SN74LVC1G66 (LX)
Bilateral Switch

Product Specification

Specification Revision History:

Version	Date	Description
2022-10-A1	2022-10	New
2023-11-A2	2023-11	Internal structure block diagram modified

Contents

1、General Description 1
2、Block Diagram And Pin Description 2
2.1、Block Diagram 2
2.2、Pin Configurations 2
2.3、Pin Description 2
2.4、Function Table 3
3、Electrical Parameter 3
3.1、Absolute Maximum Ratings 3
3.2、Recommended Operating Conditions 3
3.3、Electrical Characteristics 4
3.3.1、DC Characteristics 1 4
3.3.2、DC Characteristics 2 5
3.3.3、ON Resistance 1 6
3.3.4、ON Resistance 2 7
3.3.5、AC Characteristics 1 8
3.3.6、AC Characteristics 2 9
3.3.7、Additional AC Characteristics 9
4、Testing Circuit 10
4.1、DC Testing Circuit 10
4.2、ON Resistance Test Circuit 11
4.3、AC Testing Circuit 11
4.4、AC Testing Circuit 12
4.5、Additional AC Testing Circuit 12
4.6、Measurement Points 14
4.7、Test Data 14
5、Package Information 15
5.1、SOT23-5 15
5.2、SOT353 16
6、Statements And Notes 17
6.1、The name and content of Hazardous substances or Elements in the product 17
10.2、Notes 17

1、General Description

The SN74LVC1G66 provides one single pole, single-throw analog switch function. It has two input/output terminals (Y and Z) and an active HIGH enable input pin (E). When E is LOW, the analog switch is turned off.

Features:

- Wide supply voltage range from 1.65 V to 5.5 V
- Very low ON resistance:
- Switch current capability of 32 mA
- CMOS low power consumption
- Specified from -40℃ to +125℃
- Packaging information: SOT-23-5/SOT-353

Ordering Information:

Reel packing specifications:

Part number	Packaging form	Marking code	Reel quantity	Boxed reel quantity	Notes
SN74LVC1G66DB (LX)	SOT-23-5	DRXX	3000 PCS/reel	30000 PCS/box	Dimensions of plastic enclosure: 2.9mm×1.6mm Pin spacing:0.95mm
SN74LVC1G66DC (LX)	SOT-353	DRXX	3000 PCS/reel	30000 PCS/box	Dimensions of plastic enclosure: 2.1mm×1.3mm Pin spacing:0.65mm

Note 1: “XX” refers to variable content, meaning year and package batch serial number.

Note 2: If the physical information is inconsistent with the ordering information, please refer to the actual product.

2、Block Diagram And Pin Description

2.1、Block Diagram

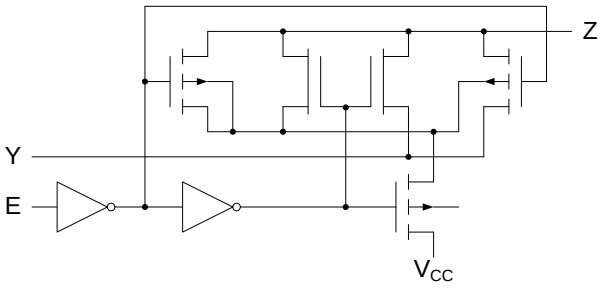
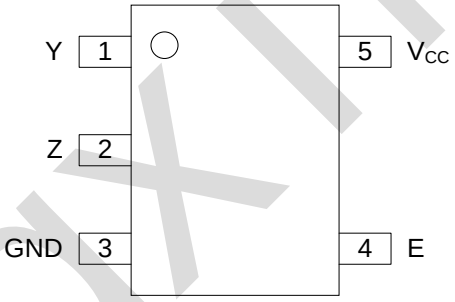


Figure 3. Logic diagram

2.2、Pin Configurations



2.3、Pin Description

Pin No.	Pin Name	Description
1	Y	independent input or output
2	Z	independent output or input
3	GND	ground (0V)
4	E	enable input (active HIGH)
5	V_{CC}	supply voltage

2.4、Function Table

Input E	Switch
L	OFF-state
H	ON-state

Note: H=HIGH voltage level; L=LOW voltage level.

3、Electrical Parameter

3.1、Absolute Maximum Ratings

(T_{amb}=25℃, voltages are referenced to GND (ground=0V), unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Max.	Unit
supply voltage	V_{CC}	-	-0.5	+6.5	V
input clamping current	I_{IK}	V_I<-0.5V or V_I>V_{CC}+0.5V	-50	-	mA
input voltage	V_I	-	-0.5	+6.5	V
switch clamping current	I_{SK}	V_I<-0.5V or V_I>V_{CC}+0.5V	-50	-	mA
switch voltage	V_{SW}	enable and disable mode	-0.5	V_{CC}+0.5	V
switch current	I_{SW}	V_{SW}>-0.5V or V_{SW}<V_{CC}+0.5V	-	±50	mA
supply current	I_{CC}	-	-	100	mA
ground current	I_{GND}	-	-100	-	mA
storage temperature	T_{stg}	-	-65	+150	℃
total power dissipation	P_{tot}	-	-	250	mW
soldering temperature	T_L	10s	260		℃

