



ELECTRONICS, INC.
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NTE1677 Integrated Circuit Frequency Synthesizer for TV/CATV

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

Supply Voltage, V_{CC}	6.5V
Logic Input Voltage, V_{IN1}	-0.3V to V_{CC}
ELC Input Voltage, V_{IN2}	$2.0V_{P-P}$
Power Dissipation, P_D	1.4W
Derate Above 25°C	$11.2\text{mW}/^\circ\text{C}$
Operating Temperature Range, T_{opr}	-20° to $+75^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+150^\circ\text{C}$

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $V_{CC} = 5\text{V}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Voltage	V_{CC}		4.5	5.0	5.5	V
Supply Current	I_{CC}		-	9.0	-	mA
DC Voltage Pin12	V_{12}		-	3.0	-	V
Pin13	V_{13}		-	3.0	-	V
Input Current, High Level	I_{IH}	$V_{IN} = 5\text{V}$	-	180	300	μA
Output Voltage High Level	V_{OH}		3.8	-	-	V
Low Level	V_{OL}		-	-	0.5	V
Input Voltage High Level	V_{IH}		3.0	-	-	V
Low level	V_{IL}		-	-	0.8	V
P/D Leak Current High Level	I_L	$V_{OUT} = 4.0\text{V}$	-200	0	+200	μA
Low Level		$V_{OUT} = 0.8\text{V}$	-200	0	+200	μA
P/D Output Current High Level	I_{OH}	$V_{OUT} = 2.0\text{V}$	-0.6	-10	-	mA
Low level	I_{OL}		0.6	6.0	-	mA
RF Input Sensitivity	V_{IN}	$f_{IN} = 0.1$ to 1GHz	-27	-	+3	dBm
		$f_{IN} = 80$ to 100MHz	-24	-	+3	dBm

Electrical Characteristics (Cont'd): ($T_A = +25^\circ\text{C}$, $V_{CC} = 5\text{V}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Setup Time	T_S		2	–	0	μs
Clock Width	T_C		2	–	–	μs
Data Hold Time	T_H		2	–	–	μs
Enable Hold Time	T_{SL}		2	–	–	μs
Enable Setup Time	T_L		2	–	–	μs

Pin Connection Diagram

