

**LA8500,
8501**

3001A

Monolithic Linear IC

Tone Ringer

©2629

Applications

- Telephones and other various types of consumer equipment

Features and Functions

- Adjustable OSC frequency
- On-chip power supply control circuit with hysteresis prevents false triggering and rotary dial "chirps".
- Minimum number of external parts required
- Adjustable operation start voltage (LA8500)
- Adjustable operation start current (LA8501)

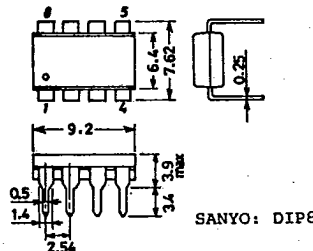
Maximum Ratings at Ta=25°C

			unit
Maximum Supply Voltage	V _{CC} max	30	V
Allowable Power Dissipation	P _d max	500	mW
Operating Temperature	T _{opg}	-20 to +75	°C
Storage Temperature	T _{stg}	-55 to +150	°C

Operating Conditions at Ta=25°C

			min	typ	max	unit
Operating Voltage	V _{opr}				29	V
Operation Start	V _{si}	(Note 1)	17	19	21	V
Supply Voltage						
Operation Sustain	V _{sus}	(Note 2)	10.5	12		V
Supply Voltage						
Operation Start	I _{si}	No load	1.4	3.3	4.2	mA
Current Dissipation						
Operation Sustain	I _{sus}	No load		1.0		mA
Current Dissipation						
OSC Frequency (Note 3)	f _L	C1=0.47uF, R1=165kohms	9	10	11	Hz
	f _{H1}	C2=6800pF, R2=191kohms	461	512	563	Hz
	f _{H2}	C2=6800pF, R2=191kohms	576	640	703	Hz
Output Voltage	H Level	V _{OH} V _{CC} =24V, I _{OH} =-10mA, PIN 7=GND	20.0	21.5	22.5	V
	L Level	V _{OL} V _{CC} =24V, I _{OL} =10mA, PIN 7=7V	0.7	1.0	2.0	V
Trigger Pin Operating	V _{trig}	V _{CC} =15V, I _{trig} =100uA	7.8	10	11.5	V
Voltage (LA8500)						

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Case Outline 3001A-D8IC
(unit:mm)

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LA8500,8501

T-75-07-11

Continued from preceding page.

Note 1: Operation start supply voltage (V_{s1}) is the value of supply voltage required for the tone ringer to start oscillating.

Note 2: Operation sustain supply voltage (V_{sus}) is the value of supply voltage required for the tone ringer to maintain oscillation.

Note 3: OSC frequencies are: (1) $f_L = 1/1.234 \cdot R_1 \cdot C_1$
 (2) $f_{H1} = 1/1.515 \cdot R_2 \cdot C_2$
 (3) $f_{H2} = 1.24 \cdot f_{H1}$

Sample Application Circuit