3.2、Recommended Operating Conditions

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
supply voltage	V_{CC}	-	1.65	-	5.5	V
input voltage	V_I	-	0	-	5.5	V
switch voltage	V_{SW}	-	0	-	V_{CC}	V
ambient temperature	T_{amb}	-	-40	-	+125	℃

3.3、Electrical Characteristics

3.3.1、DC Characteristics 1

(T_{amb}=-40℃ to +85℃, voltages are referenced to GND (ground=0V), unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.[1]	Max.	Unit
HIGH-level input voltage	V_{IH}	V_{CC}=1.65V to 1.95V	0.65×V_{CC}	-	-	V
		V_{CC}=2.3V to 2.7V	1.7	-	-	V
		V_{CC}=2.7V to 3.6V	2.0	-	-	V
		V_{CC}=4.5V to 5.5V	0.7×V_{CC}	-	-	V
LOW-level input voltage	V_{IL}	V_{CC}=1.65V to 1.95V	-	-	0.35×V_{CC}	V
		V_{CC}=2.3V to 2.7V	-	-	0.7	V
		V_{CC}=2.7V to 3.6V	-	-	0.8	V
		V_{CC}=4.5V to 5.5V	-	-	0.3×V_{CC}	V
input leakage current	I_I	pin E; V_I=5.5V or GND; V_{CC}=0V to 5.5V[2]	-	±0.1	±1	uA
OFF-state leakage current	$I_{(S)OFF}$	V_{CC}=5.5V; see Figure 4[2]	-	±0.1	±0.2	uA
ON-state leakage current	$I_{(S)ON}$	V_{CC}=5.5V; see Figure 5[2]	-	±0.1	±1	uA
supply current	I_{CC}	V_I=5.5V or GND; V_{SW}=GND or V_{CC}; V_{CC}=1.65V to 5.5V[2]	-	0.1	4	uA
additional supply current	ΔI_{CC}	pin E; V_I=V_{CC}-0.6V; V_{SW}=GND or V_{CC}; V_{CC}=5.5V[2]	-	5	500	uA
input capacitance	C_I	-	-	2.0	-	pF
OFF-state capacitance	$C_{S(OFF)}$	-	-	6.5	-	pF
ON-state capacitance	$C_{S(ON)}$	-	-	11	-	pF

Note:

[1] All typical values are measured at T_{amb}=25℃.

[2] These typical values are measured at V_{CC}=3.3V.

3.3.2、DC Characteristics 2

(T_{amb}=-40℃ to +125℃, voltages are referenced to GND (ground=0V), unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
HIGH-level input voltage	V_{IH}	V_{CC}=1.65V to 1.95V	0.65× V_{CC}	-	-	V
		V_{CC}=2.3V to 2.7V	1.7	-	-	V
		V_{CC}=2.7V to 3.6V	2.0	-	-	V
		V_{CC}=4.5V to 5.5V	0.7×V_{CC}	-	-	V
LOW-level input voltage	V_{IL}	V_{CC}=1.65V to 1.95V	-	-	0.35× V_{CC}	V
		V_{CC}=2.3V to 2.7V	-	-	0.7	V
		V_{CC}=2.7V to 3.6V	-	-	0.8	V
		V_{CC}=4.5V to 5.5V	-	-	0.3× V_{CC}	V
input leakage current	I_I	pin E; V_I=5.5V or GND; V_{CC}=0V to 5.5V[1]	-	-	±1	uA
OFF-state leakage current	$I_{(S)OFF}$	V_{CC}=5.5V; see Figure 4[1]	-	-	±0.5	uA
ON-state leakage current	$I_{(S)ON}$	V_{CC}=5.5V; see Figure 5[1]	-	-	±2	uA
supply current	I_{CC}	V_I=5.5V or GND; V_{SW}=GND or V_{CC}; V_{CC}=1.65V to 5.5V[1]	-	-	4	uA
additional supply current	ΔI_{CC}	pin E; V_I=V_{CC}-0.6V; V_{SW}=GND or V_{CC}; V_{CC}=5.5V[1]	-	-	500	uA

Note:

[1] These typical values are measured at V_{CC}=3.3V.

3.3.3、ON Resistance 1

(T_{amb}=-40℃ to +85℃, voltages are referenced to GND (ground=0V), unless otherwise specified)

