}$	4.5	-	5.5	10	-	15	
		$V_I = 2.7\text{V}, I_O = -32\text{mA}$		-	6.0	12	-	17	
		$V_I = 4.5\text{V}, I_O = -32\text{mA}$		-	5.5	10	-	15	
$R_{RANGE}$	On Resistance Over Signal Range	$I_A = 4\text{mA}, 0 \leq V_{BN} \leq V_{CC}$	1.65	-	34	130	-	195	$\Omega$
		$I_A = 8\text{mA}, 0 \leq V_{BN} \leq V_{CC}$	2.3	-	5	30	-	45	
		$I_A = 12\text{mA}, 0 \leq V_{BN} \leq V_{CC}$	2.7	-	4	25	-	38	
		$I_A = 24\text{mA}, 0 \leq V_{BN} \leq V_{CC}$	3.0	-	7.8	20	-	30	
		$I_A = 32\text{mA}, 0 \leq V_{BN} \leq V_{CC}$	4.5	-	6.2	15	-	23	
$\Delta R_{ON}$	On Resistance Match Between Channels (Note 10)	$I_A = -4\text{mA}, V_{BN} = 1.15\text{V}$	1.65	-	0.25	-	-	-	$\Omega$
		$I_A = -8\text{mA}, V_{BN} = 1.6\text{V}$	2.3	-	0.25	-	-	-	
		$I_A = -12\text{mA}, V_{BN} = 1.9\text{V}$	2.7	-	0.25	-	-	-	
		$I_A = -24\text{mA}, V_{BN} = 2.1$	3.0	-	0.25	-	-	-	
		$I_A = -32\text{mA}, V_{BN} = 3.15$	4.5	-	0.25	-	-	-	
$R_{flat}$	On Resistance Flatness (Note 11)	$I_A = -4\text{mA}, 0 \leq V_{BN} \leq V_{CC}$	1.65	-	26	110	-	150	$\Omega$
		$I_A = -8\text{mA}, 0 \leq V_{BN} \leq V_{CC}$	2.3	-	5.0	26	-	105	
		$I_A = -24\text{mA}, 0 \leq V_{BN} \leq V_{CC}$	2.7	-	3.5	16	-	35	
		$I_A = -24\text{mA}, 0 \leq V_{BN} \leq V_{CC}$	3.3	-	2.0	9	-	15	
		$I_A = -32\text{mA}, 0 \leq V_{BN} \leq V_{CC}$	5.0	-	1.5	4	-	8	

Note: 9. Switch resistance test is measured per Figure 3.

10.  $\Delta R_{ON}$  is measured at identical  $V_{CC}$ , temperature and voltage levels.

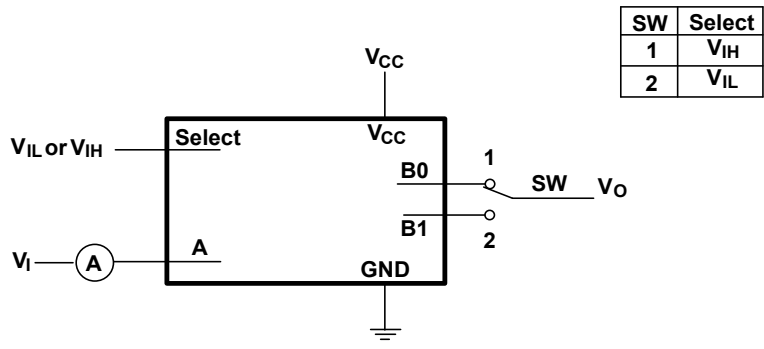
11. Flatness is defined as the difference between the maximum and minimum of ON resistance measured at identical  $V_{CC}$  and temperature.

## Switching Characteristics

Symbol	Parameter	Test Condition	V <sub>CC</sub> Volts	T <sub>A</sub> = -40 to +85°C			T <sub>A</sub> = -40 to +125°C		Unit	Figure Number
				Min	Typ	Max	Min	Max		
t <sub>PHL</sub> t <sub>PLH</sub>	Propagation Delay A to B <sub>n</sub>	V <sub>I</sub> = OPEN (Note 12)	1.65 to 1.95	-	-	2.0	-	3.0	ns	Figure 4
			2.3 to 2.7	-	-	1.2	-	2.0		
			2.7	-	-	1.0	-	1.5		
			3.0 to 3.6	-	-	0.8	-	1.5		
			4.5 to 5.5	-	-	0.6	-	1.0		
t <sub>PZL</sub> t <sub>PZH</sub>	Output Enable Time Switch to B <sub>n</sub>	V <sub>I</sub> = 2 x V <sub>CC</sub> for t <sub>PZL</sub> V <sub>I</sub> = 0V for t <sub>PZH</sub> (Note 13)	1.65 to 1.95	1.0	8.7	14.0	1.0	14.0	ns	Figure 4
			2.3 to 2.7	1.0	5.3	7.5	1.0	7.5		
			2.7	1.0	4.9	6.0	1.0	6.0		
			3.0 to 3.6	0.5	4.0	5.5	0.5	5.5		
			4.5 to 5.5	0.5	3.0	4.0	0.5	4.0		
t <sub>PLZ</sub> t <sub>PHZ</sub>	Output Disable Time Switch to B <sub>n</sub>	V <sub>I</sub> = 2 x V <sub>CC</sub> for t <sub>PLZ</sub> V <sub>I</sub> = 0V for t <sub>PHZ</sub> (Note 13)	1.65 to 1.95	2.5	6.0	8.5	2.5	8.5	ns	Figure 4
			2.3 to 2.7	2.0	4.4	8.2	2.0	8.2		
			2.7	1.5	4.2	8.0	1.5	8.0		
			3.0 to 3.6	1.5	3.6	7.8	1.5	7.8		
			4.5 to 5.5	0.8	2.9	7.5	0.8	7.5		
t <sub>B-M</sub>	Break Before Make Time (Note 9)	-	1.65 to 1.95	0.5	-	-	0.5	-	ns	Figure 5
			2.3 to 2.7	0.5	-	-	0.5	-		
			2.7	0.5	-	-	0.5	-		
			3.0 to 3.6	0.5	-	-	0.5	-		
			4.5 to 5.5	0.5	-	-	0.5	-		
Q	Charge Injection (Note 9)	C <sub>L</sub> = 0.1 nF, V <sub>GEN</sub> = 0V R <sub>GEN</sub> = 0 Ω	5.0	-	7.0	-	-	-	pC	Figure 6
			3.3	-	3.0	-	-	-		
QIRR	Off Isolation (Note 11)	R <sub>L</sub> = 50 Ω, f = 10MHz	1.65 ~ 5.5	-	-42	-	-	-	dB	Figure 7
Xtalk	Crosstalk	R <sub>L</sub> = 50 Ω, f = 10MHz	1.65 ~ 5.5	-	-42	-	-	-	dB	Figure 8
BW	-3dB Bandwidth	R <sub>L</sub> = 50 Ω	1.65 ~ 5.5	-	300	-	-	-	MHz	Figure 9
THD	Total Harmonic Distortion (Note 9)	R <sub>L</sub> = 600 Ω, 0.5 V <sub>P-P</sub> , f = 600Hz to 20kHz	5.0	-	0.1	-	-	-	%	Figure 10

