



ELECTRONICS, INC.
 44 FARRAND STREET
 BLOOMFIELD, NJ 07003
 (973) 748-5089

NTE1688 Integrated Circuit TV Tuner Bandswitch

Description:

The NTE1688 is an integrated circuit in a 9-Lead SIP type package incorporating TV tuner band-switch circuits and a 31V power supply circuit.

Features:

- Tuner Bandswitch Circuit with 31V Voltage Regulator

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

Supply Voltage, V_{CC}	18V
Supply Current, I_6	14mA
Power Dissipation, P_D	620mW
Operating Ambient Temperature Range, T_{opr}	-20° to $+70^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+150^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Threshold Voltage	V_t	$V_{CC} = 12V$	1.5	–	2.5	V
Input Threshold Current	I_t	$V_{CC} = 12V$	100	–	500	μA
Output Saturation Voltage	$V_{CE(sat)}$	$V_{CC} = 12V, I_0 = -60\text{mA}$	–	0.3	0.8	V
Pin8 Output Saturation Voltage	$V_{CE(sat)}$	$V_{CC} = 12V, I_8 = 20\text{mA}$	–	0.2	0.5	V
Voltage Regulator	V_{6-5}	$V_{CC} = 12V, I_6 = 10\text{mA}$	29.5	31.7	33.5	V
Voltage Regulator with Ambient Temperature	V_{6-5}/T_A	$T_A = -20^\circ$ to $+60^\circ\text{C}$	-1.0	0	+1.0	$\text{mV}/^\circ\text{C}$
Voltage Regulator Voltage for Drift	ΔV_{6-5}	As Per Condition After 5sec Elapsed with SW ON	–	–	± 50	mV

Input/Output Related (Logic Table)

Input		Output				Remarks (Tuning Status)
Pin3	Pin4	Pin1	Pin2	Pin7	Pin8	
L	L	V_{CC}	Open	Open	L	UHF
H	L	Open	V_{CC}	Open	Open	VHF-L
L	H	Open	Open	V_{CC}	L	VHF-H
H	H	Open	Open	V_{CC}	Open	–

Pin Connection Diagram
(Front View)

