

**SINGLE-POLE DOUBLE-THROW ANALOG SWITCH**

**Description**

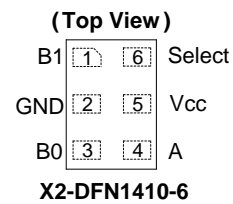
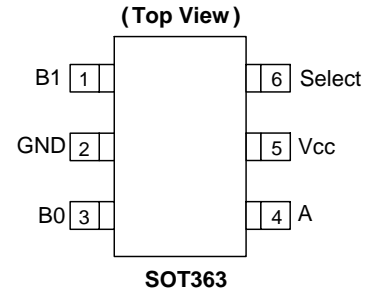
The 74LVC1G3157 is a single-pole, double-throw analog switch. The device is designed for operation with a power supply range of 1.65V to 5.5V. The bidirectional switch can handle signal amplitudes between Vcc and Ground. The OFF state impedance of the switch is typically 50MΩ while the ON state is typically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

**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 200-V Machine Model (A115)
  - 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)**

Notes: 1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant.  
 2. See [http://www.diodes.com/quality/lead\\_free.html](http://www.diodes.com/quality/lead_free.html) 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.

**Pin Assignments**

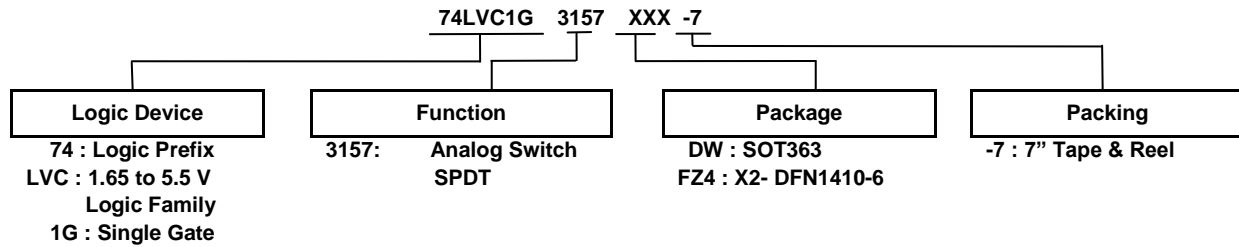


Packages not to scale

**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

## Ordering Information (Note 4)



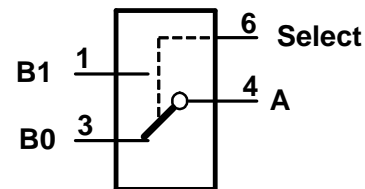
Device	Package Code	Package (Note 5)	Package Size	7" Tape and Reel (Note 6)	
				Quantity	Part Number Suffix
74LVC1G3157DW-7	DW	SOT363	2.0mm x 2.0mm x 1.1mm 0.65 mm lead pitch	3,000/Tape & Reel	-7
74LVC1G3157FZ4-7	FZ4	X2-DFN1410-6	1.4mm x 1.0mm x 0.4mm 0.5 mm pad pitch	5,000/Tape & Reel	-7

- 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/Datasheets/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

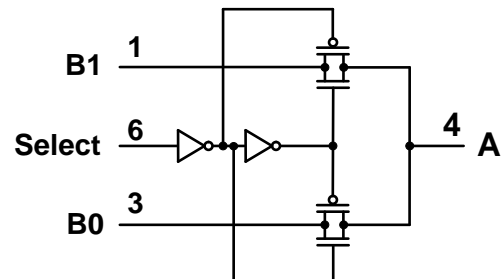
## Logic Diagram



## 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
ESD MM	Machine Model ESD Protection	200	V
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, $B_n = V_{CC}$ 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, $B_n = V_{CC}$ or GND $I_{OUT} = 0$	5.5	-	30	500	-	5,000	$\mu\text{A}$
$C_1$	Input Capacitance Select Pin	-	3.3	-	2.5	-	-	-	pF
$C_{S(OFF)}$	OFF State Capacitance	Select = $V_{CC}$ or GND A, $B_n = V_{CC}$ or GND $I_{OUT} = 0$	3.3	-	6.0	-	-	-	pF
$C_{S(ON)}$	ON State Capacitance	Select = $V_{CC}$ or GND A, $B_n = V_{CC}$ 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	2016	-	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.

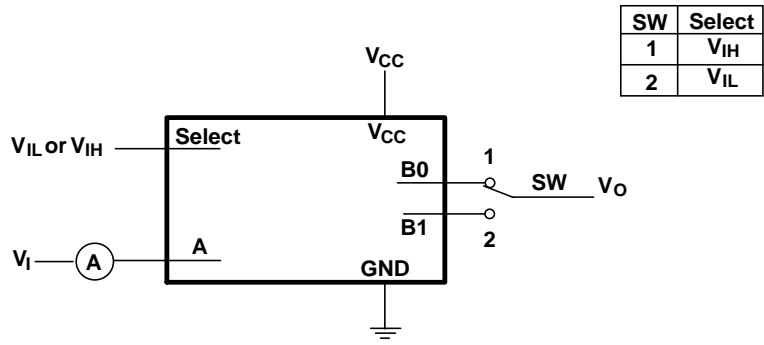
**Switching Characteristics**

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	1.65 to 1.95	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: 12. 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.

