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## NTE1402 Integrated Circuit Electronic Channel Selector

### Description

The NTE1402 is an integrated circuit in a 24-Lead DIP type package designed for electronic tuner by the preset volume method.

### Features

- Simplifies Selection Circuit up to 16 Channels
- Incorporating Clock Oscillator, Input Control, UP-DOWN Counter and Decoder Circuit
- Remote Control Electronic Channel Selection Available (UP-DOWN Bidirectional)
- Clock Oscillation Frequency Variable by External Components : 0.7 to 2.5KHz
- AFC Defeat Pulse Output Terminal
- Initial Channel at the Time of Power ON can be Set at Any Channel by the Adjustment of External Components
- Jump Over Channel Selection Available
- Selection Output Terminal Voltage: 40V

### Absolute Maximum Ratings: ( $T_A = +25^\circ\text{C}$ unless otherwise specified)

Supply Voltage, $V_{CC}$ .....	7.2V
Circuit Voltage	
$V_{K-12}$ .....	-0.5 to 50V
$V_{13-12}$ .....	-0.5 to 14.4V
$V_{14-12}, V_{17-12}$ .....	-0.5 to 8V
Circuit Current	
$I_K$ .....	-5 to 30mA
$I_{13}$ .....	-5 to 25mA
$I_{14}$ .....	-5 to 100mA
$I_{15}, I_{16}, I_{17}, I_{18}, I_{19}$ .....	-5 to 10mA
Power Dissipation ( $T_A = +75^\circ\text{C}$ ), $P_D$ .....	600mW
Operating Ambient Temperature Range, $T_{opr}$ .....	$-20^\circ$ to $+75^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	$-40^\circ$ to $+150^\circ\text{C}$

**Electrical Characteristics:** ( $T_A = +25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Output Saturation Voltage (Tuning)	$V_{OL(K)}$	$V_{CC} = 4.8\text{V}, I_{OL} = 5\text{mA}$	–	–	0.15	V
Output Leak Current (Tuning)	$I_{OH(K)}$	$V_{CC} = 7.2\text{V}, V_{OH} = 35\text{V}$	–	–	5	$\mu\text{A}$
Output On Voltage (DEF)	$V_{OL(D)}$	$V_{CC} = 4.8\text{V}, I_{OL} = 12\text{mA}$	–	–	6	V
Output Leak Current (DEF)	$I_{OH(D)}$	$V_{CC} = 7.2\text{V}, V_{OH} = 14.4\text{V}$	–	–	5	$\mu\text{A}$
Input Current Low Level (CHD, CHU)	$I_{IL(CH)}$	$V_{CC} = 7.2\text{V}, V_{IL} = 0\text{V}$	–5	–	–	$\mu\text{A}$
Input Current High Level (CHD, CHU)	$I_{IH(CH)}$	$V_{CC} = 4.8\text{V}, \text{Note 2}$	50	–	–	$\mu\text{A}$
Input Current Low Level (KIN)	$I_{IL(KI)}$	$V_{CC} = 7.2\text{V}, V_{IL} = 0\text{V}$	–10	–	–	$\mu\text{A}$
Input Current High Level (KIN)	$I_{IH(KI)}$	$V_{CC} = 4.8\text{V}, \text{Note 3}$	200	–	–	$\mu\text{A}$
Input Current Low Level (SKP)	$I_{IL(SK)}$	$V_{CC} = 7.2\text{V}, V_{IL} = 0\text{V}$	–5	–	–	$\mu\text{A}$
Input Current High Level (SKP)	$I_{IH(SK)}$	$V_{CC} = 4.8\text{V}, \text{Note 4}$	50	–	–	$\mu\text{A}$
Input Current Low Level (OSC)	$I_{IL(OS)}$	$V_{CC} = 7.2\text{V}, V_{IL} = 1.0\text{V}$	–	–	5	$\mu\text{A}$
Input Current High Level (OSC)	$I_{IH(OS)}$	$V_{CC} = 4.8\text{V}, V_{IH} = 4\text{V}$	1.5	–	3.0	mA
Oscillation Frequency (Clock)	$f_{OSC}$	$V_{CC} = 6\text{V}$	1.5	2.0	2.5	kHz
Total Circuit Current	$I_{tot}$	$V_{CC} = 6\text{V}$	52	66	80	mA

Note 1. Operating supply voltage range is  $V_{CC} (\text{opr}) = 4.8\text{V}$  to  $7.2\text{V}$ .

Note 2. DEF Pin13 shall be “L” level (3.0V or more)

Note 3. DEF Pin13 shall be “L” level (1.0V or less)

Note 4. DEF Pin13 shall be “H” level (3.0V or more)

**Pin Connection Diagram**



