NTE1402
Integtrated 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 2.5KH$_Z$
- 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°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°C), P_D 600mW

Operating Ambient Temperature Range, T_{opr} . . . . –20° to +75°C

Storage Temperature Range, T_{stg} . . . . –40° to +150°C

Electrical Characteristics: (T_A = +25°C unless otherwise specified)

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

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

Left	Pin		Pin	Right
Channel Selection Output (11)	1		24	Channel Selection Output (12)
Channel Selection Output (10)	2		23	Channel Selection Output (13)
Channel Selection Output (9)	3		22	Channel Selection Output (14)
Channel Selection Output (8)	4		21	Channel Selection Output (15)
Channel Selection Output (7)	5		20	Channel Selection Output (16)
Channel Selection Output (6)	6		19	Skip Input
Channel Selection Output (5)	7		18	Key Input
Channel Selection Output (4)	8		17	OSC Filter
Channel Selection Output (3)	9		16	Channel Up Input
Channel Selection Output (2)	10		15	Channel Down Input
Channel Selection Output (1)	11		14	V_{CC}
GND	12		13	AFT Defeat Input

24   13

1   12

1.300 (33.02)
Max

.225
(5.73)
Max

.100 (2.54)

.126
(3.22)
Min

1.100 (27.94)

.520
(13.2)

.600
(15.24)