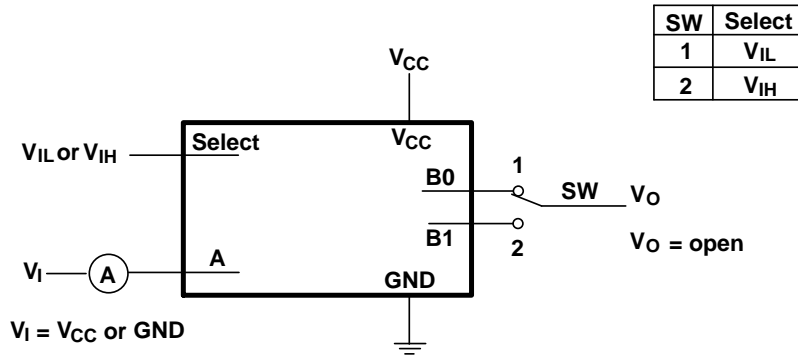
13. The Switch signal enable and disables time are the same for B<sub>n</sub> and A if they are reversed at input and output.

**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

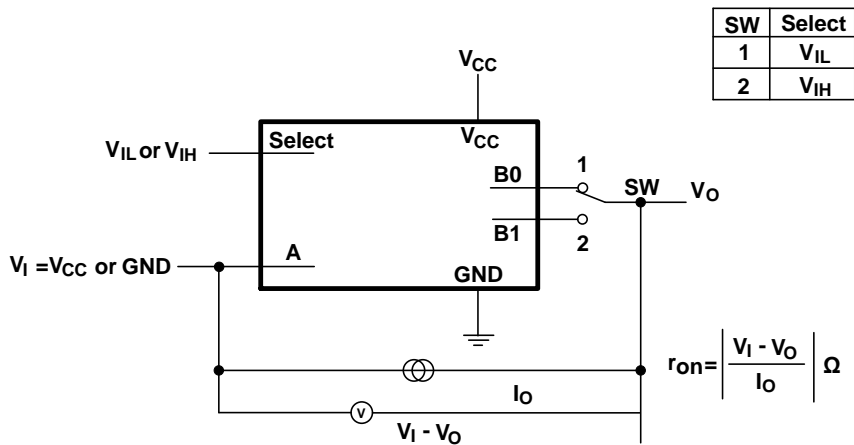
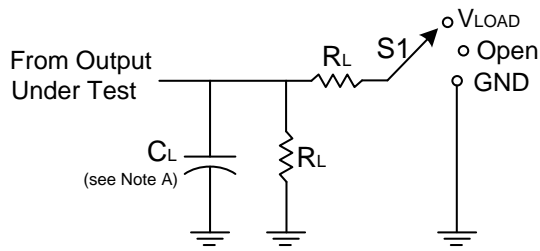


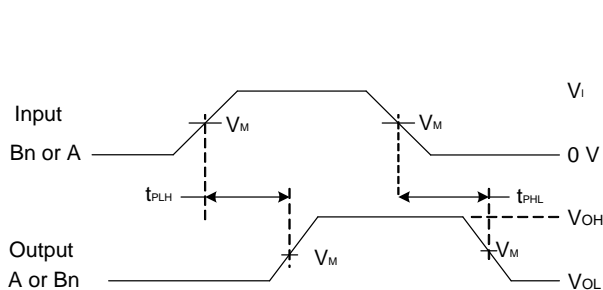
Figure 3 ON State Resistance Test

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

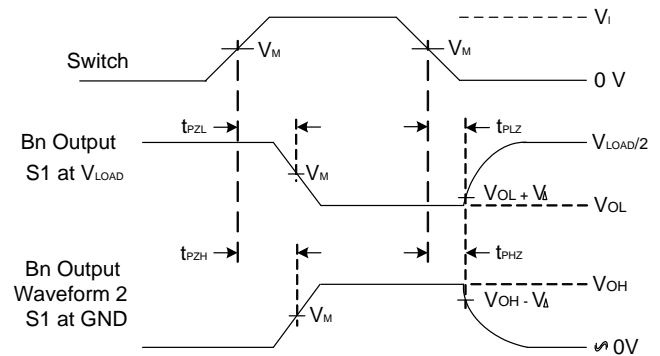


TEST	S1	$R_L$
$t_{PLH}/t_{PHL}$	Open	500 $\Omega$
$t_{PLZ}/t_{PZL}$	Vload	500 $\Omega$
$t_{PHZ}/t_{PZH}$	GND	500 $\Omega$

$V_{CC}$	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)

