Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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XC74WL32AASR

CMOS Logic

■GENERAL DESCRIPTION

XC74WL32AASR is dual 2-input OR gate manufactured using silicon gate CMOS processes. The small supply current, which is one of the features of the CMOS logic, gives way to high speed operations which enables LS-TTL.

With wave forming buffers connected internally, stabilized output can be achieved as the series offers high noise immunity.

As the series is integrated into a mini molded, MSOP-8B package, high density mounting is possible.

■APPLICATIONS

●Palmtops

●Digital equipment

■FEATURES

High Speed Operations   : tpd = 3.8ns(TYP.)(Vcc=5V)

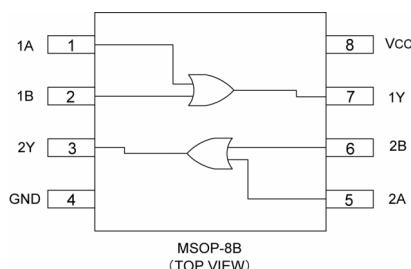**Operating Voltage Range** : 2V ~ 5.5V

Low Power Consumption : 1 μ A (MAX.)@Ta=25℃

CMOS Logic Dual 2- Input OR GATE

Small Package   : MSOP-8B

■PIN CONFIGURATION

MSOP-8B
（TOP VIEW）

■FUNCTIONS

INPUT		OUTPUT
A	B	Y
H	H	H
H	L	H
L	H	H
L	L	L

H=High level

L=Low level

■ABSOLUTE MAXIMUM RATINGS

Ta=-40℃~85℃

PARAMETER	SYMBOL	RATINGS	UNITS
Power Supply Voltage	Vcc	-0.5~+6.0	V
Input Voltage	VIN	-0.5~+6.0	V
Output Voltage	VOUT	-0.5~Vcc+0.5	V
Input Diode Current	IIK	-20	mA
Output Diode Current	IOK	±20	mA
Output Current	IOUT	±25	mA
Vcc,GND Current	ICC,IGND	±50	mA
Power Dissipation (Ta = 25℃)	Pd	300	mW
Storage Temperature Range	Tstg	-65~+150	℃

Note : Voltage is all ground standardized.

XC74WL32AASR

■RECOMMENDED OPERATING CONDITIONS

PARAMETER	SYMBOL	CONDITIONS	UNITS
Supply Voltage	Vcc	2~5.5	V
Input Voltage	Vin	0~5.5	V
Output Voltage	Vout	0~ Vcc	V
Operating Temperature Range	Topr	-40~+85	℃
Input Rise and Fall Time	tr,tf	0～200 （Vcc=3.3V）	ns
		0～100 （Vcc=5V）	

■DC ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	Vcc(V)	CONDITIONS		Ta=25℃			Ta=-40℃~85℃		UNITS
					MIN.	TYP.	MAX.	MIN.	MAX.	
Input Voltage	VIH	2.0			1.5	—	—	1.5	—	V
		3.0			2.1	—	—	2.1	—	
		5.5			3.85	—	—	3.85	—	
	VIL	2.0			—	—	0.5	—	0.5	V
		3.0			—	—	0.9	—	0.9	
		5.5			—	—	1.65	—	1.65	
Output Voltage	VOH	2.0	VIN=VIL or VIH	IOH=-50μA	1.9	2.0	—	1.9	—	V
		3.0			2.9	3.0	—	2.9	—	
		4.5			4.4	4.5	—	4.4	—	
		3.0		IOH=-4mA	2.58	—	—	2.48	—	
		4.5		IOH=-8mA	3.94	—	—	3.80	—	
	VOL	2.0	VIN=VIL	IOL=50μA	—	—	0.1	—	0.1	V
		3.0			—	—	0.1	—	0.1	
		4.5			—	—	0.1	—	0.1	
		3.0		IOL=4mA	—	—	0.36	—	0.44	
		4.5		IOL=8mA	—	—	0.36	—	0.44	
Input Current	IIN	0~5.5	VIN=Vcc or GND		-0.1	—	0.1	-1.0	1.0	μA
Static Supply Current	ICC	5.5	VIN=Vcc or GND,IOUT=0μA		—	—	1.0	—	10.0	μA

■SWITCHING ELECTRICAL CHARACTERISTICS

(tr=tf=3ns)