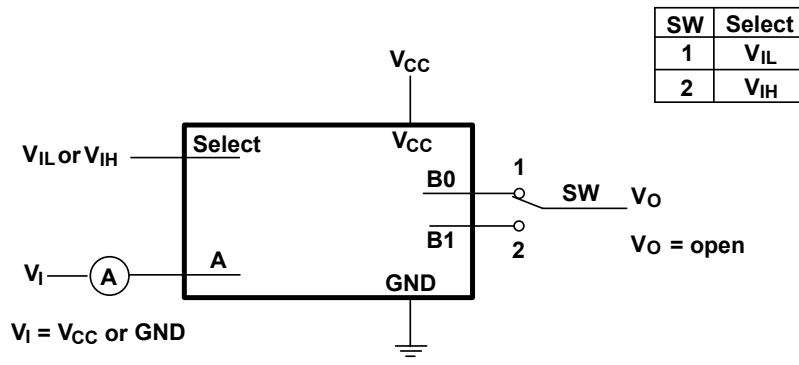
- Notes:
- Due to the symmetry of the part, the direction of the propagation delay applies to either direction A to B<sub>n</sub> or B<sub>n</sub> to A. Propagation time is the calculated RC time constant of the typical ON resistance of the switch and the specified load capacitance when capacitance when driven by an ideal voltage source.
  - The Switch signal enable and disables time are the same for B<sub>n</sub> and A if they are reversed at input and output.

**Parameter Measurement Information**



Condition 1:  $V_I = \text{GND}, V_O = V_{CC}$   
 Condition 2:  $V_I = V_{CC}, V_O = \text{GND}$

Figure 1 OFF –State Leakage Current Test



$V_I = V_{CC} \text{ or } \text{GND}$

Figure 2 ON –State Leakage Current Test

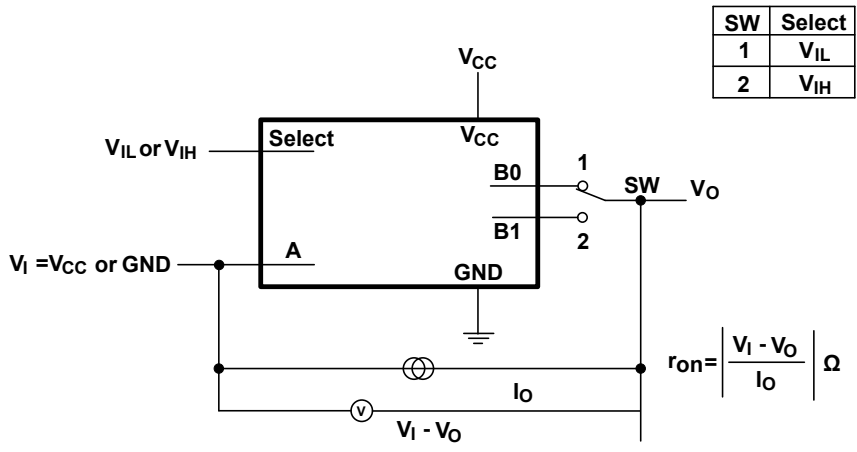
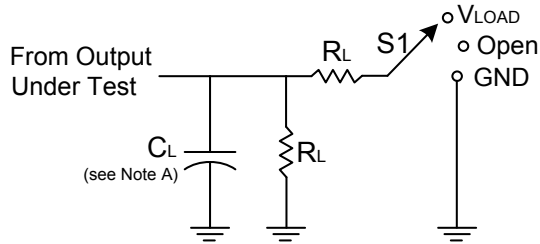


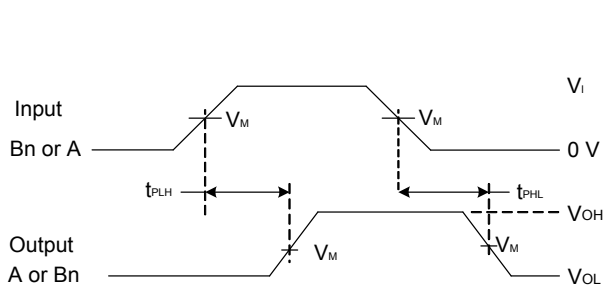
Figure 3 ON State Resistance Test

**Parameter Measurement Information** (Notes 15-19)

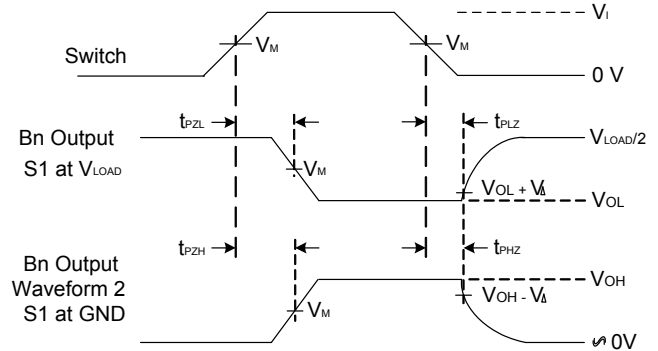


TEST	S1	$R_L$
$t_{PLH}/t_{PHL}$	Open	500 $\Omega$
$t_{PLZ}/t_{PZL}$	Vload	500 $\Omega$
$t_{PHZ}/t_{PZH}$	GND	500 $\Omega$