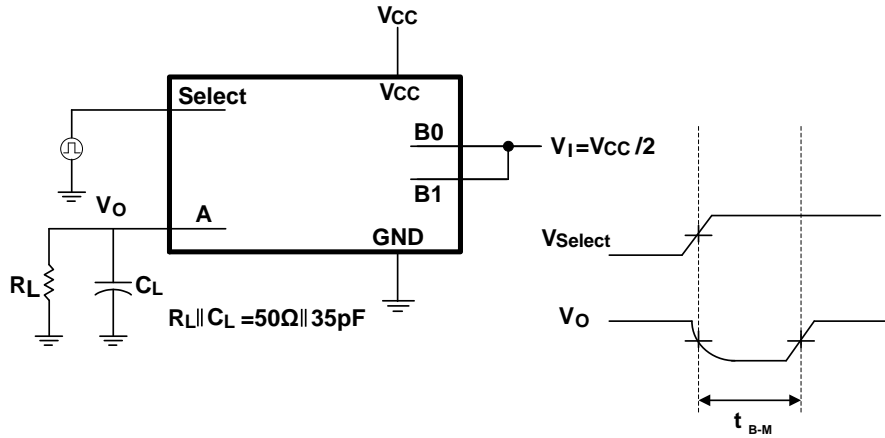


Figure 5 Break before Make Timing Test

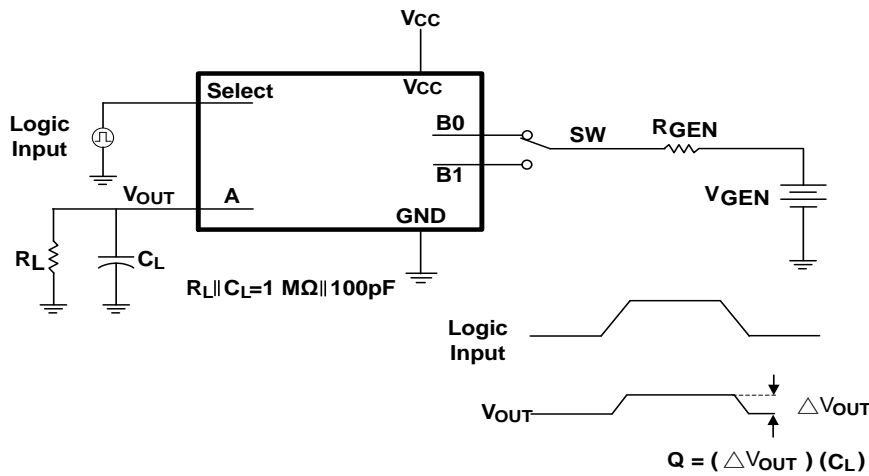


Figure 6 Charge Injection

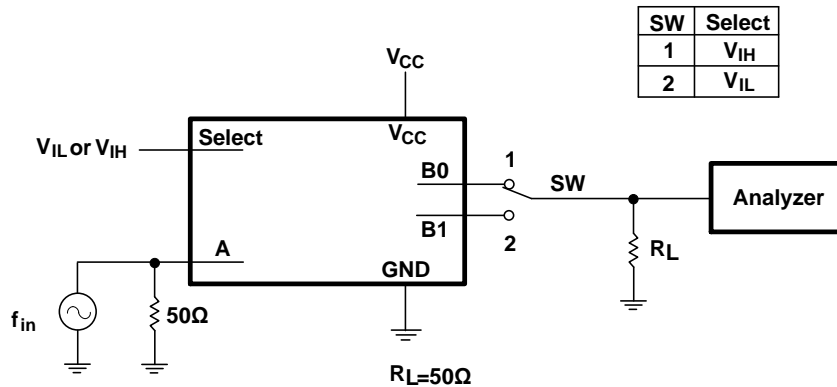


Figure 7 OFF Isolation

**Parameter Measurement Information (Cont.)**

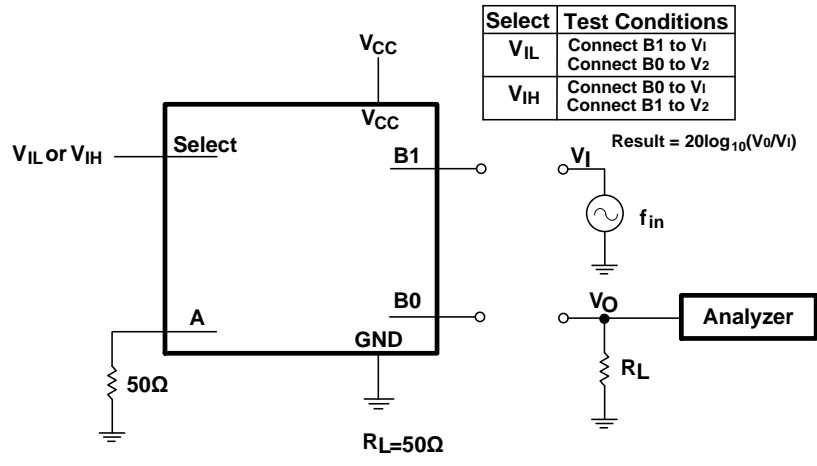


Figure 8 Cross Talk

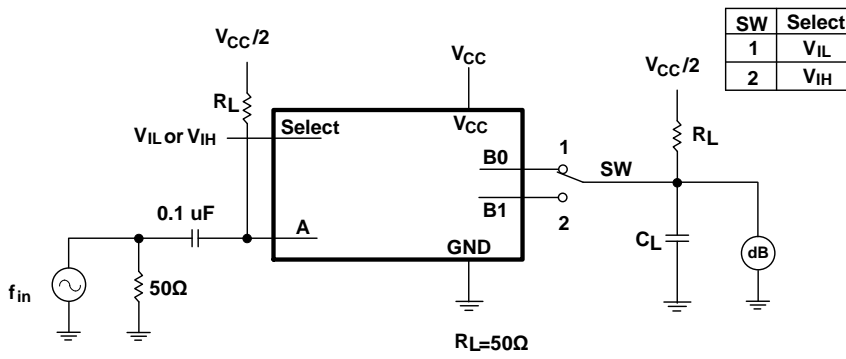


Figure 9 Bandwidth

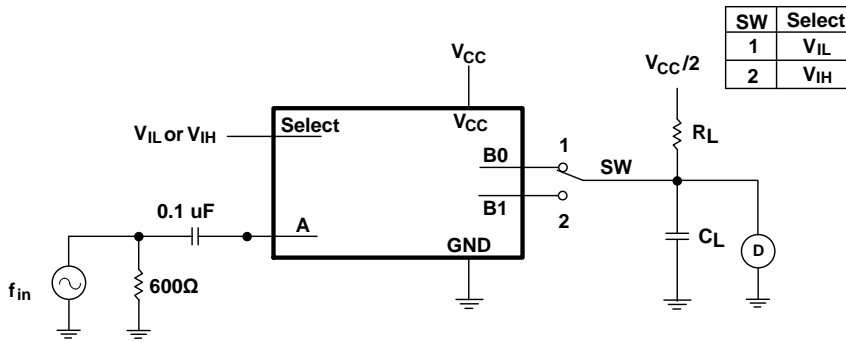


Figure 10 THD

**Typical Performance Characteristics**

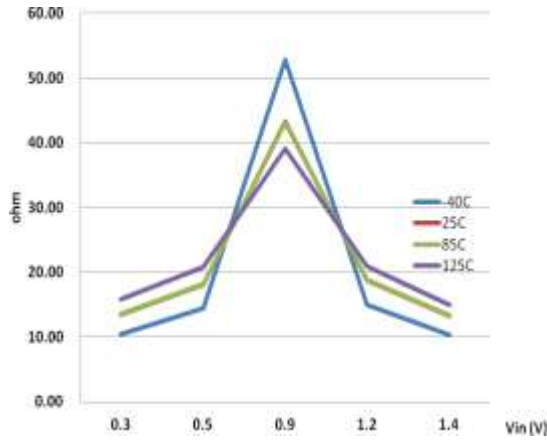