PARAMETER	SYMBOL	CL	Vcc(V)	CONDITIONS	Ta=25℃			Ta=-40℃~85℃		UNITS
					MIN.	TYP.	MAX.	MIN.	MAX.	
Delay Time	tPLH	15pF	3.3		—	5.5	7.9	1.0	9.5	ns
			5.0		—	3.8	5.5	1.0	6.5	
		50pF	3.3		—	8	11.4	1.0	13	ns
			5.0		—	5.3	7.5	1.0	8.5	
	tPHL	15pF	3.3		—	5.5	7.9	1.0	9.5	ns
			5.0		—	3.8	5.5	1.0	6.5	
		50pF	3.3		—	8	11.4	1.0	13	ns
			5.0		—	5.3	7.5	1.0	8.5	
Input Capacitance	CIN	—	5.0	VIN=Vcc or GND	—	2	10	—	10	pF
Power Dissipation Capacitance	Cpd		No Load, f=1MHz		—	8.9	—	—	—	pF

■NOISE CHARACTERISTICS

(tr=tf=3ns)

PARAMETER	SYMBOL	C_L	V_{CC}(V)	CONDITIONS	Ta=25℃			UNITS
					MIN.	TYP.	MAX.	
Non Functional Output Maximum Dynamic V_{OL}	V_{OLP}	50pF	5.0		—	0.3	0.8	V
Non Functional Output Minimum Dynamic V_{OL}	V_{OLV}	50pF	5.0		-0.8	-0.3	—	V
Minimum Dynamic V_{IH}	V_{IHD}	50pF	5.0		—	—	3.5	V
Maximum Dynamic V_{IL}	V_{ILD}	50pF	5.0		—	—	1.5	V

■TEST CIRCUIT

■WAVEFORM

PRR=1MHz
duty cycle 50%
tr=tf=3ns
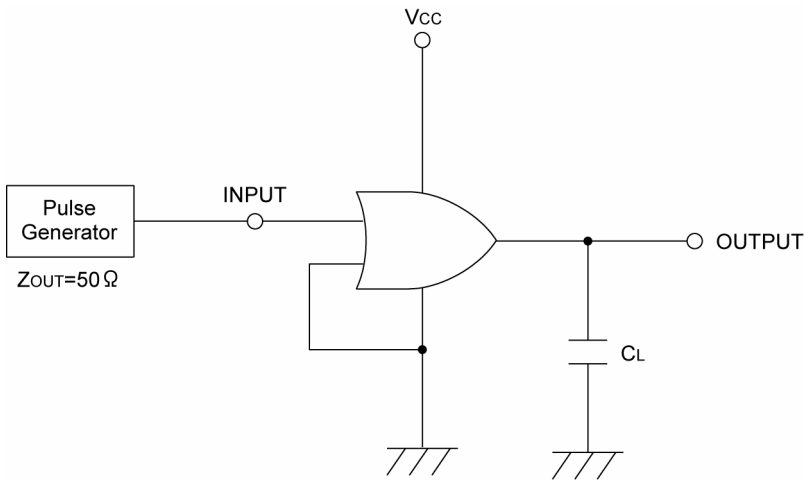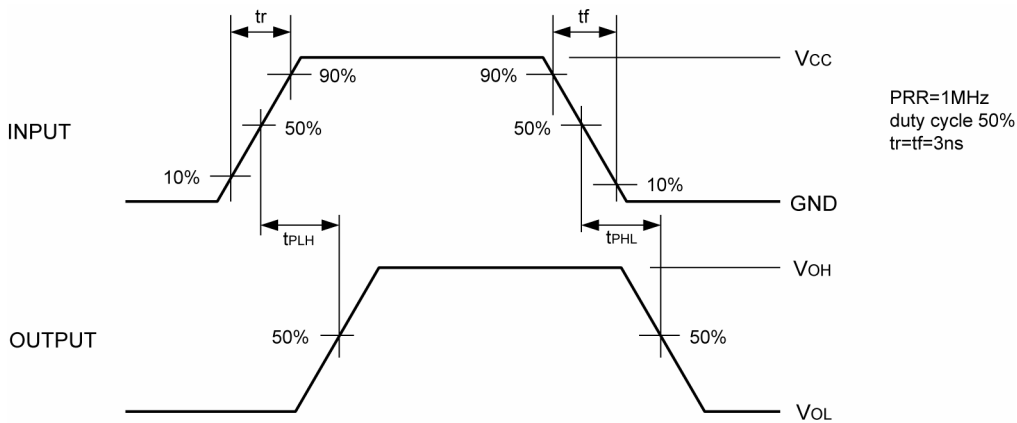
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