$V_{CC}$	Inputs		$V_M$	$V_{LOAD}$	$C_L$ (Note 14)	$V_{\Delta}$
	$V_I$	$t_r/t_f$				
1.8V $\pm$ 0.15V	$V_{CC}$	$\leq 2$ ns	$V_{CC}/2$	2 x $V_{CC}$	50pF	0.1V
2.5V $\pm$ 0.2V	$V_{CC}$	$\leq 2$ ns	$V_{CC}/2$	2 x $V_{CC}$	50pF	0.1V
3.3V $\pm$ 0.3V	$V_{CC}$	$\leq 2.5$ ns	$V_{CC}/2$	2 x $V_{CC}$	50pF	0.1V
5V $\pm$ 0.5V	$V_{CC}$	$\leq 2.5$ ns	$V_{CC}/2$	2 x $V_{CC}$	50pF	0.1V



**Voltage Waveform Propagation Delay Times**



**Voltage Waveform Enable and Disable Times**

**Figure 4 Load Circuit and Voltage Waveforms**

- Notes:
14. Includes test lead and test apparatus capacitance.
  15. All pulses are supplied at pulse repetition rate  $\leq 10$ MHz.
  16. Inputs are measured separately one transition per measurement.
  17.  $t_{PLZ}$  and  $t_{PHZ}$  are the same as  $t_{dis}$ .
  18.  $t_{PZL}$  and  $t_{PZH}$  are the same as  $t_{EN}$ .
  19.  $t_{PLH}$  and  $t_{PHL}$  are the same as  $t_{PD}$ .



