

TRI-STATE BUFFER

■ GENERAL DESCRIPTION

The NJU6342 Series is a tri-state buffer which is input the external ECL oscillation signal and output C-MOS level signal.

It consists of an amplifier and tri-state output buffer.

The input/output frequency is as wide as up to 120MHz and the symmetry of 45-55% is realized over full operating frequency range.

NJU6342H is TTL compatible and capable of 5 TTL driving.

NJU6342 is FACT equivalent.

PACKAGE OUTLINE





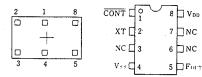
NJU6342XC

NJU6342XE

■ FEATURES

- Operating Voltage -- 4.0~6.0V
- Maximum Oscillation Frequency -- 120MHz
- Low Operating Current
- High Fan-out NJU6342 : FACT equivalent NJU6342H:5TTL
- 3-state Output Buffer
- Output Stand-by Function
- Package Outline CHIP/EMP 8
- C-MOS Technology

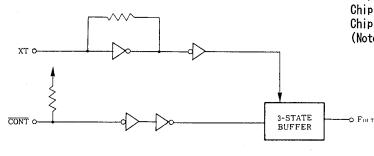
■ PIN CONFIGURATION/PAD LOCATION



■ LINE-UP TABLE

VERSION	Fan-out		
NJU6342	FACT equivalent(oL/ oH=24mA)		
NJU6342H	5TTL		

BLOCK DIAGRAM



■ COORDINATES

Unit: um

No.	PAD	Х	Y
1 2 3 4 5 8	CONT XT NC Vss Fout Vdd	- 29 - 462 - 463 - 44 564	181 181 - 181 - 229 - 229 229

Chip Size

: 1.49 X 0.8mm

Chip Center

: X=0µm,Y=0µm

Chip Thickness : 400 µm ± 30 µm

(Note) No. 6 and 7 terminals are only for package type information. There are no

PAD on the chip.



TERMIN	AL DESCRIP	TION			
NO.	SYMBOL	F U N C T I O N			
1	CONT	Tri-state output control terminal CONT FOUT H or OPEN Input ECL oscillation signal output L Output High Impedance			
2	XT	External ECL oscillation signal input terminal			
4	Vss	GND			
5	Four	Output amplified external ECL oscillation frequency			
<u>8</u>	Van	+ 5V			

ABSOLUTE MAXIMUM RATINGS			(Ta=25℃)
PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V _{DD}	- 0.3 ~ +7.0	٧
Input Voltage	VIN	V_{ss} -0.3 ~ V_{dd} +0.3	٧
Output Voltage	Vo	$-0.5 \sim V_{DD} + 0.5$	V
Input Current	IIN	±10	mA
Output Current	lo	±25	mA
Power Dissipation (EMP)	Pɒ	200	m₩
Operating Temperature Range	Topr	- 30 ~ + 75	℃
Storage Temperature Range	Tstg	- 40 ∼ +125	င

Note) Decoupling capacitor should be connected between V_{DD} and V_{SS} due to the stabilized operation for the circuit.

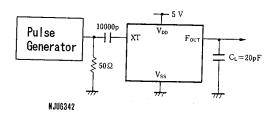
ELECTRICAL CHARACTERISTICS				(Ta=25°C, V _{DD} =5V)			
PARAMETER	SYMBOL	CONDITIO	NS	MIN	TYP	MAX	UNIT
Operating Voltage	V _{DD}			4		6	V
Operating Current	ldd	f _{IN} =120MHz, V _{IN} =0.5V _{P-P} Sine wave input, No load				65	mA
Stand-by Current	lst	CONT=XT=Vss, No load (Note)				1	μA
Input Voltage	V _{IH}	CONT Terminal		4.5 0		5.0 0.5	٧
	Іон	V _{он} =4.5V	NJU6342 NJU6342H	24			
Output Current	lor	V _{o.L} =0.5V	NJU6342 NJU6342H	24			· mA
Input Current	IIN	CONT Terminal, CONT=V	ss	125	250	500	μA
Tri-state Off-leakage Current	loz	CONT=Vss, Fout=Vdd or Vss				±1	μA
Max. Operating Frequency	fMAX			120			MHz
Input Oscillation Swing	VIN	C _{IN} =10000pF,f _{IN} =120MHz Sine wave input		0.5			V _{P-P}
Output Signal Symmetry	SYM	C _L =20pF @1/2V _{DD} f _{IN} =120MHz V _{IN} =0.5V _{P-P}	NJU6342	45	50	55	%
		C _L =15pF RL=780Ω @1.4V f _{IN} =120MHz V _{IN} =0.5V _{P-P}	NJU6342H	45	50	55	/0
Output Signal Rise Time	tr	C _L =20pF, R _L =450 Ω 20% \sim 80%	NJU6342		0.8		
		C _L =15pF, R _L =780Ω 0.4V~2.4V	NJU6342H		1.4		ns
Output Signal Fall Time	t _f	C _L =20pF, R _L =450Ω 80%~20%	NJU6342		0.8		115
		C _L =15pF, R _L =780 Ω 2.4V \sim 0.4V	NJU6342H		0.8		

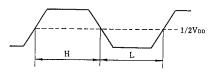
Note) Excluding input current on CONT terminal.

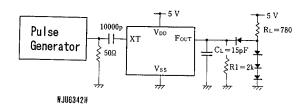


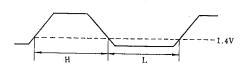
■ MEASUREMENT CIRCUITS

(1) Output Symmetry

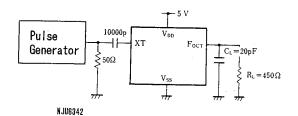


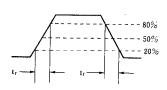


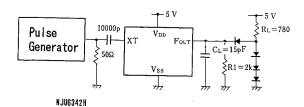


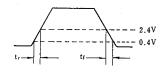


(2) Output Rise / Fall Time









NJU6342 Series

MEMO

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