

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	—	$k\Omega$
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	—	$k\Omega$
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 Pin4 Parallel Input Resistance	R _{ip4}	f = 10MHz	–	1.5	–	kΩ
Pin4 Parallel Input Capacitance	C _{ip4}		–	4.3	–	pF
Doubly Balanced Mixer Output Impedance Pin6 Parallel Output Resistance	R _{op6}	f = 27MHz	–	3.5	–	kΩ
Pin6 Parallel Output Capacitance	C _{op6}		–	6.0	–	pF

Pin Connection Diagram (Front View)