**Parameter Measurement Information** (continued)

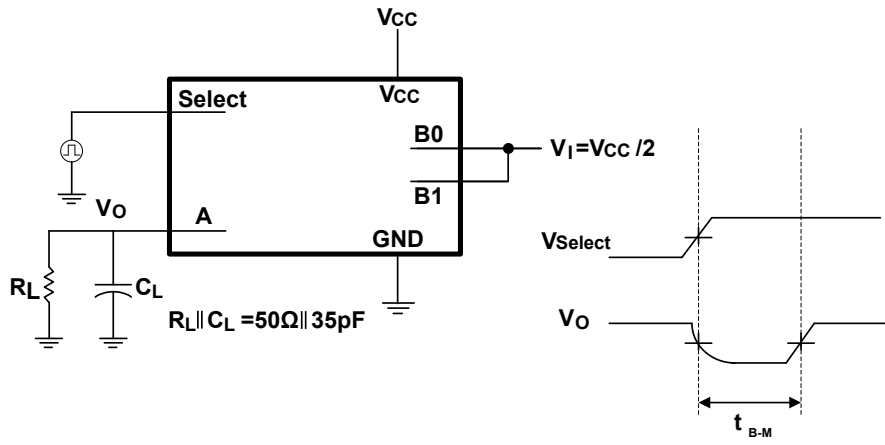


Figure 5 Break before Make Timing Test

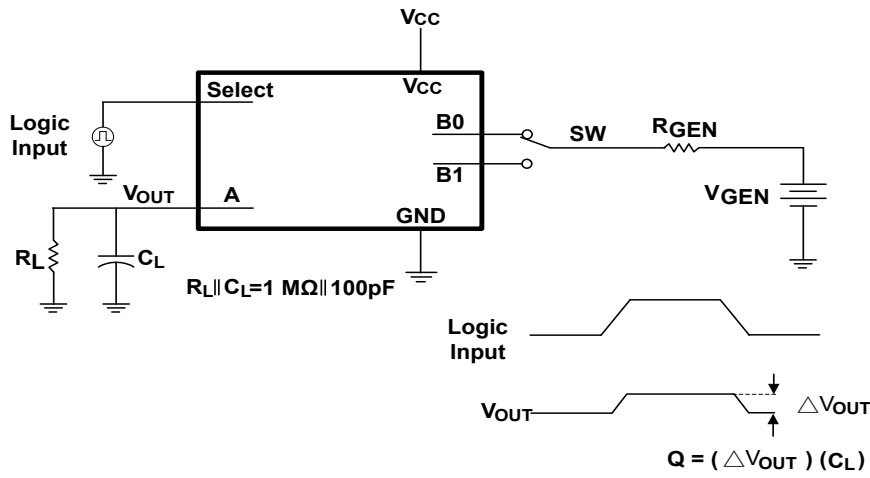


Figure 6 Charge Injection

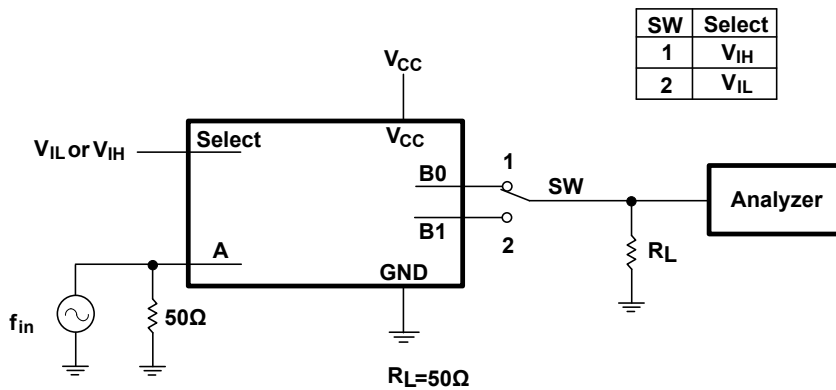


Figure 7 OFF Isolation

**Parameter Measurement Information** (continued)

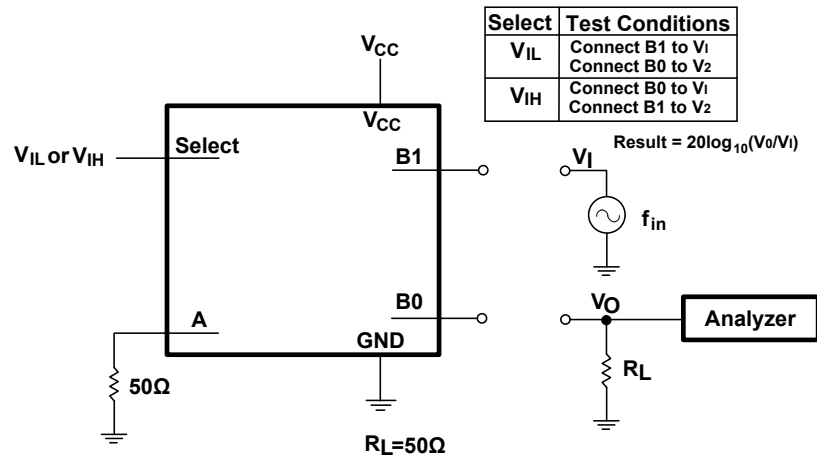


Figure 8 Cross Talk

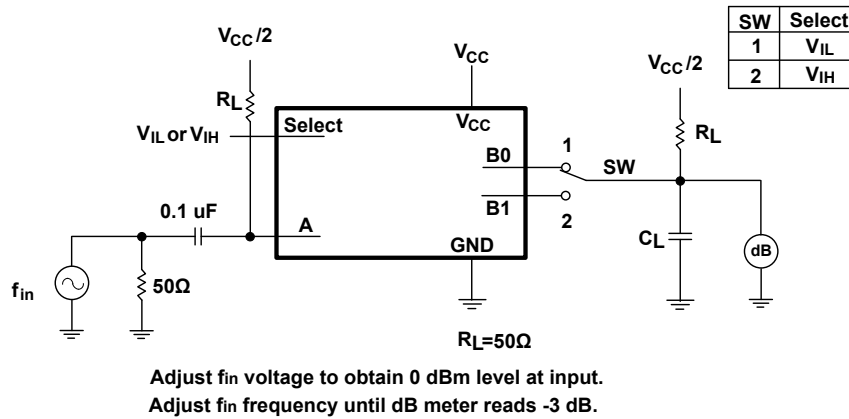


Figure 9 Bandwidth

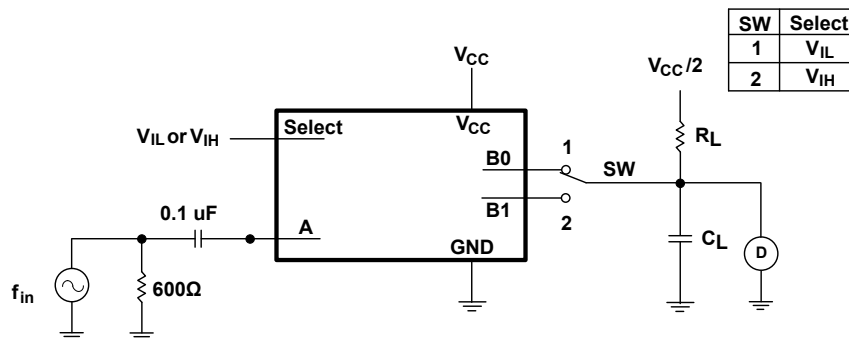
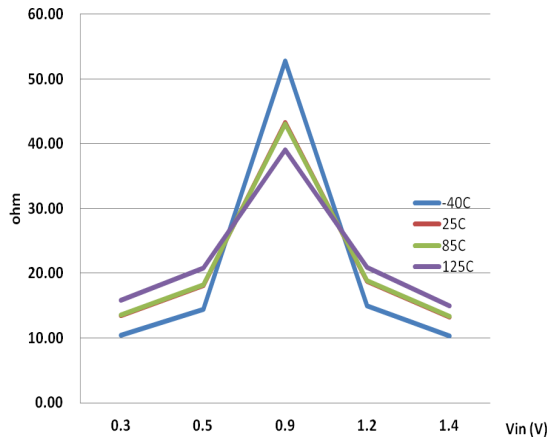
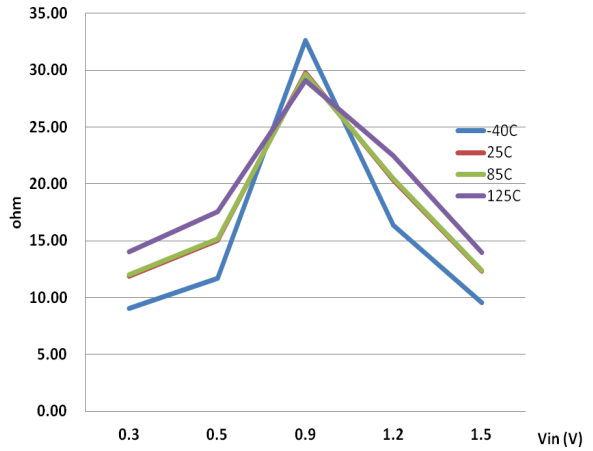


Figure 10 THD

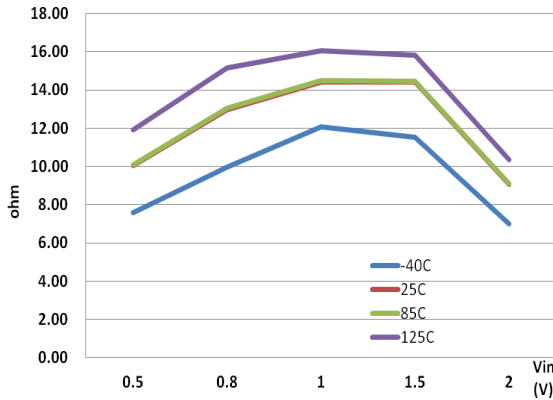
**Typical Performance Characteristics**



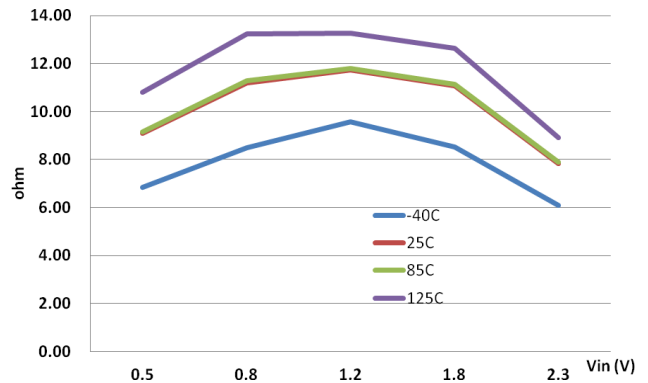
**Figure 11 ON state Resistance Vcc = 1.65 V; IBn = 4ma**



