

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

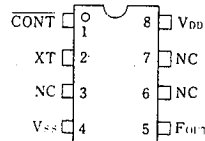
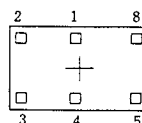


NJU6342XE

■ 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

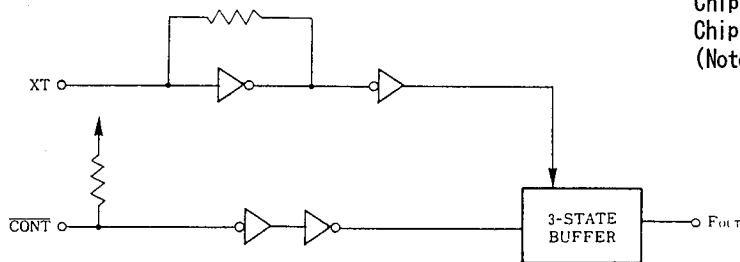
VERSION	Fan-out
NJU6342	FACT equivalent($I_{OL}/I_{OH}=24mA$)
NJU6342H	5TTL

■ COORDINATES

Unit: μm

No.	PAD	X	Y
1	CONT	- 29	181
2	XT	- 462	181
3	NC	- 463	- 181
4	VSS	- 44	- 229
5	FOUT	564	- 229
8	VDD	564	229

■ BLOCK DIAGRAM



Chip Size : 1.49 X 0.8mm
 Chip Center : $X=0\mu m, Y=0\mu m$
 Chip Thickness : $400\mu m \pm 30\mu m$
 (Note) No. 6 and 7 terminals are only for package type information. There are no PAD on the chip.

TERMINAL DESCRIPTION

NO.	SYMBOL	F U N C T I O N
1	CONT	Tri-state output control terminal
		CONT
		F _{OUT}
		H or OPEN Input ECL oscillation signal output L Output High Impedance
2	XT	External ECL oscillation signal input terminal
4	V _{SS}	GND
5	F _{OUT}	Output amplified external ECL oscillation frequency
8	V _{DD}	+ 5V

ABSOLUTE MAXIMUM RATINGS

(T_a=25°C)

P A R A M E T E R	SYMBOL	R A T I N G S	UNIT
Supply Voltage	V _{DD}	- 0.3 ~ +7.0	V
Input Voltage	V _{IN}	V _{SS} -0.3 ~ V _{DD} +0.3	V
Output Voltage	V _O	- 0.5 ~ V _{DD} +0.5	V
Input Current	I _{IN}	±10	mA
Output Current	I _O	±25	mA
Power Dissipation (EMP)	P _D	200	mW
Operating Temperature Range	T _{opr}	- 30 ~ + 75	°C
Storage Temperature Range	T _{stg}	- 40 ~ +125	°C

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

ELECTRICAL CHARACTERISTICS

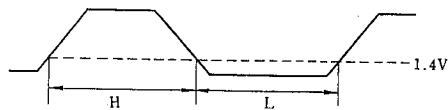
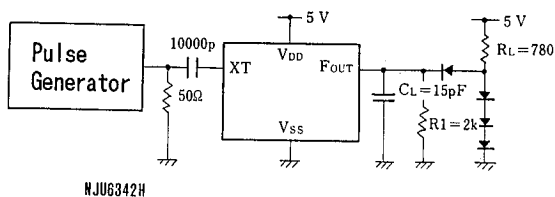
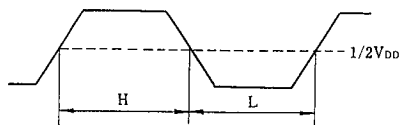
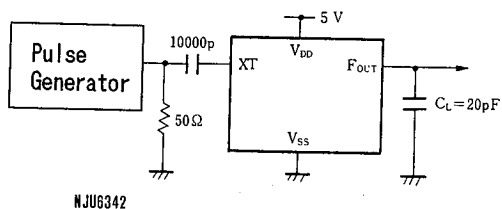
(T_a=25°C, V_{DD}=5V)

P A R A M E T E R		S Y M B O L		C O N D I T I O N S		MIN	TYP	MAX	UNIT	
Operating Voltage		V _{DD}				4		6	V	
Operating Current		I _{DD}		f _{IN} =120MHz, V _{IN} =0.5V _{P-P} Sine wave input, No load				65	mA	
Stand-by Current		I _{st}		CONT=XT=V _{SS} , No load (Note)				1	μA	
Input Voltage		V _{IH}		CONT Terminal		4.5		5.0	V	
		V _{IL}				0		0.5		
Output Current		I _{OH}		V _{OH} =4.5V		NJU6342	24		mA	
						NJU6342H	4			
		I _{OL}		V _{OL} =0.5V		NJU6342	24			
						NJU6342H	8			
Input Current		I _{IN}		CONT Terminal, CONT=V _{SS}		125	250	500	μA	
Tri-state Off-leakage Current		I _{oz}		CONT=V _{SS} , F _{OUT} =V _{DD} or V _{SS}				±1	μA	
Max. Operating Frequency		f _{MAX}				120			MHz	
Input Oscillation Swing		V _{IN}		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 R _L =780Ω @1.4V f _{IN} =120MHz V _{IN} =0.5V _{P-P}		NJU6342H	45	50	55	
Output Signal Rise Time		t _r		C _L =20pF, R _L =450Ω 20%~80%		NJU6342		0.8	ns	
				C _L =15pF, R _L =780Ω 0.4V~2.4V		NJU6342H		1.4		
Output Signal Fall Time		t _f		C _L =20pF, R _L =450Ω 80%~20%		NJU6342		0.8		
				C _L =15pF, R _L =780Ω 2.4V~0.4V		NJU6342H		0.8		

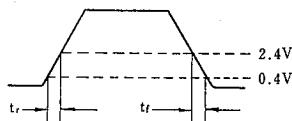
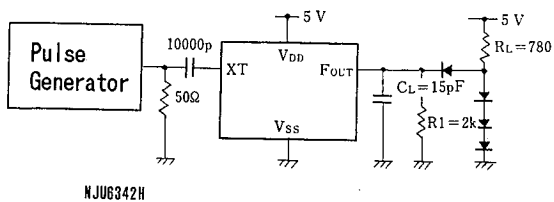
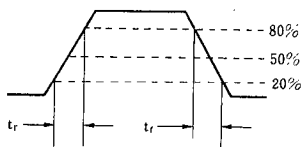
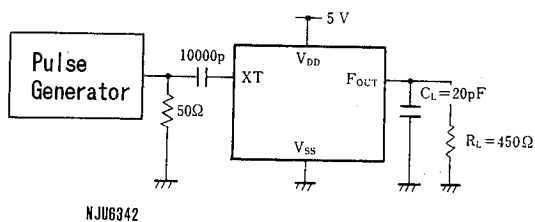
Note) Excluding input current on CONT terminal.

■ MEASUREMENT CIRCUITS

(1) Output Symmetry



(2) Output Rise / Fall Time



NJU6342 Series

MEMO

[CAUTION]

The specifications on this databook are only given for information , without any guarantee as regards either mistakes or omissions. The application circuits in this databook are described only to show representative usages of the product and not intended for the guarantee or permission of any right including the industrial rights.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[NJR:](#)

[NJU6342C](#) [NJU6342E](#) [NJU6342E-TE2](#) [NJU6342HE](#) [NJU6342HC](#)