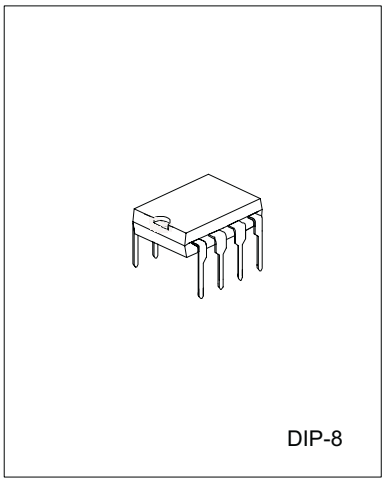
TA31001 LINEAR INTEGRATED CIRCUIT

TELEPHONE TONE RINGER



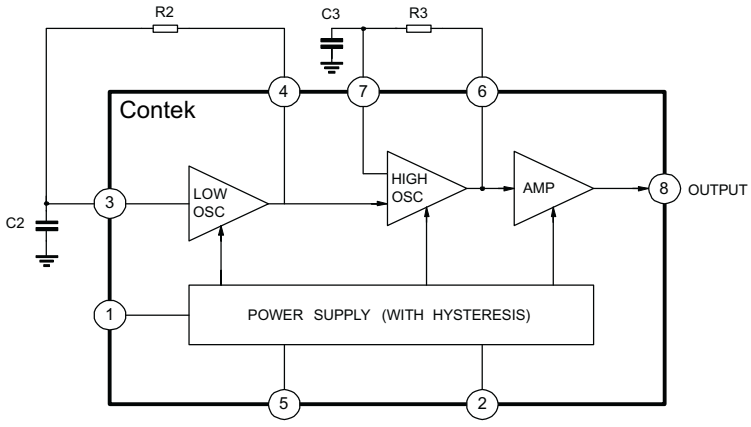
DESCRIPTION

The Contek TA31001 is a bipolar integrated circuit designed for telephone bell replacement. It can also be used as alarms or other alerting devices.

FEATURES

*Designed for telephone bell replacement.
*Low current drain for multiple extension of lines.
*Adjustable 2-frequency tone.
*Adjustable warbling rate.
*Built-in hysteresis prevents false triggering and rotary dial 'CHIRPS'.
*Programmable for initiation voltage by simple external resistor.

BLOCK DIAGRAM



Note:R2,R3,C2 and C3 are parts externally mounted

ABSOLUTE MAXIMUM RATINGS (Ta=25 C)

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	Vcc	30	V
Power Dissipation	Pd	400	mW
Operating Temperature	Topr	-45 to 85	C
Storage Temperature	Tstg	-65 to 150	C

ELECTRICAL CHARACTERISTICS (Ta=25 C)

(All voltage referenced to GND unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Operating Supply Voltage	Vcc				29	V
Initiation Supply Voltage (note 1)	Vsi	See Fig.2	17	19	21	V
Initiation Supply Current (note 1)	Isi	6.8K-Pin 2 to GND	1.4	3.5	4.2	mA
Sustaining Voltage (note 2)	Vsus	See Fig.2	9.7	11	12	V
Sustaining Current (note 2)	Isus	No Load Vcc=Vsus,See Fig.2	0.7	1.4	2.5	mA
Output Voltage High	VOH	Vcc=21V, I8=-15mA Pin6=6V, Pin7=GND	17.0	19	21	V
Output Voltage Low	VOL	Vcc=21V, I8=15mA Pin6=GND, Pin7=6V			1.6	V
I_{IN}(Pin 3) I_{IN}(Pin 7)		Pin3=6V, Pin4=GND Pin7=6V, Pin6=GND	- -	- -	500 500	nA nA
High Frequency 1	FH1	R3=191K, C3=6800pF	461	512	563	Hz
High Frequency 2	FH2	R3=191K, C3=6800pF	576	640	704	Hz
Low Frequency	FL	R2=165K, C2=0.47μF	9	10	11	Hz

*NOTE (See electrical characteristics sheet)

1. Initiation supply voltage (Vsi) is the supply voltage required to start the tone ringer oscillating.
2. Sustaining voltage (Vsus) is the supply voltage required to maintain oscillation.

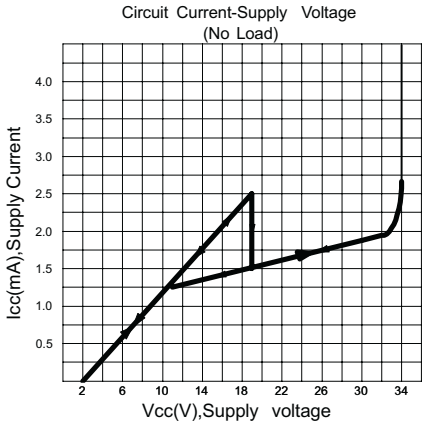


Fig. 1

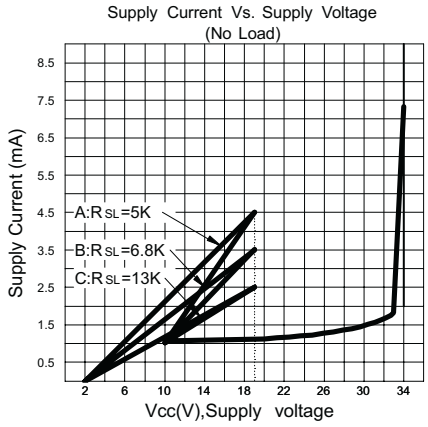


Fig. 2

APPLICATION CIRCUIT

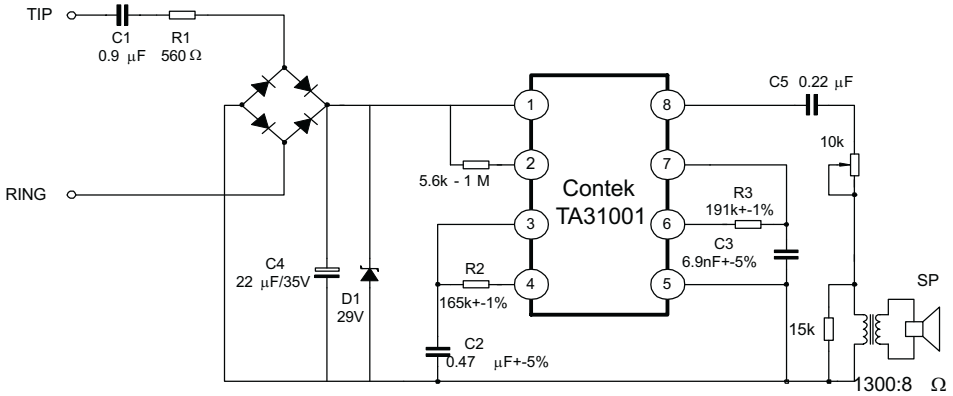


Fig. 3