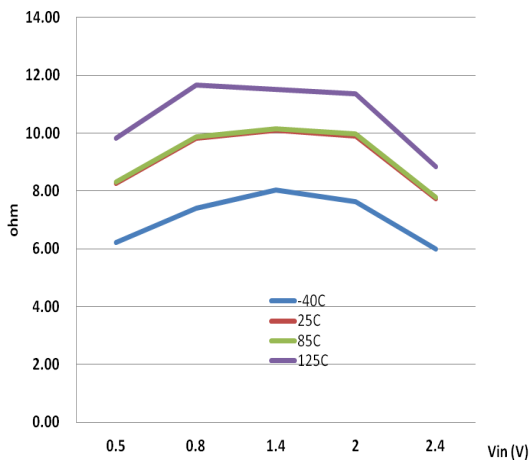
**Figure 12 ON state Resistance Vcc = 1.8 V; IBn = 4ma**



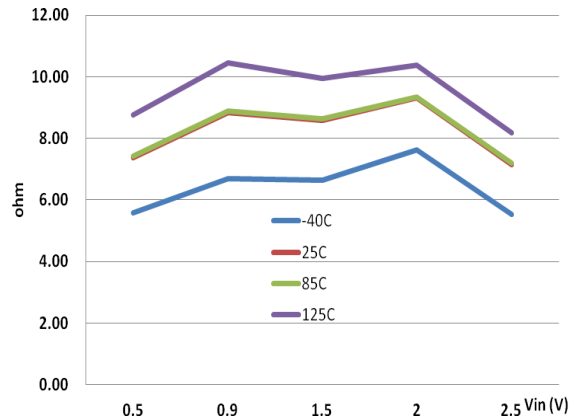
**Figure 13 ON state Resistance Vcc = 2.3 V; IBn = 8ma**



**Figure 14 ON state Resistance Vcc = 2.5 V; IBn = 8ma**

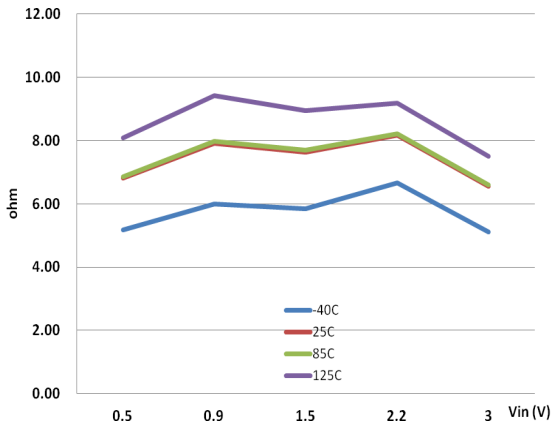


**Figure 15 ON state Resistance Vcc = 2.7 V; IBn = 12ma**

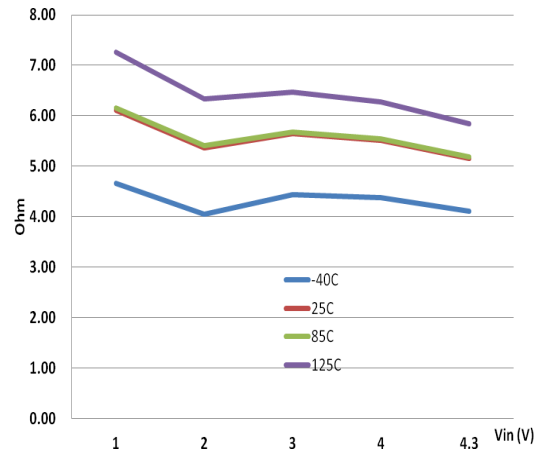


**Figure 16 ON state Resistance Vcc = 3 V; IBn = 24ma**

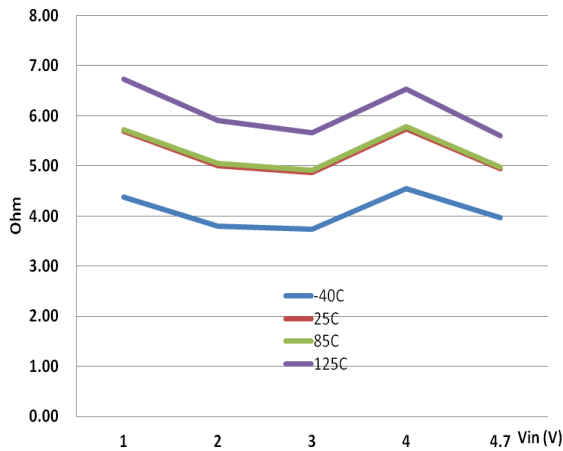
**Typical Performance Characteristics** (continued)



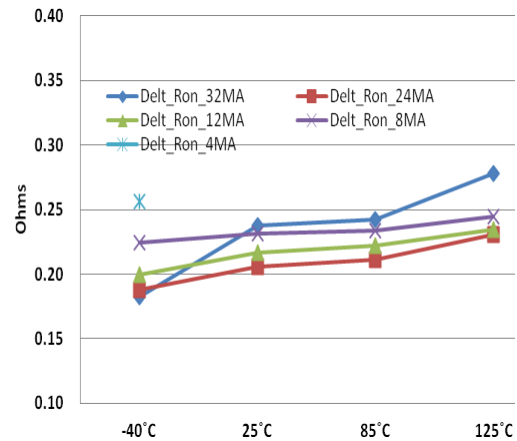
**Figure 17 ON state Resistance Vcc = 3.3 V; IBn = 24ma**