Figure 11 ON state Resistance  $V_{cc} = 1.65\text{ V}$ ;  $I_{Bn} = 4\text{ ma}$

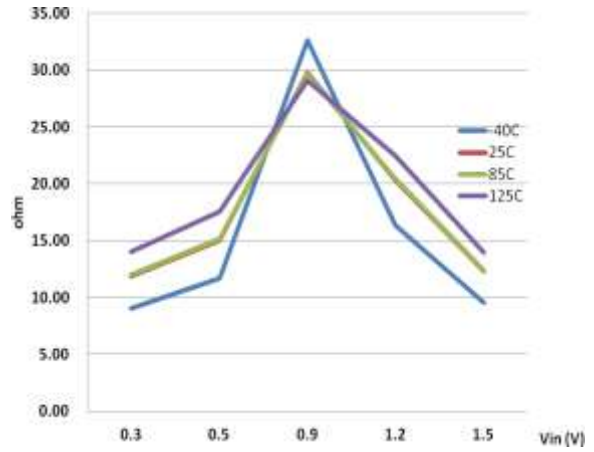


Figure 12 ON state Resistance  $V_{cc} = 1.8\text{ V}$ ;  $I_{Bn} = 4\text{ ma}$

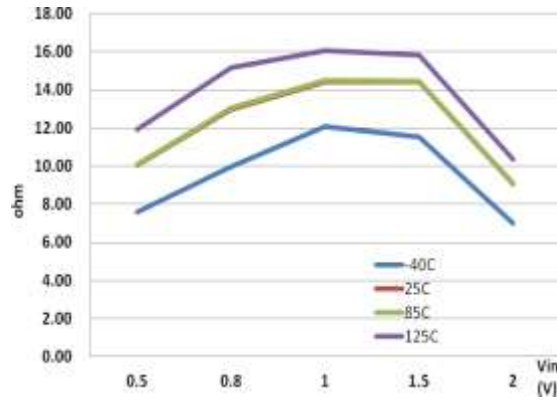


Figure 13 ON state Resistance  $V_{cc} = 2.3\text{ V}$ ;  $I_{Bn} = 8\text{ ma}$

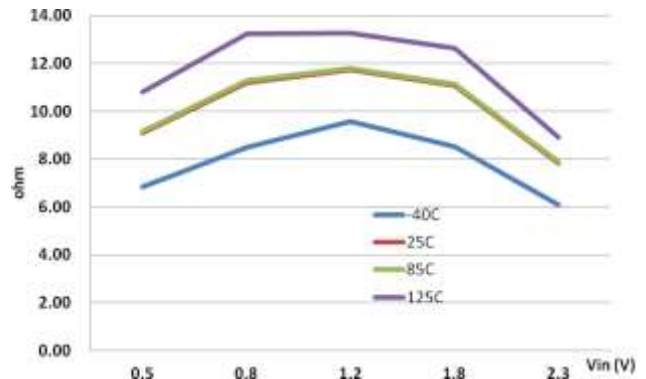


Figure 14 ON state Resistance  $V_{cc} = 2.5\text{ V}$ ;  $I_{Bn} = 8\text{ ma}$

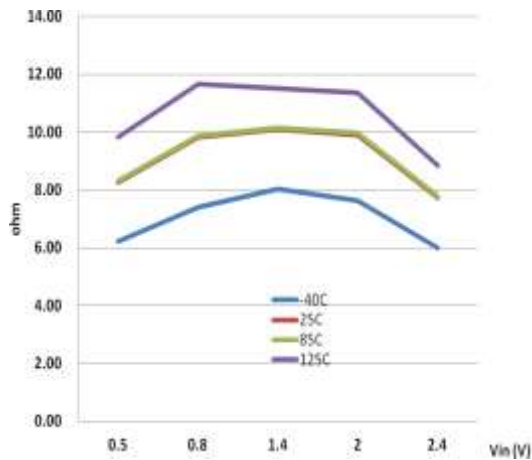


Figure 15 ON state Resistance  $V_{cc} = 2.7\text{ V}$ ;  $I_{Bn} = 12\text{ ma}$