Parameter	Symbol	Conditions		Min.	Typ.[1]	Max.	Unit
ON resistance (peak)	$R_{ON(peak)}$	V_I=GND to V_{CC}; see Figure 6	I_{SW} = 4 mA; V_{CC}=1.65V to 1.95V	-	34.0	130	Ω
			I_{SW}=8mA; V_{CC}=2.3V to 2.7V	-	12.0	30	Ω
			I_{SW}=12mA; V_{CC}=2.7V	-	10.4	25	Ω
			I_{SW}=24mA; V_{CC}=3V to 3.6V	-	7.8	20	Ω
			I_{SW}=32mA; V_{CC}=4.5V to 5.5V	-	6.2	15	Ω
ON resistance (rail)	$R_{ON(rail)}$	V_I=GND; see Figure 6	I_{SW} = 4 mA; V_{CC}=1.65V to 1.95V	-	8.2	18	Ω
			I_{SW}=8mA; V_{CC}=2.3V to 2.7V	-	7.1	16	Ω
			I_{SW}=12mA; V_{CC}=2.7V	-	6.9	14	Ω
			I_{SW}=24mA; V_{CC}=3V to 3.6V	-	6.5	12	Ω
			I_{SW}=32mA; V_{CC}=4.5V to 5.5V	-	5.8	10	Ω
		V_I=V_{CC}; see Figure 6	I_{SW} = 4 mA; V_{CC}=1.65V to 1.95V	-	10.4	30	Ω
			I_{SW}=8mA; V_{CC}=2.3V to 2.7V	-	7.6	20	Ω
			I_{SW}=12mA; V_{CC}=2.7V	-	7.0	18	Ω
			I_{SW}=24mA; V_{CC}=3V to 3.6V	-	6.1	15	Ω
			I_{SW}=32mA; V_{CC}=4.5V to 5.5V	-	4.9	10	Ω
ON resistance (flatness)	$R_{ON(flatness)}$	V_I=GND to V_{CC}[2]	I_{SW} = 4 mA; V_{CC}=1.65V to 1.95V	-	26.0	-	Ω
			I_{SW}=8mA; V_{CC}=2.3V to 2.7V	-	5.0	-	Ω
			I_{SW}=12mA; V_{CC}=2.7V	-	3.5	-	Ω
			I_{SW}=24mA; V_{CC}=3V to 3.6V	-	2.0	-	Ω
			I_{SW}=32mA; V_{CC}=4.5V to 5.5V	-	1.5	-	Ω

Note:

[1] Typical values are measured at T_{amb}=25℃ and nominal V_{CC}.

[2] Flatness is defined as the difference between the maximum and minimum value of ON resistance

measured at identical V_{CC} and temperature.

3.3.4、ON Resistance 2

(T_{amb}=-40℃ to +125℃, voltages are referenced to GND (ground=0V), unless otherwise specified)

Parameter	Symbol	Conditions		Min.	Typ.	Max.	Unit
ON resistance (peak)	$R_{ON(peak)}$	V_I=GND to V_{CC}; see Figure 6	I_{SW} = 4 mA; V_{CC}=1.65V to 1.95V	-	-	195	Ω
			I_{SW}=8mA; V_{CC}=2.3V to 2.7V	-	-	45	Ω
			I_{SW}=12mA; V_{CC}=2.7V	-	-	38	Ω
			I_{SW}=24mA; V_{CC}=3V to 3.6V	-	-	30	Ω
			I_{SW}=32mA; V_{CC}=4.5V to 5.5V	-	-	23	Ω
ON resistance (rail)	$R_{ON(rail)}$	V_I=GND; see Figure 6	I_{SW} = 4 mA; V_{CC}=1.65V to 1.95V	-	-	27	Ω
			I_{SW}=8mA; V_{CC}=2.3V to 2.7V	-	-	24	Ω
			I_{SW}=12mA; V_{CC}=2.7V	-	-	21	Ω
			I_{SW}=24mA; V_{CC}=3V to 3.6V	-	-	18	Ω
			I_{SW}=32mA; V_{CC}=4.5V to 5.5V	-	-	15	Ω
		V_I=V_{CC}; see Figure 6	I_{SW} = 4 mA; V_{CC}=1.65V to 1.95V	-	-	45	Ω
			I_{SW}=8mA; V_{CC}=2.3V to 2.7V	-	-	30	Ω
			I_{SW}=12mA; V_{CC}=2.7V	-	-	27	Ω
			I_{SW}=24mA; V_{CC}=3V to 3.6V	-	-	23	Ω
			I_{SW}=32mA; V_{CC}=4.5V to 5.5V	-	-	15	Ω

3.3.5、AC Characteristics 1

(T_{amb}=-40℃ to +85℃, voltages are referenced to GND (ground=0V), unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.[1]	Max.	Unit
propagation delay	t_{PHL}, t_{PLH}	Y to Z or Z to Y; see Figure 13[2]				
		V_{CC}=1.65V to 1.95V	-	0.8	2.0	ns
		V_{CC}= 2.3V to 2.7V	-	0.4	1.2	ns
		V_{CC}=2.7V	-	0.4	1.0	ns
		V_{CC}=3.0V to 3.6V	-	0.3	0.8	ns
		V_{CC}=4.5V to 5.5V	-	0.2	0.6	ns
enable time	t_{PZH}, t_{PZL}	E to Y or Z; see Figure 14				
		V_{CC}=1.65V to 1.95V	1.0	5.3	12	ns
		V_{CC}= 2.3V to 2.7V	1.0	3.0	6.5	ns
		V_{CC}=2.7V	1.0	2.6	6.0	ns
		V_{CC}=3.0V to 3.6V	1.0	2.5	5.0	ns
		V_{CC}=4.5V to 5.5V	1.0	1.9	4.2	ns
disable time	t_{PLZ}, t_{PHZ}	E to Y or Z; see Figure 14				
		V_{CC}=1.65V to 1.95V	1.0	4.2	10	ns
		V_{CC}= 2.3V to 2.7V	1.0	2.4	6.9	ns
		V_{CC}=2.7V	1.0	3.6	7.5	ns
		V_{CC}=3.0V to 3.6V	1.0	3.4	6.5	ns
		V_{CC}=4.5V to 5.5V	1.0	2.5	5.0	ns

Note:

[1] Typical values are measured at T_{amb}=25℃ and nominal V_{CC}.