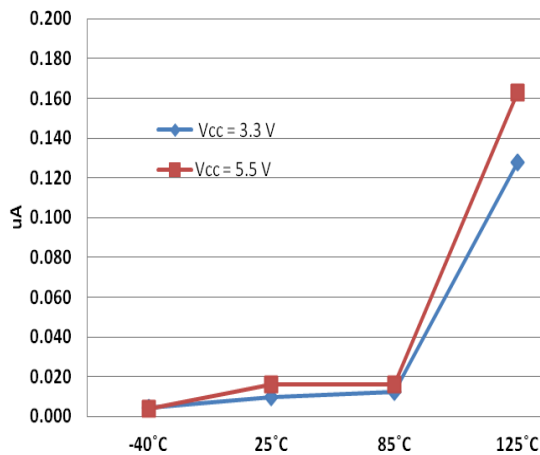
**Figure 18 ON state Resistance Vcc = 4.5 V; IBn = 32ma**



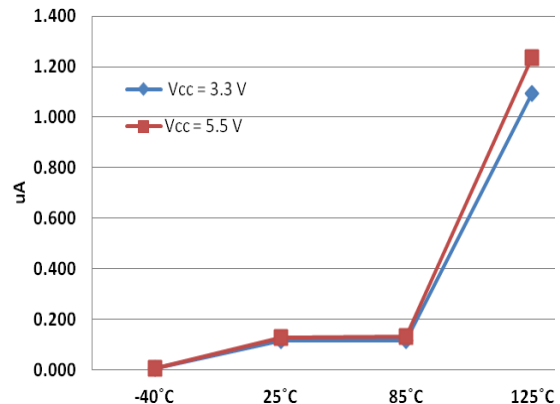
**Figure 19 ON state Resistance Vcc = 5.5 V; IBn = 32ma**