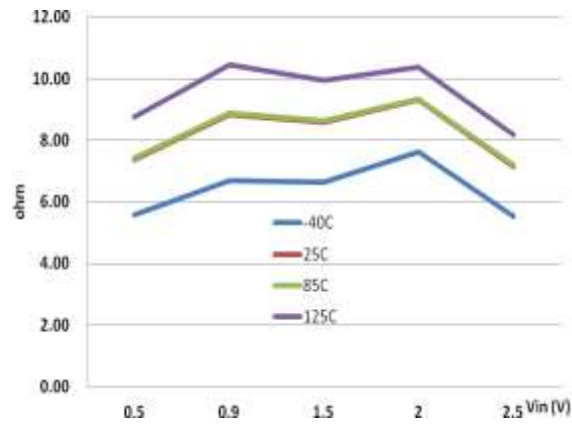


Figure 16 ON state Resistance  $V_{cc} = 3\text{ V}$ ;  $I_{Bn} = 24\text{ ma}$

**Typical Performance Characteristics** (Continued)

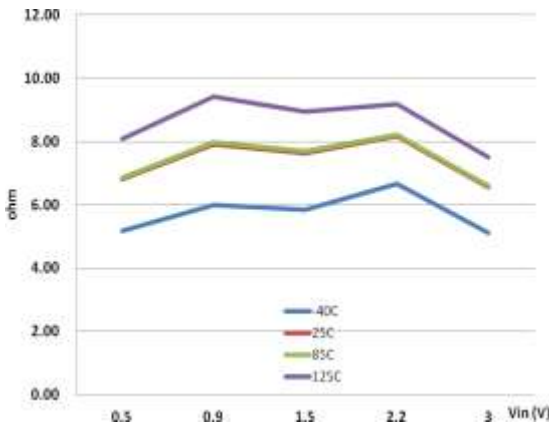


Figure 17 ON state Resistance Vcc = 3.3 V; IBn = 24ma

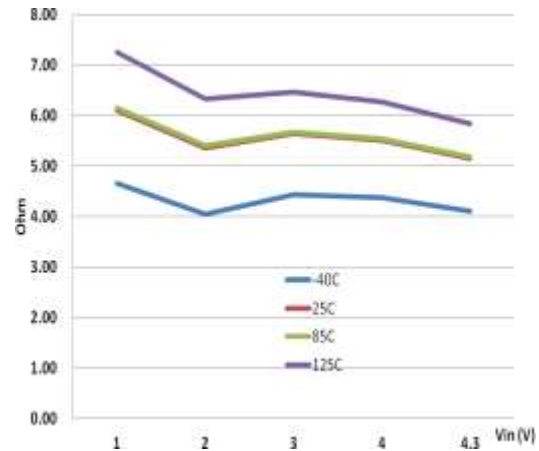


Figure 18 ON state Resistance Vcc = 4.5 V; IBn = 32ma

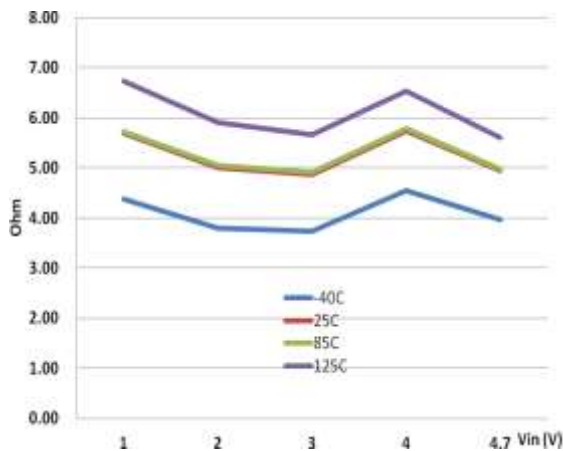


Figure 19 ON state Resistance Vcc = 5.5 V; IBn = 32ma

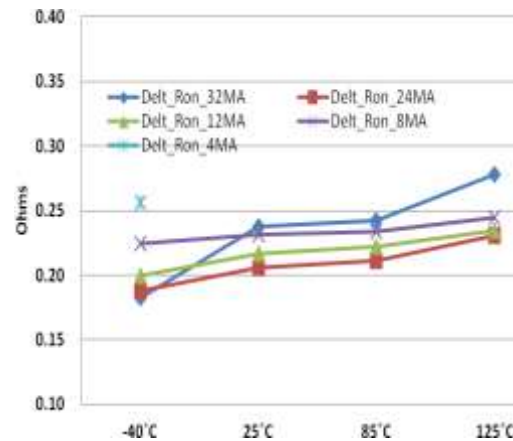


Figure 20 ΔRon-Resistance Match Between Channels

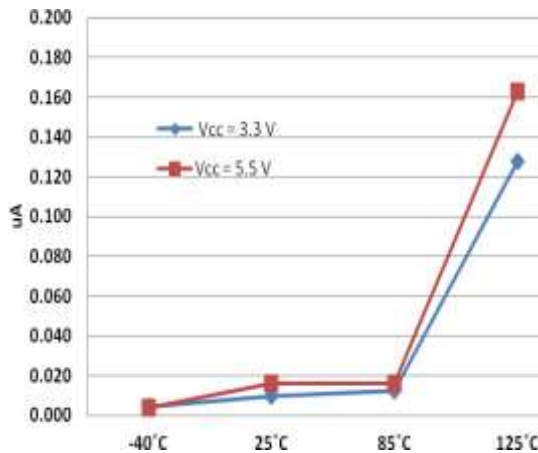