[2] Propagation delay is the calculated RC time constant of the typical ON resistance of the switch and the specified capacitance when driven by an ideal voltage source (zero output impedance).

3.3.6、AC Characteristics 2

(T_{amb}=-40℃ to +125℃, voltages are referenced to GND (ground=0V), unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
propagation delay	t_{PHL}, t_{PLH}	Y to Z or Z to Y; see Figure 13[1]				
		V_{CC}=1.65V to 1.95V	-	-	3.0	ns
		V_{CC}= 2.3V to 2.7V	-	-	2.0	ns
		V_{CC}=2.7V	-	-	1.5	ns
		V_{CC}=3.0V to 3.6V	-	-	1.5	ns
		V_{CC}=4.5V to 5.5V	-	-	1.0	ns
enable time	t_{PZH}, t_{PZL}	E to Y or Z; see Figure 14				
		V_{CC}=1.65V to 1.95V	1.0	-	15.5	ns
		V_{CC}= 2.3V to 2.7V	1.0	-	8.5	ns
		V_{CC}=2.7V	1.0	-	8.0	ns
		V_{CC}=3.0V to 3.6V	1.0	-	6.5	ns
		V_{CC}=4.5V to 5.5V	1.0	-	5.5	ns
disable time	t_{PLZ}, t_{PHZ}	E to Y or Z; see Figure 14				
		V_{CC}=1.65V to 1.95V	1.0	-	13	ns
		V_{CC}= 2.3V to 2.7V	1.0	-	9.0	ns
		V_{CC}=2.7V	1.0	-	9.5	ns
		V_{CC}=3.0V to 3.6V	1.0	-	8.5	ns
		V_{CC}=4.5V to 5.5V	1.0	-	6.5	ns

Note:

[1] Propagation delay is the calculated RC time constant of the typical ON resistance of the switch and the specified capacitance when driven by an ideal voltage source (zero output impedance).

3.3.7、Additional AC Characteristics

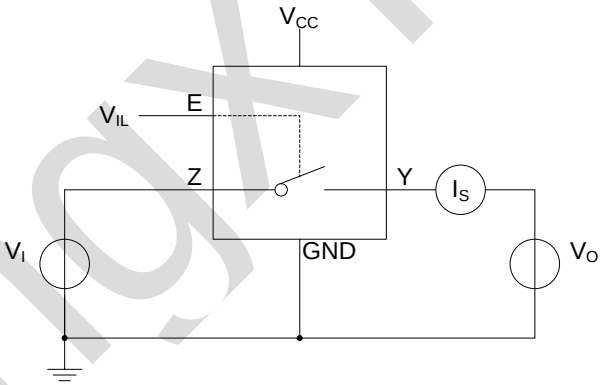
(T_{amb}=25℃, voltages are referenced to GND (ground=0V), unless otherwise specified)

Parameter	Symbol	Conditions		Min.	Typ.	Max.	Unit
total harmonic distortion	THD	R_L=10kΩ; C_L=50pF; f_i=1kHz; see Figure 7	V_{CC}=1.65V	-	0.032	-	%
			V_{CC}=2.3V	-	0.008	-	%
			V_{CC}=3.0V	-	0.006	-	%
			V_{CC}=4.5V	-	0.001	-	%
		R_L=10kΩ; C_L=50pF; f_i=10kHz; see Figure 7	V_{CC}=1.65V	-	0.068	-	%
			V_{CC}=2.3V	-	0.009	-	%
			V_{CC}=3.0V	-	0.008	-	%
			V_{CC}=4.5V	-	0.006	-	%
-3dB frequency response	$f_{(-3dB)}$	R_L=600Ω; C_L=50pF; see Figure 8	V_{CC}=1.65V	-	135	-	MHz
			V_{CC}=2.3V	-	145	-	MHz
			V_{CC}=3.0V	-	150	-	MHz
			V_{CC}=4.5V	-	155	-	MHz
		R_L=50Ω; C_L=5pF; see Figure 8	V_{CC}=1.65V	-	>500	-	MHz
			V_{CC}=2.3V	-	>500	-	MHz
			V_{CC}=3.0V	-	>500	-	MHz
			V_{CC}=4.5V	-	>500	-	MHz
		R_L=50Ω; C_L=10pF; see Figure 8	V_{CC}=1.65V	-	200	-	MHz
			V_{CC}=2.3V	-	350	-	MHz

