

EVVOSEMI[®]

THINK CHANGE DO



ESD



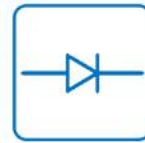
TVS



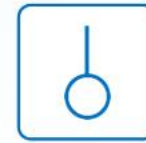
MOS



LDO



Diode



Sensor



DC-DC

Product Specification

▶ Domestic	Part Number	74HC32D
▶ Overseas	Part Number	74HC32D
▶ Equivalent	Part Number	74HC32D

EV is the abbreviation of name EVVO

产品简介

74HC32D是一款采用先进 CMOS 技术设计的低功耗 2 输入或门集成电路。它内部集成有四组 2 输入端或门电路，每组门电路均设计成具有缓冲级的推挽输出，具有较强的抗干扰和驱动能力。其逻辑功能和标准引脚定义与 54/74LS 系列逻辑门兼容。

产品特点

- 低输入电流： $\leq 1\mu\text{A}$

低静态功耗： $I_{CC}\leq 5.5\mu\text{A}$, @VCC=6V, Ta=25℃
- 宽工作电压范围：2.0V to 6.0V

封装形式：DIP14 、SOP14

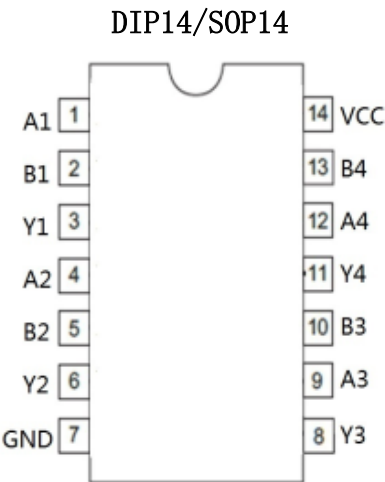
产品用途

- 数字逻辑驱动

其它应用领域
- 工控应用（如抢答器，程控设备）等

封装形式和管脚功能定义

管脚序号	管脚 定义	管脚序号	管脚 定义
DIP14/SOP14		DIP14/SOP14	
1	A1	14	VCC
2	B1	13	B4
3	Y1	12	A4
4	A2	11	Y4
5	B2	10	B3
6	Y2	9	A3
7	GND	8	Y3

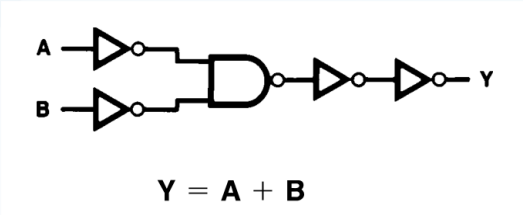


极限参数

参数	符号	极限值	单位
工作电压	V _{CC}	6.5	V
输入/输出电压	V _{IN} 、V _{OUT}	-0.3~V _{CC} +0.3V	V
单个管脚输出电流	I _{OUT}	±25	mA
VCC 或 GND 电流	I _{CC}	±50	mA
耗散功率	P _D	500	mW
工作温度	T _A	0~70	℃
存储温度	T _S	-65~150	℃
引脚焊接温度	T _W	260, 10s	℃

注：极限参数是指无论在任何条件下都不能超过的极限值。万一超过此极限值，将有可能造成产品劣化等物理性损伤；
同时在接近极限参数下，不能保证芯片可以正常工作。

原理逻辑图



真值表

Inputs		Output
A	B	Y
L	L	L
L	H	H
H	L	H
H	H	H

H=High logic level

L=low logic level

工作条件

项目	符号	最小值	典型值	最大值	单位
工作电压	V_{CC}	2	5	6	V
输入输出电压	V_{IN} 、 V_{out}	0		V_{CC}	V
输入上升/ 下降时间	t_{THL} t_{TLH}	$V_{CC}=2.0V$		1000	ns
		$V_{CC}=4.5V$		500	ns
		$V_{CC}=6.0V$		400	ns
工作温度	T_A	0		60	°C