Figure 21 IS(OFF) OFF state leakage VIN = 0 V

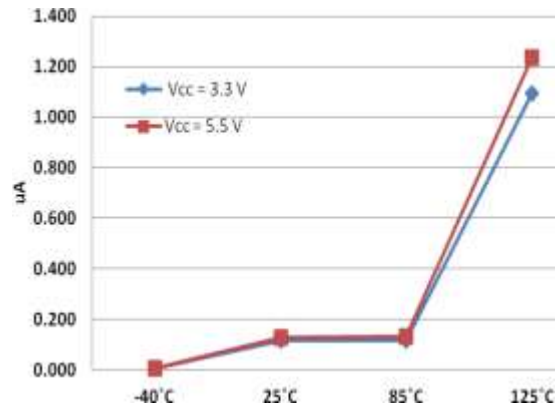


Figure 22 IS(OFF) OFF state leakage VIN = -0.1 V

**Typical Performance Characteristics (Cont.)**

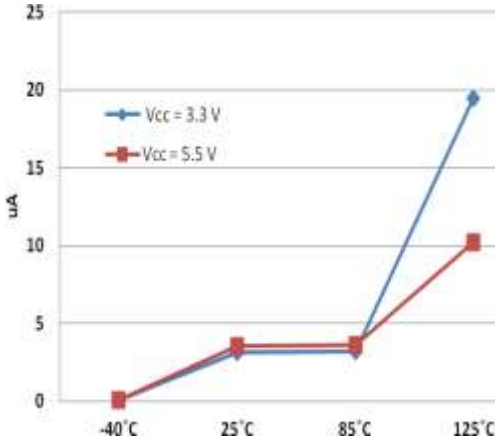


Figure 23  $I_{S(OFF)}$  OFF state leakage  $V_{IN} = -0.2 V$

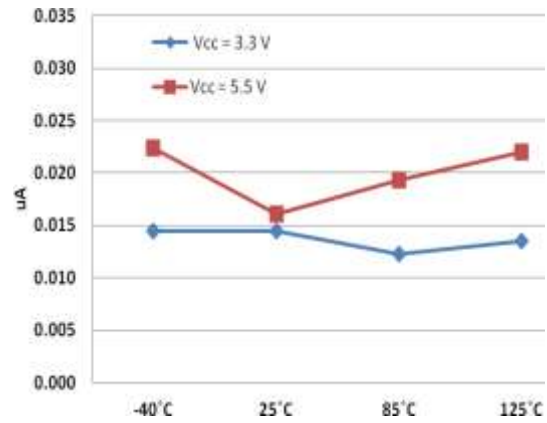


Figure 24  $I_{S(ON)}$  ON state leakage  $V_{IN} = 0 V$

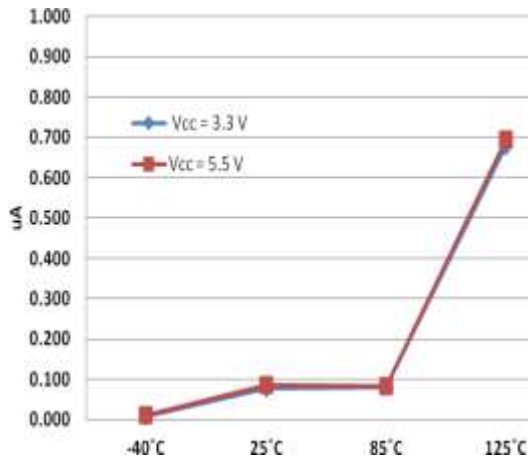


Figure 25  $I_{S(ON)}$  ON state leakage  $V_{IN} = -0.1 V$

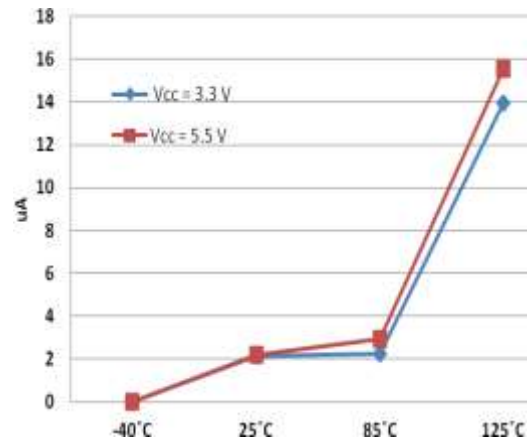


Figure 26  $I_{S(ON)}$  ON state leakage  $V_{IN} = -0.2 V$

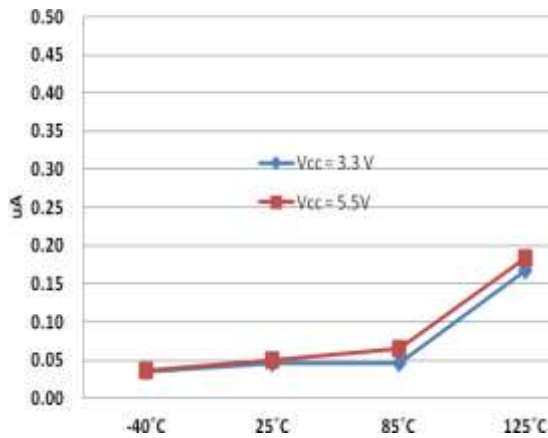


