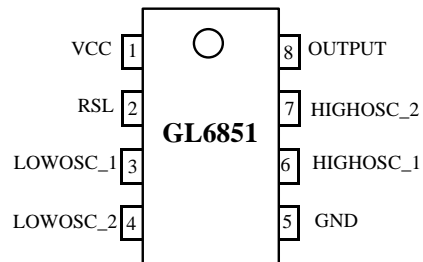
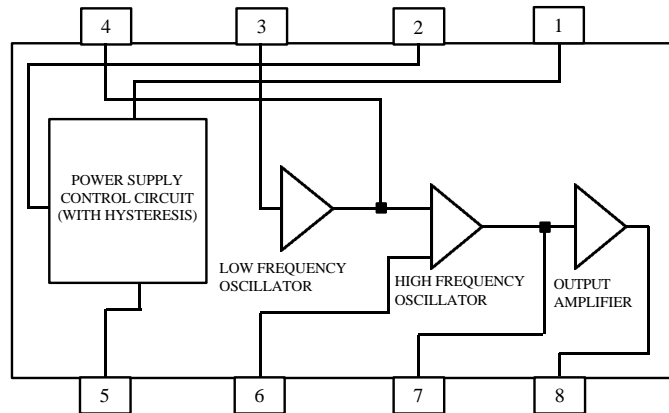


GL6851**TWO TONE RINGER****Description**

The GL6851 tone ringer is a monolithic device, which incorporates two oscillators, an output amplifier and a power supply control circuit. The oscillator frequencies can be adjusted over a wide range by selection of external components. One oscillator, normally operated at a low frequency, causes the second oscillator to alternate between its nominal frequency, and a related higher frequency. The resulting output is a distinct warbling tone. The output amplifier will drive either a transformer coupled loudspeaker or a piezo-ceramic transducer. The device can be powered from a telephone line or a fixed d.c. supply. The GL6851 has provision for adjustment of the supply initiation current.

Pin Configuration**Features**

- Low current consumption.
- Designed for telephone bell replacement.
- Small size MINIDIP package.
- Adjustable 2- frequency tone.
- Built-in hysteresis prevents false triggering and rotary dial CHIRPS.
- Alarms or other alerting devices.
- Adjustable for reduced supply initiation current
- Include ESD protection.

Block Diagram

Absolute Maximum Ratings (Ta = 25; É

CHARACTERISTICS	SYMBOL	VALUE	UNIT
Supply Voltage	V _{CC}	30	V
Power Dissipation	P _o	400	mW
Operating Temperature	T _{opr}	-25 to 65	; É
Storage Temperature	T _{stg}	-65 to 150	; É

Electrical Characteristics (Ta = 25; É

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Operating Supply Voltage	V _{CC}		-	-	29.0	V
Initiation Supply Voltage ¹	V _{SI}		17	19	21	V
Initiation Supply Current ¹	I _{SI}		0.9	2.0	3.7	mA
Sustaining Voltage ²	V _{SUS}		9.7	11.0	12.0	V
Sustaining Current ²	I _{SUS}		0.4	1.0	2.0	mA
Output Voltage High	V _{OH}	V _{CC} =21V, I _s =-10mA Pin6=6V, Pin7=GND	17	19	21	V
Output Voltage Low	V _{OL}	V _{CC} =21V, I _s = 10mA Pin6=GND, Pin7=6V	-	-	2	V
High Frequency 1	f _{H1}	R3=191K, C3=6800pF R3=191K, C3=6800pF R2=165K, C2=0.47µF	461	512	563	Hz
High Frequency 2	f _{H2}		576	640	704	Hz
Low Frequency	f _L		9.0	10	11.0	Hz

* NOTE

1. Initial supply voltage (V_{SI}) is the supply voltage required to start the tone ringer oscillation.
2. Sustaining voltage (V_{SUS}) is the supply voltage required to maintain oscillation.

PIN DESCRIPTION

PIN NUMBER	PIN FUNCTION	DESCRIPTION
PIN 1	VCC	Operating supply D.C. voltage rectified from ringing signal.
PIN2	RSL	Initiation current programming Pin. (Must be connected)
PIN3	LOWOSC_1	Low Frequency Time Constant Adjustment pins f_L is controlled externally by R_2 and C_2 $f_L = 1/1.289R_2C_2$
PIN 4	LOWOSC_2	
PIN 5	GND	Ground
PIN 6	HIGHOSC_1	High Frequency Time Constant Adjustment Pins f_{H1} and f_{H2} are controlled externally by R_3 and C_3 . $f_{H1} = 1/1.504R_3C_3$, $f_{H2} = 1/1.203R_3C_3$
PIN 7	HIGHOSC_2	
PIN 8	OUTPUT	Tone output

APPLICATION CIRCUIT