电学特性

直流电学特性： $T_A=25^{\circ}C$

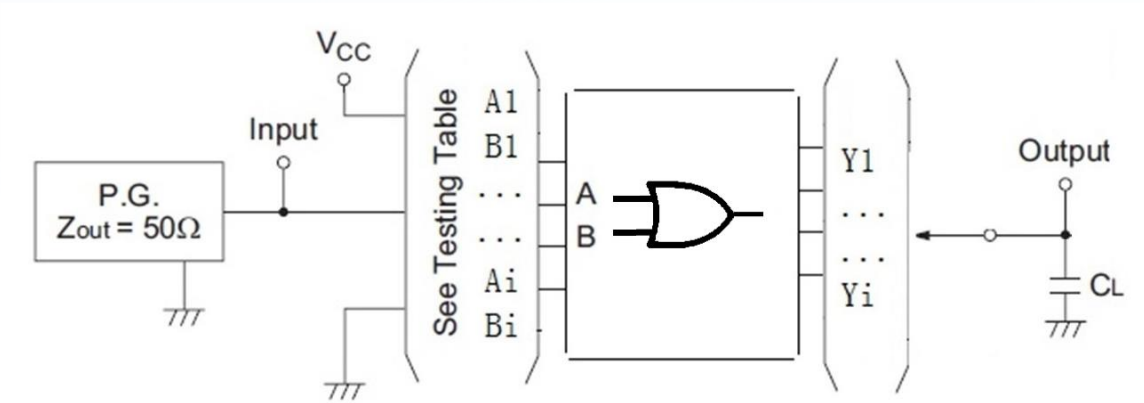
符号	项目	测试条件	$V_{CC}(V)$	最小值	典型值	最大值	单位
V_{IH}	高电平有效输入电压		2.0	1.5			V
			4.5	3.15			V
			6.0	4.2			V
V_{IL}	低电平有效输入电压		2.0			0.5	V
			4.5			1.35	V
			6.0			1.8	V
V_{OH}	高电平输出电压	$V_I = V_{IH} \text{ or } V_{IL}$ $ I_{OUT} \leq 20\mu A$	2.0	1.9			V
			4.5	4.4			V
			6.0	5.9			V
		$V_I = V_{IH} \text{ or } V_{IL}$ $ I_{OUT} \leq 4.0mA$ $ I_{OUT} \leq 5.2mA$	4.5	3.7	4.4		V
			6.0	5.2	5.8		V
V_{OL}	低电平输出电压	$V_I = V_{IH} \text{ or } V_{IL}$ $ I_{OUT} \leq 20\mu A$	2.0			0.1	V
			4.5			0.1	V
			6.0			0.1	V
		$V_I = V_{IH} \text{ or } V_{IL}$ $ I_{OUT} \leq 4.0mA$ $ I_{OUT} \leq 5.2mA$	4.5		0.06	0.4	V
			6.0		0.07	0.5	V
I_{IN}	输入电流	$V_I = V_{CC} \text{ or } GND$	6.0			1	μA
I_{CC}	工作电流	$V_I = V_{CC} \text{ or } GND, I_{OUT} = 0\mu A$	6.0			5.5	μA

交流电学特性： Ta=25℃ V_{CC}=5.0V， t_r=t_f≤20ns 见测试方法。

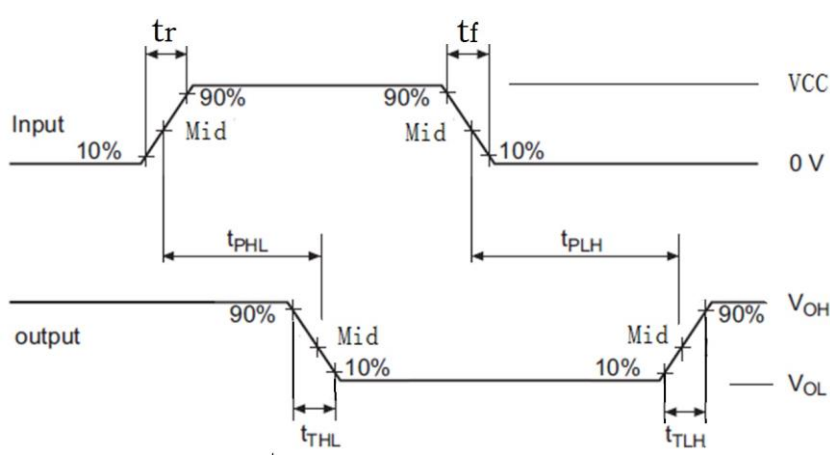
项目	符号	测试条件	最小值	典型值	最大值	单位
最大传输延迟时间 A、B to Y	t _{PHL}	C _L =15pF		18		ns
	t _{PLH}	C _L =15pF		15		ns