Figure 27  $I_{CC}$  versus Temperature

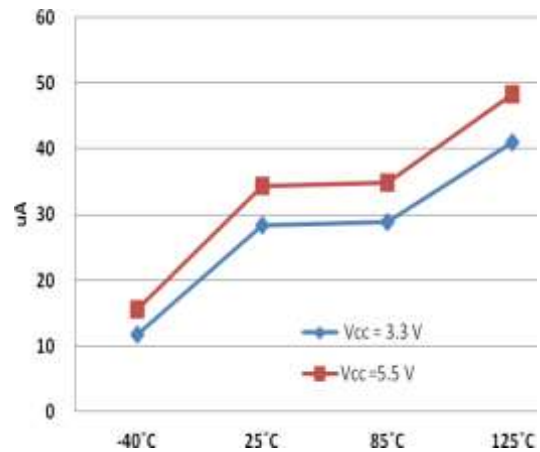


Figure 28  $\Delta I_{CC}$  versus Temperature

**Typical Performance Characteristics (Cont.)**

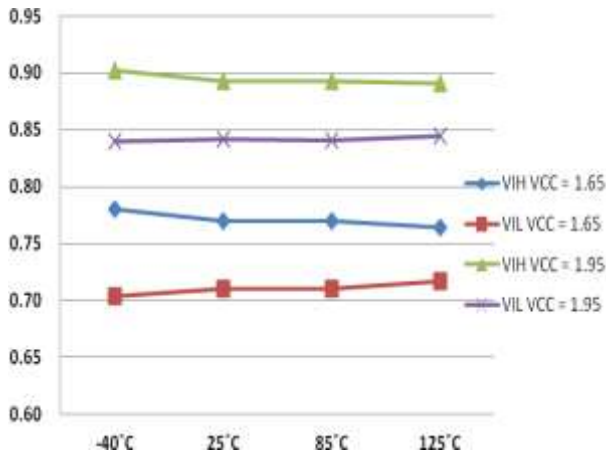


Figure 29  $V_{IH}$ ,  $V_{IL}$ , Hysteresis  $V_{CC} = 1.65\text{ V}$  and  $V_{CC} = 1.95\text{ V}$

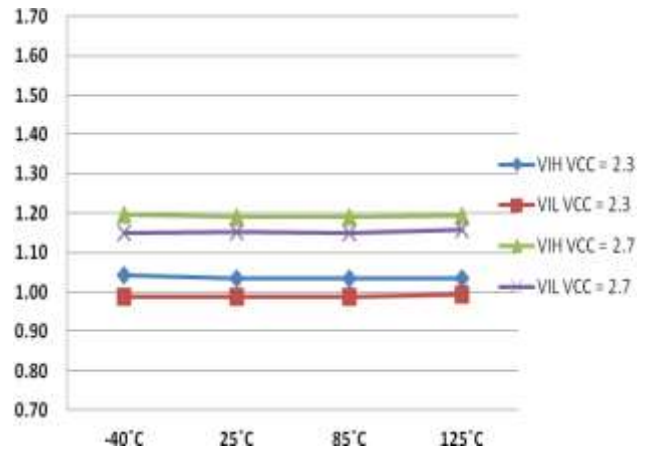


Figure 30  $V_{IH}$ ,  $V_{IL}$ , Hysteresis  $V_{CC} = 2.3\text{ V}$  and  $V_{CC} = 2.7\text{ V}$

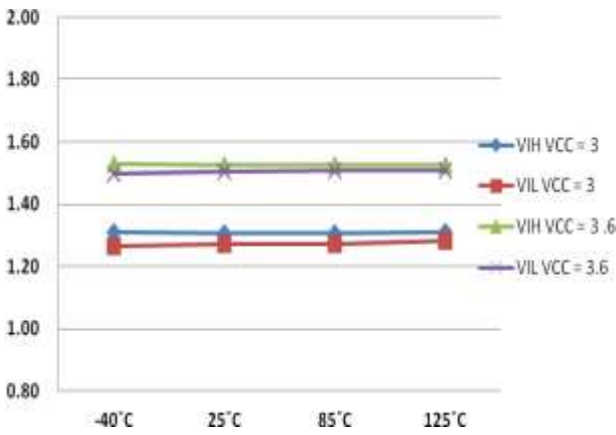


Figure 31  $V_{IH}$ ,  $V_{IL}$ , Hysteresis  $V_{CC} = 3\text{ V}$  and  $V_{CC} = 3.3\text{ V}$