			V_{CC}=3.0V	-	410	-	MHz
			V_{CC}=4.5V	-	440	-	MHz
isolation (OFF-state)	α_{iso}	R_L=600Ω; C_L=50pF; f_i=1MHz; see Figure 9	V_{CC}=1.65V	-	-46	-	dB
			V_{CC}=2.3V	-	-46	-	dB
			V_{CC}=3.0V	-	-46	-	dB
			V_{CC}=4.5V	-	-46	-	dB
		R_L=50Ω; C_L=5pF; f_i=1MHz; see Figure 9	V_{CC}=1.65V	-	-37	-	dB
			V_{CC}=2.3V	-	-37	-	dB
			V_{CC}=3.0V	-	-37	-	dB
			V_{CC}=4.5V	-	-37	-	dB
crosstalk voltage	V_{ct}	between digital input and switch; R_L=600Ω; C_L=50pF; f_i=1MHz; t_r=t_f=2ns; see Figure 10	V_{CC}=1.65V	-	69	-	mV
			V_{CC}=2.3V	-	87	-	mV
			V_{CC}=3.0V	-	156	-	mV
			V_{CC}=4.5V	-	302	-	mV
charge injection	Q_{inj}	C_L=0.1nF; V_{gen}=0V; R_{gen}=0Ω; f_i=1MHz; R_L=1MΩ; see Figure 11	V_{CC}=1.8V	-	3.3	-	pC
			V_{CC}=2.5V	-	4.1	-	pC
			V_{CC}=3.3V	-	5.0	-	pC
			V_{CC}=4.5V	-	6.4	-	pC
			V_{CC}=5.5V	-	7.5	-	pC

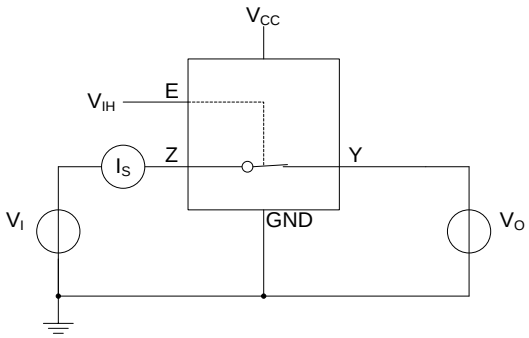
4、Testing Circuit

4.1、DC Testing Circuit



V_I=V_{CC} or GND and V_O=GND or V_{CC}.

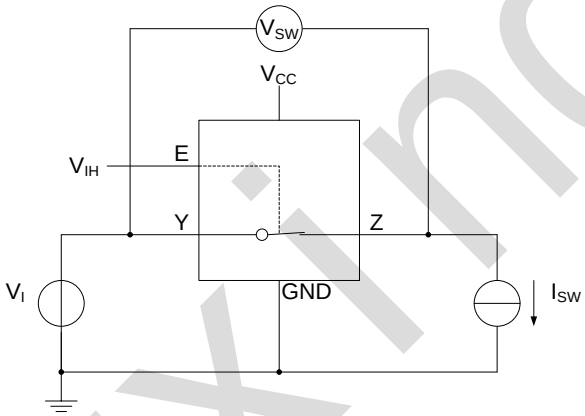
Figure 4. Test circuit for measuring OFF-state leakage current



V_I=V_{CC} or GND and V_O=open circuit.

Figure 5. Test circuit for measuring ON-state leakage current

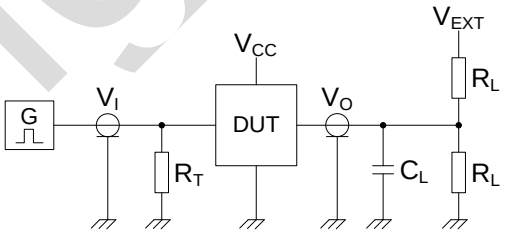
4.2、ON Resistance Test Circuit



R_{ON}=V_{SW}/I_{SW}

Figure 6. Test circuit for measuring ON resistance

4.3、AC Testing Circuit



Definitions for test circuit:

R_L=Load resistance.

C_L=Load capacitance including jig and probe capacitance.

R_T=Termination resistance should be equal to the output impedance Z_o of the pulse generator.

V_{EXT}=External voltage for measuring switching times.