**Figure 20 ΔRon-Resistance Match Between Channels**



**Figure 21 IS(OFF) OFF state leakage VIN = 0 V**



**Figure 22 IS(OFF) OFF state leakage VIN = -0.1 V**

**Typical Performance Characteristics** (continued)

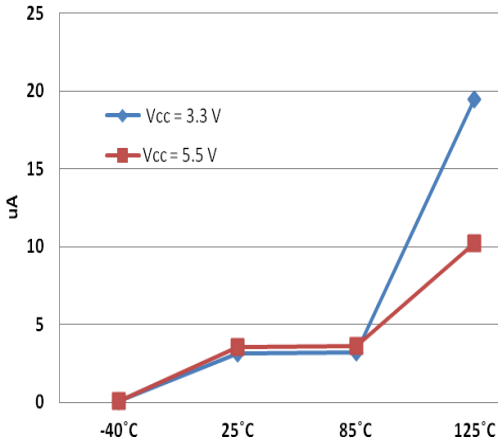


Figure 23  $I_{S(OFF)}$  OFF state leakage  $V_{IN} = -0.2 V$

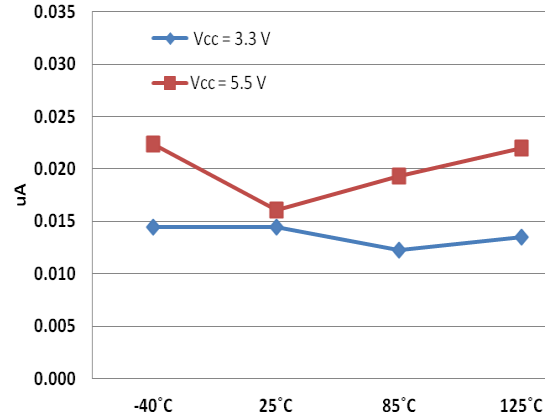


Figure 24  $I_{S(ON)}$  ON state leakage  $V_{IN} = 0 V$

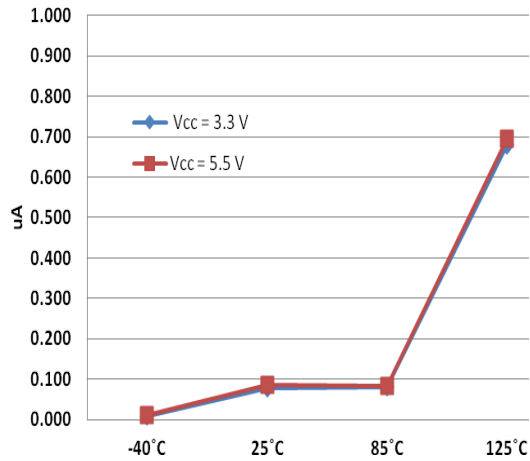


Figure 25  $I_{S(ON)}$  ON state leakage  $V_{IN} = -0.1 V$

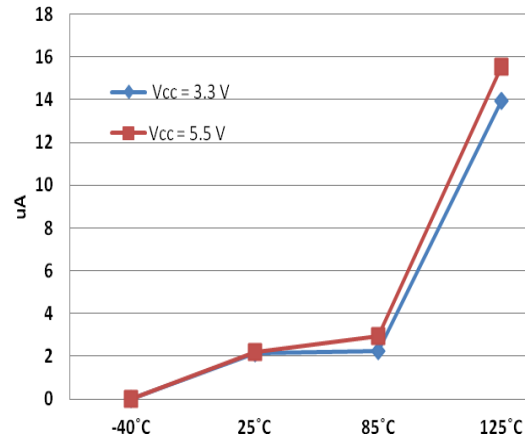


Figure 26  $I_{S(ON)}$  ON state leakage  $V_{IN} = -0.2 V$

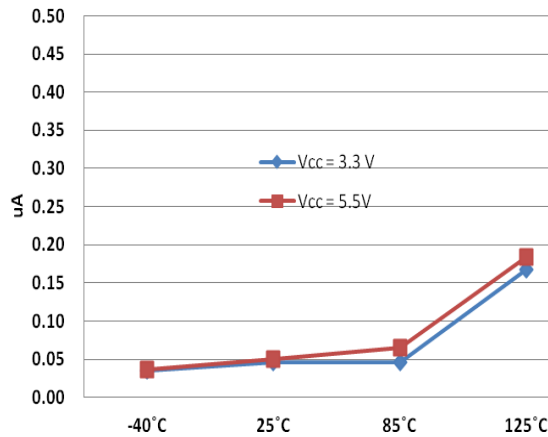


Figure 27  $I_{CC}$  versus Temperature

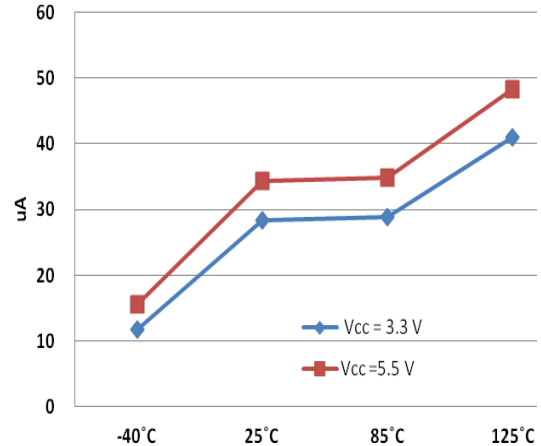
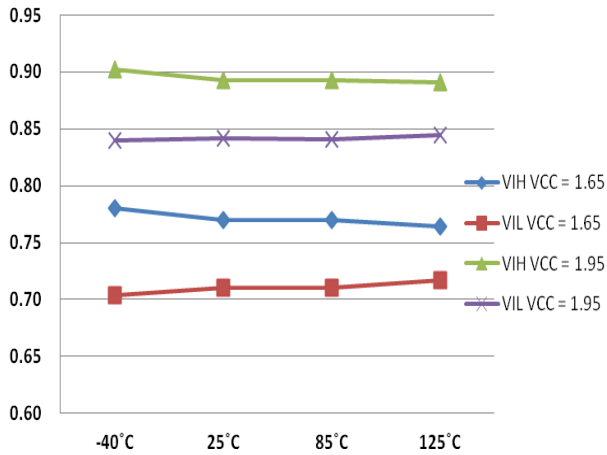
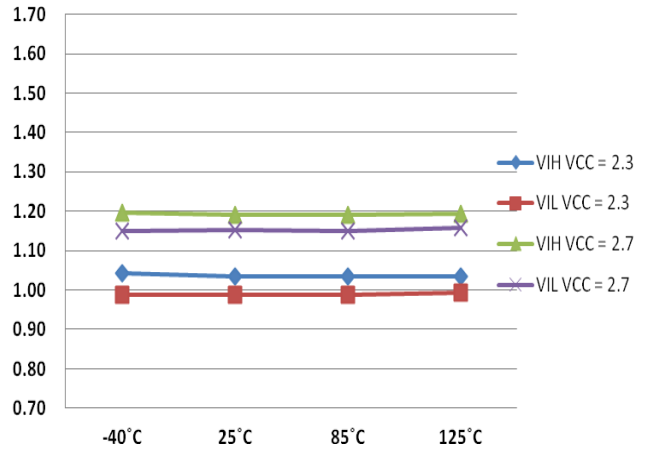


Figure 28  $\Delta I_{CC}$  versus Temperature

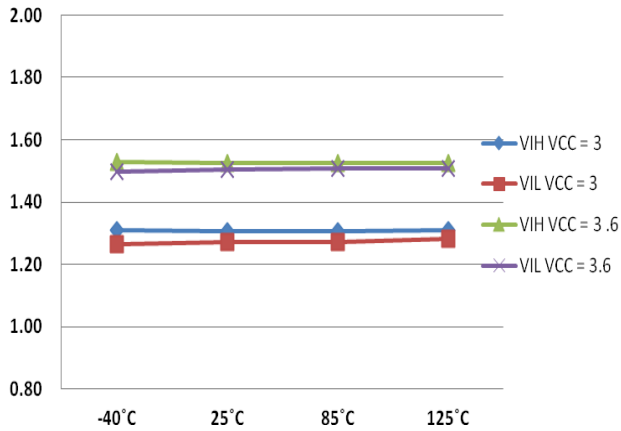
**Typical Performance Characteristics** (continued)



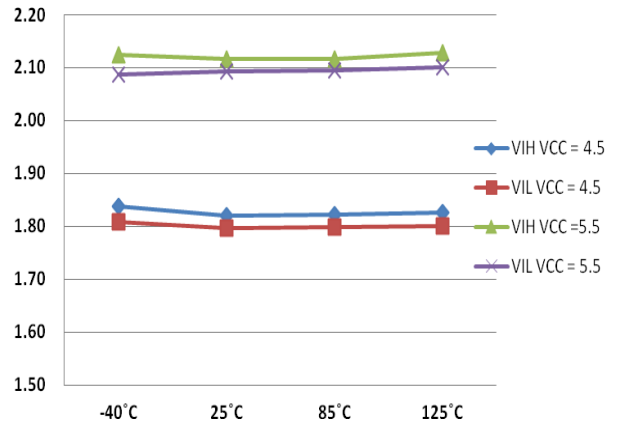
**Figure 29**  $V_{IH}$ ,  $V_{IL}$ , Hysteresis  $V_{CC} = 1.65\text{ V}$  and  $V_{CC} = 1.95\text{ V}$



**Figure 30**  $V_{IH}$ ,  $V_{IL}$ , Hysteresis  $V_{CC} = 2.3\text{ V}$  and  $V_{CC} = 2.7\text{ V}$



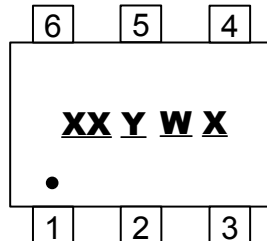
**Figure 31**  $V_{IH}$ ,  $V_{IL}$ , Hysteresis  $V_{CC} = 3\text{ V}$  and  $V_{CC} = 3.3\text{ V}$



**Figure 32**  $V_{IH}$ ,  $V_{IL}$ , Hysteresis  $V_{CC} = 4.5\text{ V}$  and  $V_{CC} = 5.5\text{ V}$

## Marking Information

(1) SOT363

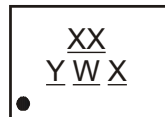


XX : Identification code  
Y : Year 0~9  
W : Week : A~Z : 1~26 week;  
a~z : 27~52 week; z represents  
52 and 53 week  
X : A~Z : Internal Code

Part Number	Package	Identification Code
74LVC1G3157DW	SOT363	J7

(2) X2-DFN1410-6

(Top View)



XX : Identification Code  
Y : Year 0~9  
W : Week : A~Z : 1~26 week;  
a~z : 27~52 week;  
z represents 52 and 53 week  
X : A~Z : Internal Code