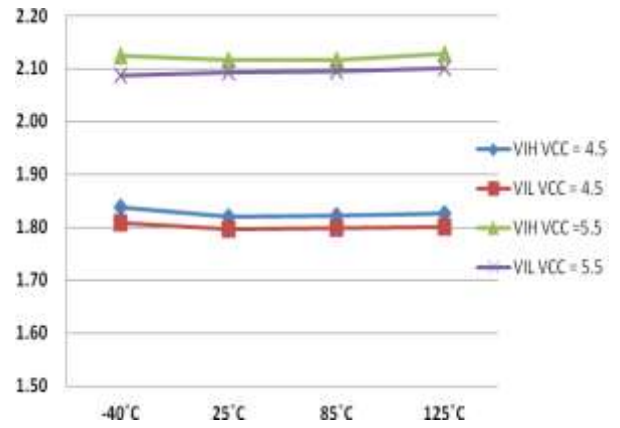
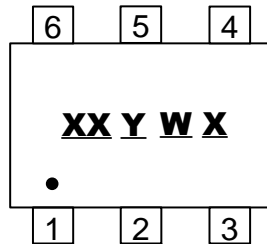


Figure 32  $V_{IH}$ ,  $V_{IL}$ , Hysteresis  $V_{CC} = 4.5\text{ V}$  and  $V_{CC} = 5.5\text{ V}$

**Marking Information**

(1) SOT363

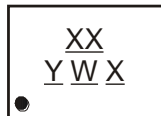


**XX** : Identification code  
**Y** : Year 0~9  
**W** : Week : A~Z : 1~26 week;  
a~z : 27~52 week; z represents 52 and 53 week  
**X** : A~Z : Internal Code

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

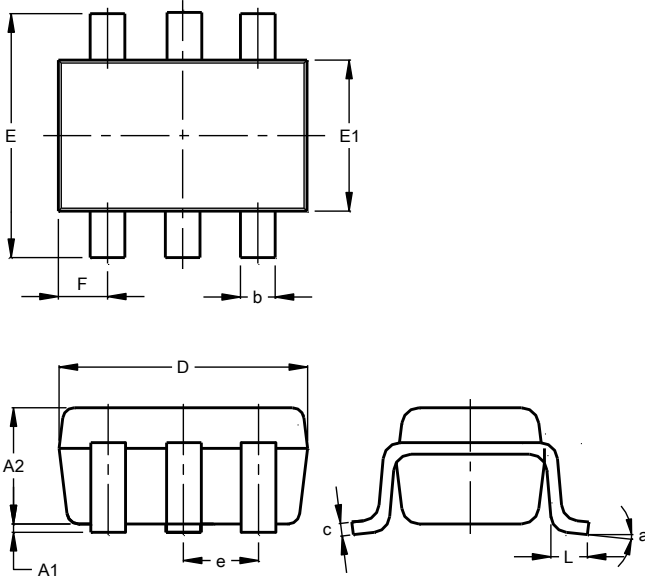
**Package Characteristics** (All typical values are at  $V_{CC} = 3.3V$ ,  $T_A = +25^{\circ}C$ )

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	-	

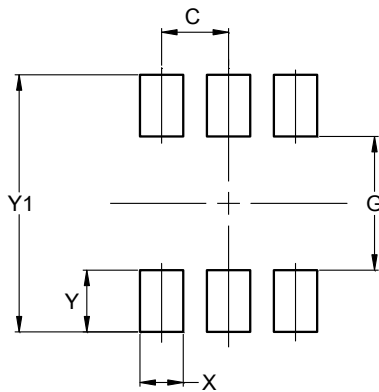
Note: 20. Test condition SOT363, and X2-DFN1410-6: Device mounted on FR-4 substrate PC board, 2oz. copper, with minimum recommended pad layout.

**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>			

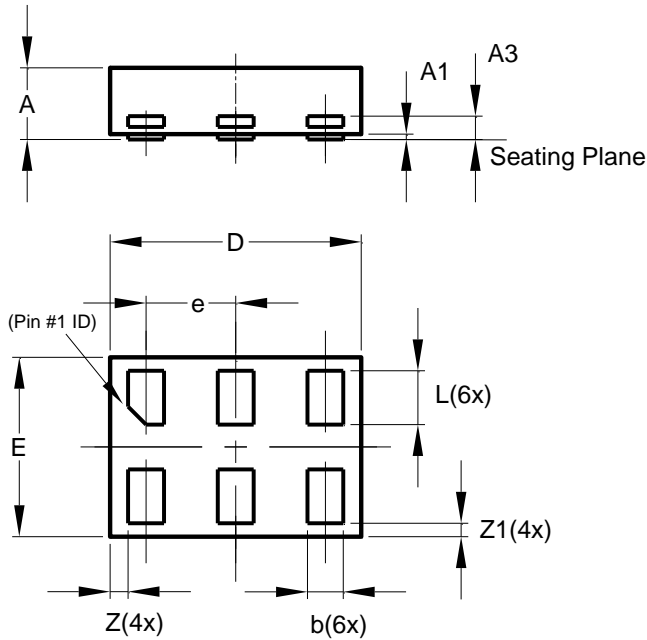


Dimensions	Value (in mm)
C	0.650
G	1.300
X	0.420
Y	0.600
Y1	2.500

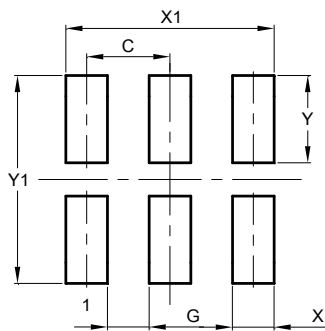


**X2-DFN1410-6 Package Outline Dimensions and Suggested Pad Layout**

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

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