Figure 7. Test circuit for measuring switching times

4.4、AC Testing Circuit

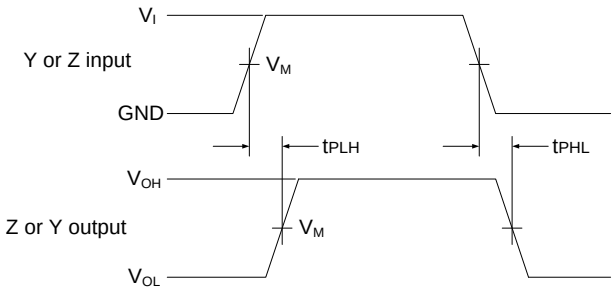


Figure 8. Input (Y or Z) to output (Z or Y) propagation delays

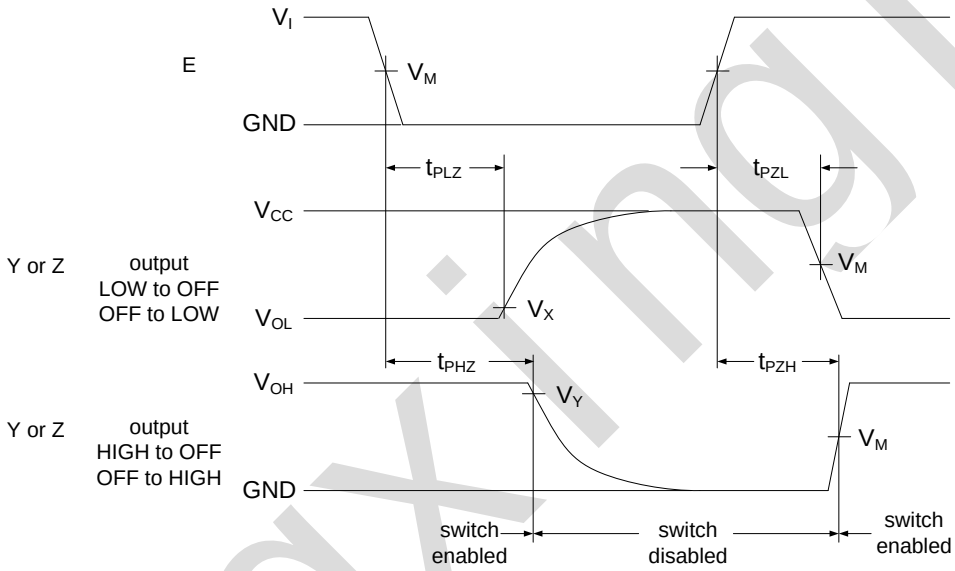
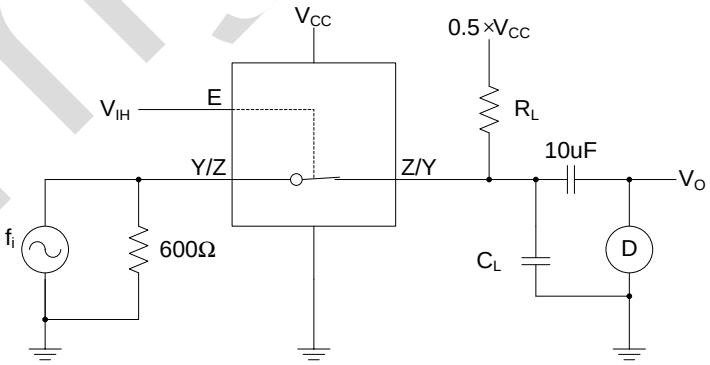


Figure 9. Enable and disable times

4.5、Additional AC Testing Circuit



Test conditions:

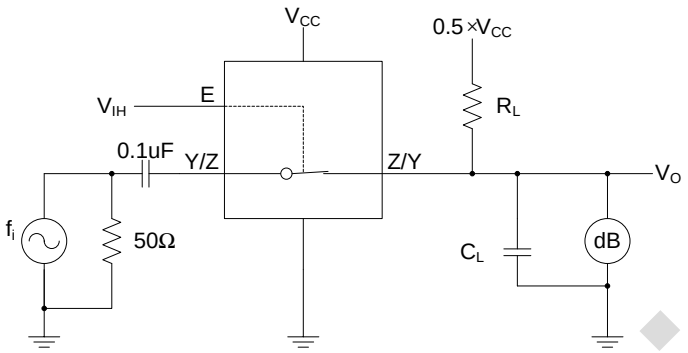
V_{CC}=1.65V: V_i=1.4V (p-p).

V_{CC}=2.3V: V_i=2 V (p-p).

V_{CC}=3V: V_i=2.5V (p-p).

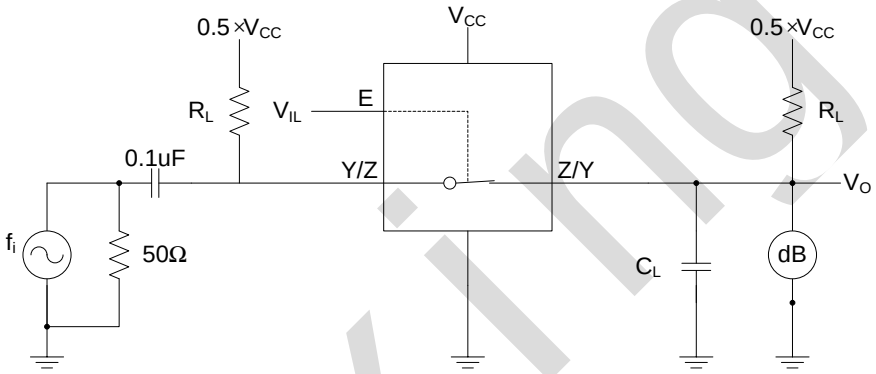
V_{CC}=4.5V: V_i=4V (p-p).

Figure 10. Test circuit for measuring total harmonic distortion



Adjust f_i voltage to obtain 0dBm level at output. Increase f_i frequency until dB meter reads -3dB.

Figure 11. Test circuit for measuring the frequency response when switch is in ON-state



Adjust f_i voltage to obtain 0dBm level at input.

