

MAXIMUM RATINGS* ($T_A = 25^{\circ}\text{C}$)

Symbol	Parameter	Value	Unit
V_{TP}	Calling Voltage (f = 50 Hz) Continuous	120	V _{rms}
V_{TP}	Calling Voltage (f = 50 Hz) 5 Sec ON/10 Sec OFF	200	V _{rms}
I_{CC}	Supply Current	22	mA
Tstg	Storage and Junction Temperature	-65 to +150	$^{\circ}\text{C}$

* Maximum Ratings are those values beyond which damage to the device may occur. Functional operation should be restricted to the Recommended Operating Conditions.

RECOMMENDED OPERATING CONDITIONS

Symbol	Parameter	Min	Max	Unit
V_{CC}	Supply Voltage		26	V
T_A	Operating Temperature	-20	+70	$^{\circ}\text{C}$

This device contains protection circuitry to guard against damage due to high static voltages or electric fields. However, precautions must be taken to avoid applications of any voltage higher than maximum rated voltages to this high-impedance circuit. For proper operation, V_{IN} and V_{OUT} should be constrained to the range $GND \leq (V_{IN} \text{ or } V_{OUT}) \leq V_{CC}$.

Unused inputs must always be tied to an appropriate logic voltage level (e.g., either GND or V_{CC}). Unused outputs must be left open.

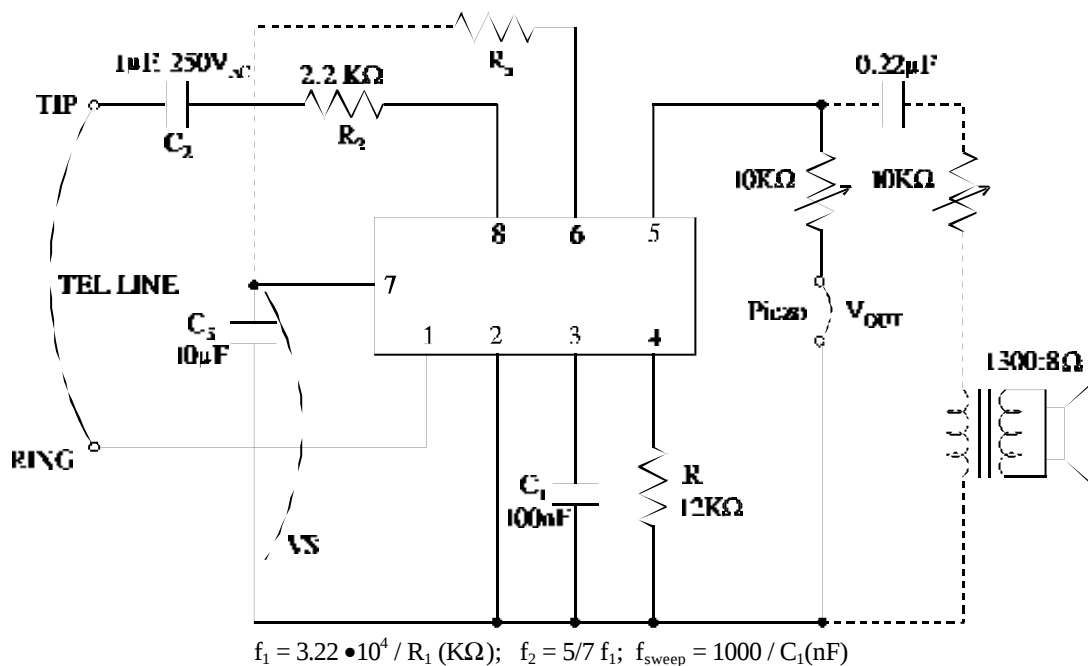
ELECTRICAL CHARACTERISTICS ($T_A = 25^{\circ}\text{C}$)

Symbol	Parameter	Test Conditions	Guaranteed Limits			Unit
			Min	Typ	Max	
I_{CC}	Current Consumption without Load	$V_S = 8.8$ to 26 V			1.8	mA
V_{ON}	Activation Voltage		12.2		13	V
V_{ONR}	Activation Voltage Range	$R_A = 1\text{ K}\Omega$	8		10	V
V_{SUS}	Sustaining Voltage		8		8.8	V
R_D	Differential Resistance in Off Condition		6.4			$\text{K}\Omega$
V_{OUT}	Output Voltage Swing			$V_{CC}-3$		V
I_{OUT}	Short Circuit Current	$V_S = 26\text{ V}$		35		mA

AC CHARACTERISTICS

Symbol	Parameter	Test Conditions	Guaranteed Limits			Unit
			Min	Typ	Max	
f_{H1} f_{H2}	Output Frequencies f_{H1} f_{H2}	$V_{CC} = 26\text{ V}$, $R_1 = 14\text{ K}\Omega$ $V_{CC} = 0\text{ V}$ $V_{CC} = 6\text{ V}$		2300 1700		Hz Hz
	f_{H1} Range	$R_1 = 27\text{ K}\Omega$ to $1.7\text{ K}\Omega$	0.1		15	KHz
f_L	Sweep Frequency	$R_1 = 14\text{ K}\Omega$, $C_1 = 100\text{ nF}$		10		Hz

TEST AND APPLICATION CIRCUIT



DESCRIPTION

The SL2418 tone ringer derives its power supply by rectifying the AC ringing signal. It uses this power to activate two tone generators. The two tone frequencies generated are switched by internal oscillator in a fast sequence and made audible across an output amplifier in the loudspeaker; both tone frequencies and the switching frequency can be externally adjusted.

The device can drive either directly a piezo ceramic converter (buzzer) or small loudspeaker. In case of using a loud-speaker, a transformer is needed.

An internal shunt voltage regulator provides DC voltage to the output stage, low frequency oscillator, and high frequency oscillator. To protect the IC from telephone line transients, a zener Diode is included.