

NTE1192 Integrated Circuit VCO for Phase Lock Loop (PLL)

Description:

The NTE1192 is a Phase-Locked Loop Frequency Synthesizer packaged in a 9-lead SIP type package.

Features:

- Double Balanced Mixer
- Emitter Follower Circuit
- Differential Amplifier
- Wide Operating Supply Voltage Range

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

Supply Voltage, V_{CC}	10V
Pin6 Supply Voltage, V_6	14V
Pin1 Supply Voltage, V_9	201
Power Dissipation, P_D	600mW
Derated Above 25°C	4.8mW/ $^\circ\text{C}$
Operating Temperature Range, T_{opr}	-30° to $+75^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+150^\circ\text{C}$

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $V_{CC} = 7\text{V}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Current	I_{CC}		21.5	—	38.0	mA
Pin6 Supply Current	I_6		3.0	—	5.5	mA
Pin9 Maximum Supply Current	$I_{9(MAX)}$	Pin7 GND	6	—	12	mA
Output Power	P_O	$V_9 = 12\text{V}$	6	10	—	mW
Differential Amplifier Input Impedance Pin7 Parallel Input Resistance	R_{ip7}	$f = 27\text{MHz}$	—	1.0	—	k Ω
Pin7 Parallel Input Capacitance	C_{ip7}		—	6.5	—	pF
Differential Amplifier Output Impedance Pin9 Parallel Output Resistance	R_{op9}	$V_9 = 12\text{V}$, $f = 27\text{MHz}$	—	4.0	—	k Ω
Pin9 Parallel Output Capacitance	C_{op9}		—	4.0	—	pF

Electrical Characteristics (Cont'd): ($T_A = +25^{\circ}\text{C}$, $V_{CC} = 7\text{V}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Doubly Balanced Mixer Input Impedance	R_{ip4}	$f = 10\text{MHz}$	–	1.5	–	$k\Omega$
Pin4 Parallel Input Resistance			–	4.3	–	pF
Pin4 Parallel Input Capacitance	C_{ip4}					
Doubly Balanced Mixer Output Impedance	R_{op6}	$f = 27\text{MHz}$	–	3.5	–	$k\Omega$
Pin6 Parallel Output Resistance			–	6.0	–	pF
Pin6 Parallel Output Capacitance	C_{op6}					

Pin Connection Diagram
(Front View)