Figure 12. Test circuit for measuring isolation (OFF-state)

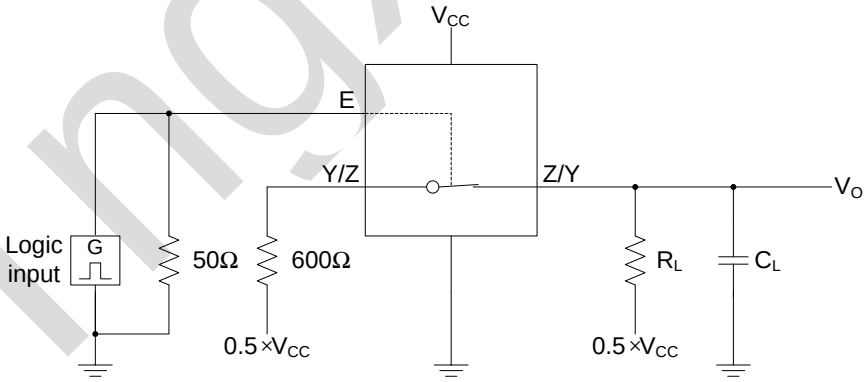
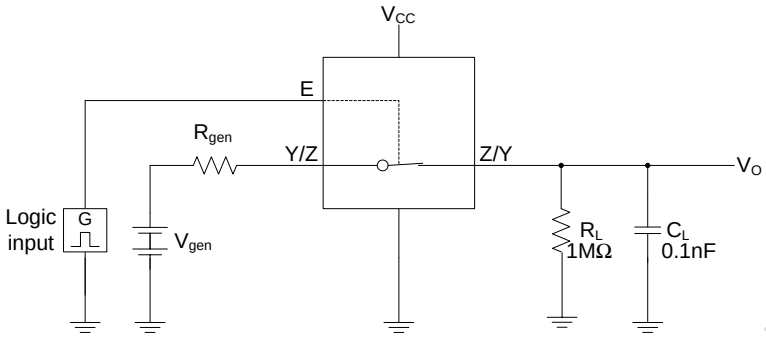
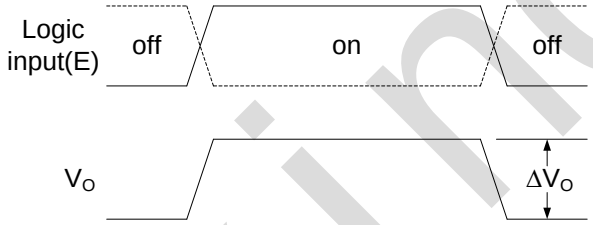


Figure 13. Test circuit for measuring crosstalk between digital input and switch





$Q_{inj}=\Delta V_O \times C_L$.

ΔV_O=output voltage variation.

R_{gen}=generator resistance.

V_{gen}=generator voltage.

Figure 14. Test circuit for measuring charge injection

4.6、Measurement Points

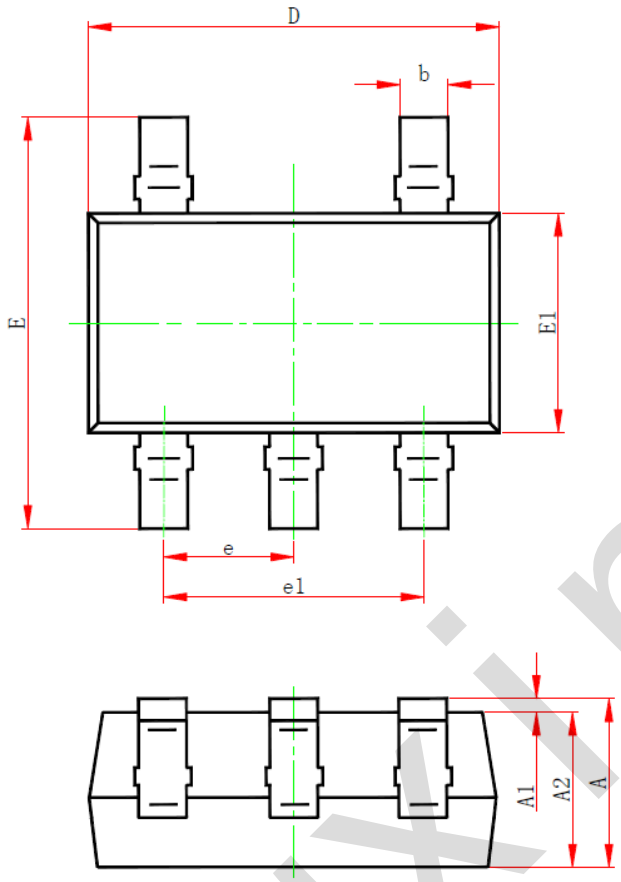
Supply voltage	Input	Output		
V_{CC}	V_M	V_M	V_X	V_Y
1.65V to 1.95V	$0.5\times V_{CC}$	$0.5\times V_{CC}$	V_{OL}+0.15V	V_{OH}-0.15V
2.3V to 2.7V	$0.5\times V_{CC}$	$0.5\times V_{CC}$	V_{OL}+0.15V	V_{OH}-0.15V
2.7V	1.5V	1.5V	V_{OL}+0.3V	V_{OH}-0.3V
3V to 3.6V	1.5V	1.5V	V_{OL}+0.3V	V_{OH}-0.3V
4.5V to 5.5V	$0.5\times V_{CC}$	$0.5\times V_{CC}$	V_{OL}+0.3V	V_{OH}-0.3V

