

QUARTZ CRYSTAL OSCILLATOR

■ GENERAL DESCRIPTION

The NJU6341 series is a C-MOS quartz crystal oscillator which consists of oscillation amplifier, 3-stage divider and output buffer.

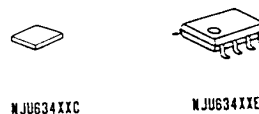
The oscillation frequency is as wide as up to 120MHz and the symmetry of 45-55% is realized over full oscillation frequency range.

The feed-back resistor incorporated on oscillation amplifier enables oscillation by connecting quartz crystal and oscillation capacitors.

Only one output frequency is selected from f_0 , $f_0/2$, $f_0/4$ and $f_0/8$ by internal connection.

The output buffer is TTL compatible and capable of 5 TTL driving.

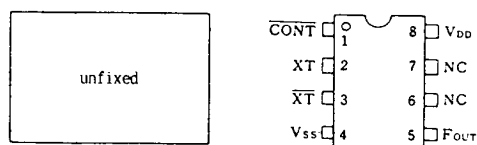
■ PACKAGE OUTLINE



■ FEATURES

- Operating Voltage -- 4.0~6.0V
- Maximum Oscillation Frequency -- 120MHz
- Low Operating Current
- High Fanout -- TTL 5
- Output Frequency Selectable by mask option
 - One frequency out of f_0 , $f_0/2$, $f_0/4$ and $f_0/8$ outputs.
- Oscillation Stop Function
- Package Outline -- CHIP/EMP 8
- C-MOS Technology

■ PIN CONFIGURATION/PAD LOCATION



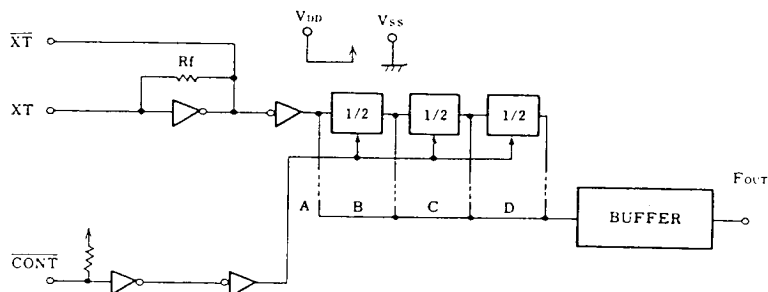
■ COORDINATES

Unit : μm

No	PAD	X	Y
1	CONT		
2	XT		
3	XT		
4	Vss		
5	Fout		
6	NC		
7	NC		
8	VDD		

CHIP SIZE : 1.70 × 0.8mm
CHIP THICKNESS : 400 μm ± 30 μm

■ BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

P A R A M E T E R	S Y M B O L	R A T I N G S	U N I T
Supply Voltage	V _{DD}	- 0.3 ~ 7.0	V
Input Voltage	V _{IN}	- 0.3 ~ V _{DD} +0.3	V
Output Voltage	V _O	- 0.5 ~ V _{DD} +0.5	V
Input Current	I _{IN}	- 10 ~ + 10	mA
Output Current	I _O	- 25 ~ + 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

ELECTRICAL CHARACTERISTICS

(Ta=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	M I N	T Y P	M A X	U N I T
Operating Voltage	V _{DD}		4	5	6	V
Operating Current	I _{DD}	fosc=50MHz, No load		25	35	mA
Stand-by Current	I _{st}	CONT=V _{ss} , No load (Note)		100		uA
Input Volatge	V _{IH}		4.5		5.0	V
	V _{IL}		0		0.5	
Output Current	I _{OH}	V _{OH} =4.5V	1			mA
	I _{OL}	V _{OL} =0.5V	8			
Input Current	I _{IN}	CONT=V _{ss}	125	250	500	uA
Max. Oscillation Freq.	F _{MAX}		72		120	MHz
Output Signal Symmetry	SYM	C _L =15pF, at 1.4V	45	50	55	%
Output Signal Rise Time	T _{R1}	C _L =15pF, R _L =820Ω, 20% - 80%		1		ns
	T _{R2}	C _L =15pF, R _L =820Ω, 0.4V-2.4V		0.6		
Output Signal Fall Time	T _{F1}	C _L =15pF, R _L =820Ω, 80% - 20%		0.8		ns
	T _{F2}	C _L =15pF, R _L =820Ω, 2.4V-0.4V		0.4		

Note) Excluding input current on CONT terminal.