Part Number	Package	Identification Code
74LVC1G3157FZ4	X2-DFN1410-6	J7

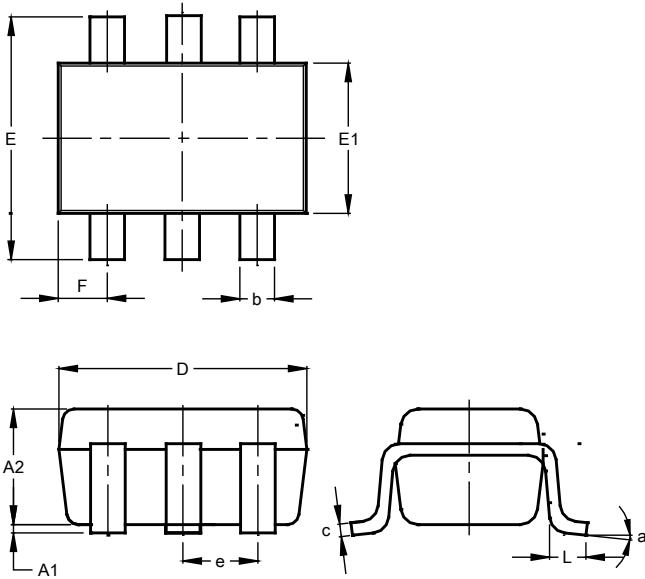
## Package Characteristics (All typical values are at $V_{CC} = 3.3V$ , $T_A = +25^{\circ}C$ )

Symbol	Parameter	Test Conditions	$V_{CC}$	Min	Typ.	Max	Unit
$\theta_{JA}$	Thermal Resistance Junction-to-Ambient	SOT363	(Note 20)	-	371	-	$^{\circ}C/W$
		X2-DFN1410-6		-	460	-	
$\theta_{JC}$	Thermal Resistance Junction-to-Case	SOT363	(Note 20)	-	143	-	$^{\circ}C/W$
		X2-DFN1410-6		-	265	-	

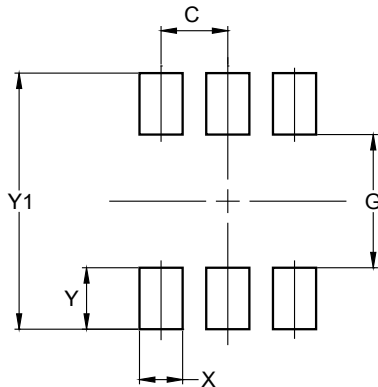
Note: 20. Test condition SOT363, and X2-DFN1410-6: Device mounted on FR-4 substrate PC board, 2oz. copper, with minimum recommended pad layout.

**SOT363 Package Outline Dimensions and Suggested Pad Layout**

Please see <http://www.diodes.com/package-outlines.html> for the latest version.



SOT363			
Dim	Min	Max	Typ
A1	0.00	0.10	0.05
A2	0.90	1.00	1.00
b	0.10	0.30	0.25
c	0.10	0.22	0.11
D	1.80	2.20	2.15
E	2.00	2.20	2.10
E1	1.15	1.35	1.30
e	0.650 BSC		
F	0.40	0.45	0.425
L	0.25	0.40	0.30
a	0°	8°	--
<b>All Dimensions in mm</b>			

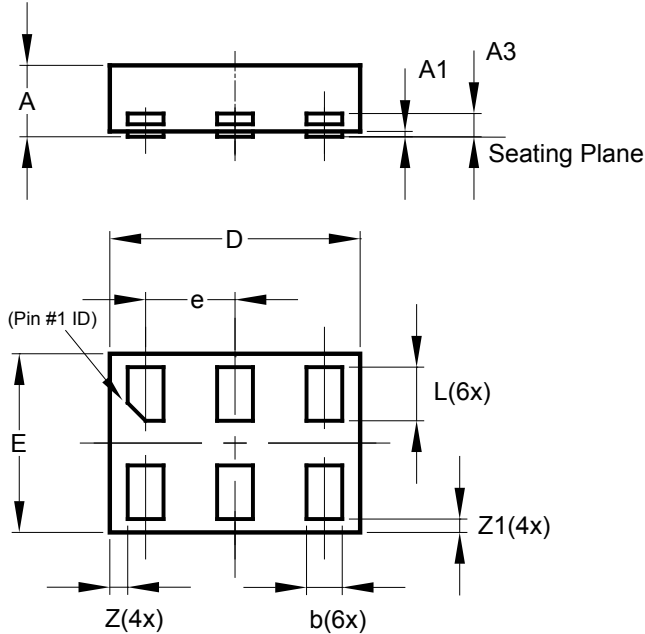


Dimensions	Value (in mm)
C	0.650
G	1.300
X	0.420
Y	0.600
Y1	2.500

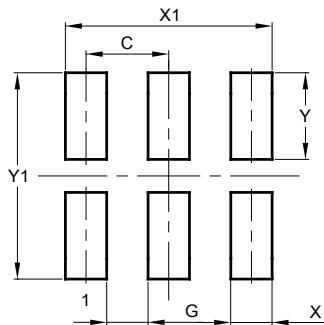


## X2-DFN1410-6 Package Outline Dimensions and Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.



X2-DFN1410-6			
Dim	Min	Max	Typ
A	—	0.40	0.39
A1	0.00	0.05	0.02
A3	—	—	0.13
b	0.15	0.25	0.20
D	1.35	1.45	1.40
E	0.95	1.05	1.00
e	—	—	0.50
L	0.25	0.35	0.30
Z	—	—	0.10
Z1	0.045	0.105	0.075
All Dimensions in mm			



Dimensions	Value (in mm)
C	0.500
G	0.250
X	0.250
X1	1.250
Y	0.525
Y1	1.250

## Mechanical Data

### SOT363

- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish - Mate Tin Plated Leads, Solderable per MIL-STD-202, Method 208 <sup>Ⓔ3</sup>
- Weight: 0.0064 grams (Approximate)

### X2-DFN1410-6

- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish - NiPdAu Nickel Palladium Gold, Solderable per MIL-STD-202, Method 208 <sup>Ⓔ4</sup>
- Weight: 0.002 grams (Approximate)

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