4.7、Test Data

Supply voltage	Input		Load		V_{EXT}		
V_{CC}	V_I	t_r, t_f	C_L	R_L	t_{PLH}, t_{PHL}	t_{PZH}, t_{PHZ}	t_{PZL}, t_{PLZ}
1.65V to 1.95V	V_{CC}	≤2.0ns	30pF	1kΩ	open	GND	$2\times V_{CC}$
2.3V to 2.7V	V_{CC}	≤2.0ns	30pF	500Ω	open	GND	$2\times V_{CC}$
2.7V	2.7V	≤2.5ns	50pF	500Ω	open	GND	$2\times V_{CC}$
3V to 3.6V	2.7V	≤2.5ns	50pF	500Ω	open	GND	$2\times V_{CC}$
4.5V to 5.5V	V_{CC}	≤2.5ns	50pF	500Ω	open	GND	$2\times V_{CC}$

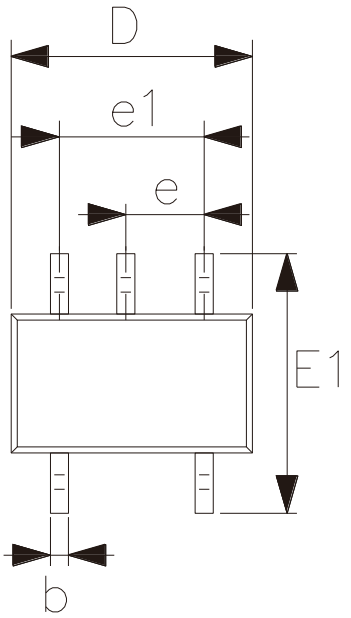
5、Package Information

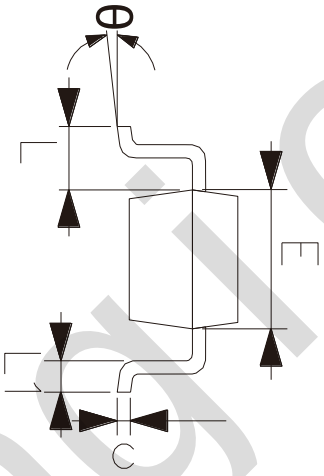
5.1、SOT23-5

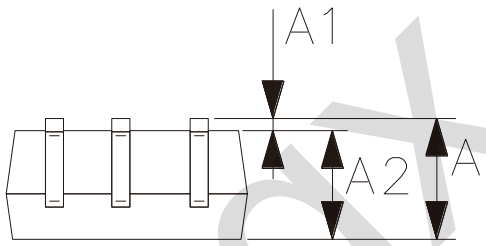


Symbol	Dimensions (mm)	
	Min.	Max.
A	-	1.26
A1	0.00	0.12
A2	1.00	1.20
b	0.30	0.50
c	0.10	0.20
D	2.82	3.02
E	2.60	3.00
E1	1.50	1.70
e	0.95	
e1	1.80	2.00
L	0.30	0.60
θ	0°	8°

5.2、SOT353







Symbol	Dimensions (mm)	
	Min.	Max.
A	0.90	1.10
A1	0.00	0.10
A2	0.90	1.00
b	0.15	0.35
c	0.11	0.175
D	2.00	2.20
E	1.15	1.35
E1	2.15	2.45
e	0.65	
e1	1.20	1.40
L	0.525	
L1	0.26	0.46
θ	0°	8°

6、Statements And Notes

6.1、The name and content of Hazardous substances or Elements in the product

Part name	Hazardous substances or Elements									
	Lead and lead compounds	Mercury and mercury compounds	Cadmium and cadmium compounds	Hexavalent chromium compounds	Polybrominated biphenyls	Polybrominated biphenyl ethers	Dibutyl phthalate	Butylbenzyl phthalate	Di-2-ethylhexyl phthalate	Diisobutyl phthalate
Lead frame	○	○	○	○	○	○	○	○	○	○
Plastic resin	○	○	○	○	○	○	○	○	○	○
Chip	○	○	○	○	○	○	○	○	○	○
The lead	○	○	○	○	○	○	○	○	○	○
Plastic sheet installed	○	○	○	○	○	○	○	○	○	○
explanation	○：Indicates that the content of hazardous substances or elements in the detection limit of the following the SJ/T11363-2006 standard. ×：Indicates that the content of hazardous substances or elements exceeding the SJ/T11363-2006 Standard limit requirements.									

6.2、Notes

Recommended carefully reading this information before the use of this product；

The information in this document are subject to change without notice；

This information is using to the reference only, the company is not responsible for any loss；

The company is not responsible for the any infringement of the third party patents or other rights of the responsibility.