测试方法

1、测试接线图

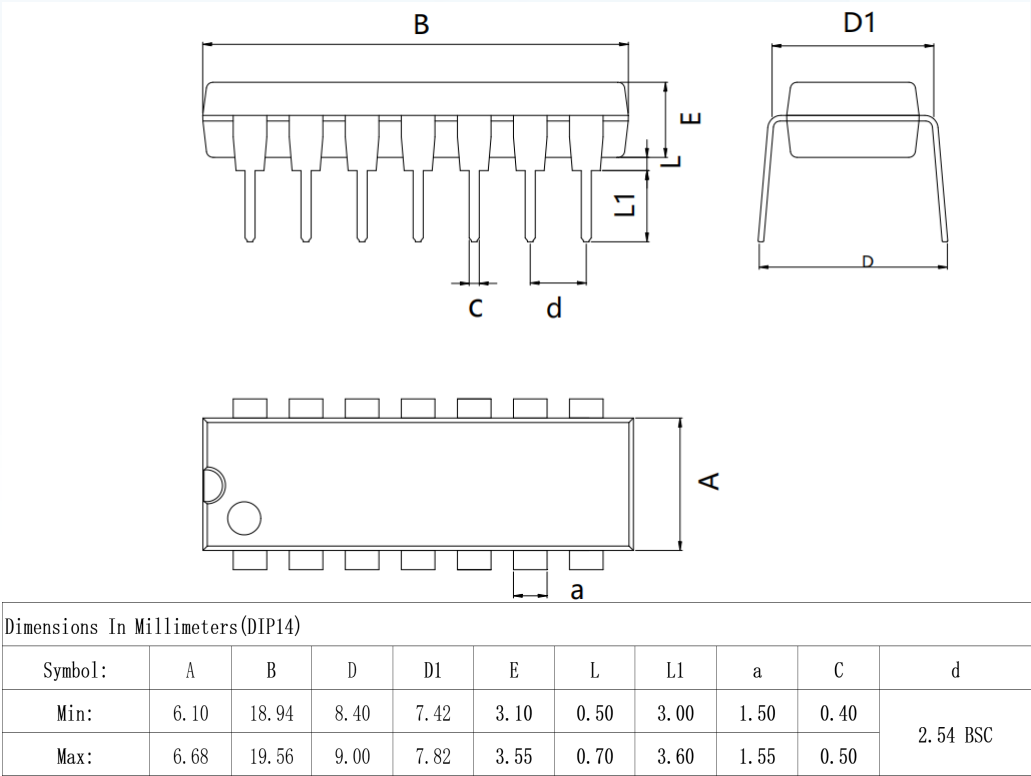


2、波形测量示意图

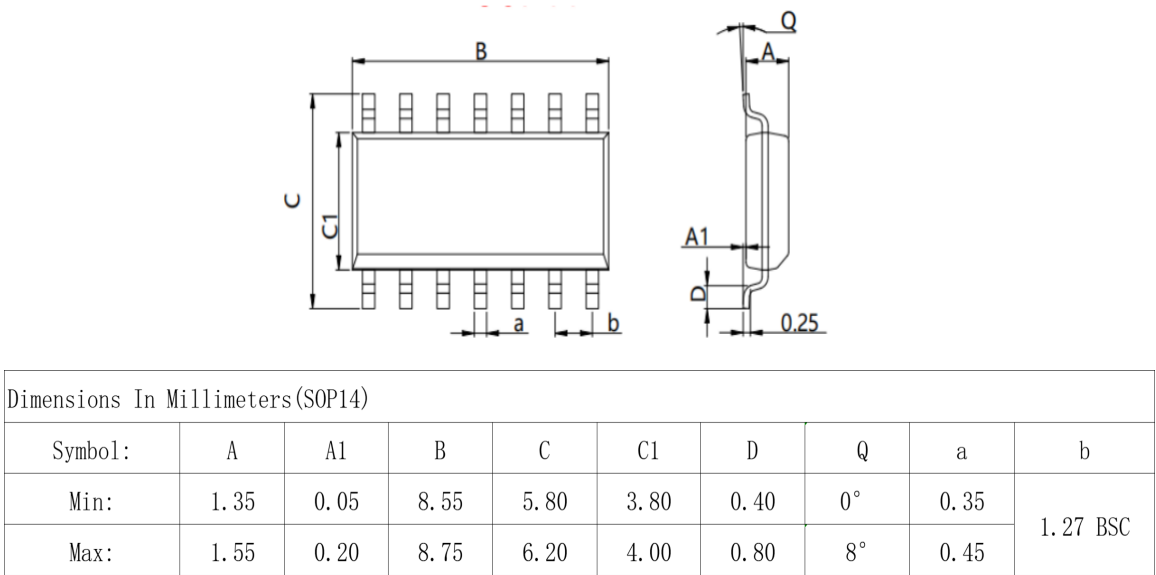


- 注： 1、 See Testing Table 指交流电学特性表中相应测试项目；
2、 CL 电容为外接贴片电容（0603），靠近输出管脚接入，电容地靠近芯片 GND；
3、 Input： 端口输入电平， f=500kHz， D=50%； tr=tf≤20ns；
4、 Output： Y 端输出测试。

DIP14



SOP14



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