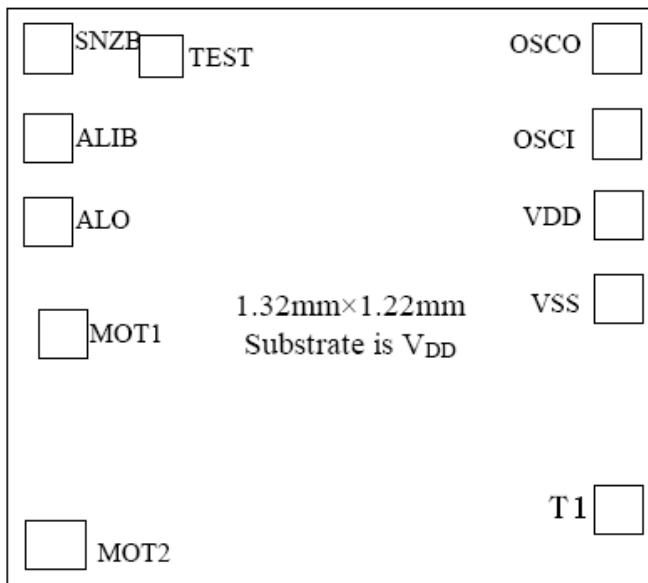


The DL1034 series are analog clock ICs that derive their timing from a 32KHz oscillator element. They feature alarm output snooze function and alarm auto-stop function. They can be configured to match a wide variety of clock specifications, alarm functions outputs.

**Features**

- Single 1.5V battery operation
- 32,768 Hz crystal frequency
- Low power dissipation
- Built-in trim capacitor
- Output for 1Hz or 16Hz stepper motor with selectable pulse width
- 256 second snooze interval
- 128 second alarm output auto-stop function (Mask Option)
- Alarm outputs compatible with both electronic sound alarms and motor bells
- 4-step increasing volume alarm output
- ALIB and SNZB use different pins
- Built-in debounce circuit (ALIB/SNZB pin)
- Fast test functions
- Power-on-clear function

**PAD LAYOUT**

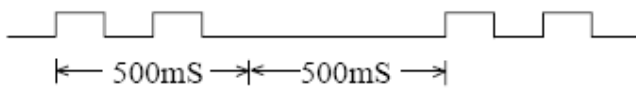
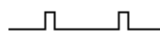
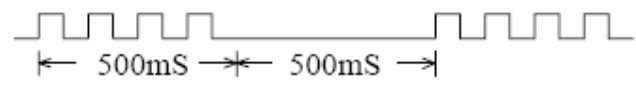
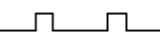
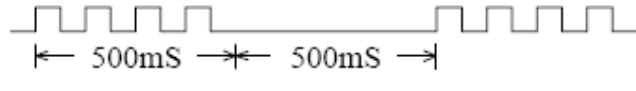
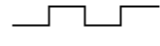

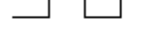


PAD No.	PAD Name.	X	Y
1	SNZB	75	1075
2	ALIB	75	911
3	ALO	75	760
4	MOT1	105	553
5	MOT2	93	75
6	T1	1175	186
7	VSS	1175	628
8	VDD	1175	778
9	OSCI	1175	923
10	OSCO	1175	1075
11	TEST	249	1065

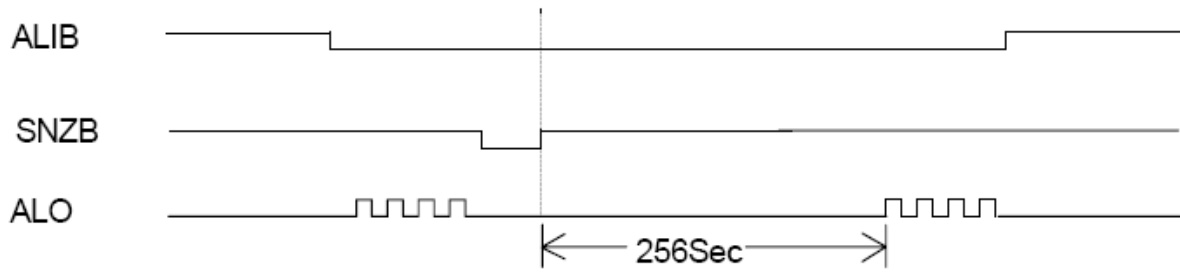
TYPE LIST

TYPE	ALO	MOT frequency	MOT pulse width
DL1034	4 step	1Hz	46.875ms

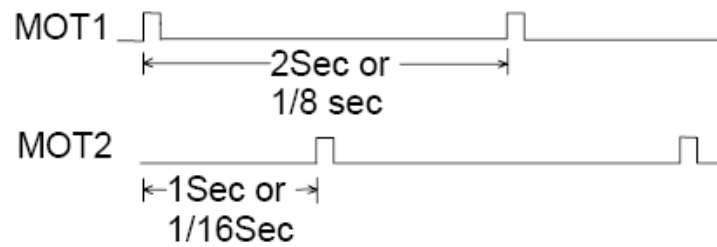
**4-step Alarm Waveform**

Time (sec) After Turning Alarm on	Alarm Waveform	Duty (%) of Fundamental Wave
1~8	 <p style="text-align: center;"> <math>\leftarrow 500\text{mS} \rightarrow \leftarrow 500\text{mS} \rightarrow</math>  <math>2048 \times 4 \times 1\text{Hz}</math> </p>	 <p style="text-align: center;">12.5%</p>
9~16	 <p style="text-align: center;"> <math>\leftarrow 500\text{mS} \rightarrow \leftarrow 500\text{mS} \rightarrow</math>  <math>2048 \times 8 \times 1\text{Hz}</math> </p>	 <p style="text-align: center;">25%</p>
17~24	 <p style="text-align: center;"> <math>\leftarrow 500\text{mS} \rightarrow \leftarrow 500\text{mS} \rightarrow</math>  <math>2048 \times 8 \times 1\text{Hz}</math> </p>	 <p style="text-align: center;">50%</p>
25~	 <p style="text-align: center;"> <math>\leftarrow 500\text{mS} \rightarrow \leftarrow 500\text{mS} \rightarrow</math>  <math>2048 \times 8\text{Hz}</math> </p>	 <p style="text-align: center;">50%</p>

**Snooze Waveform**

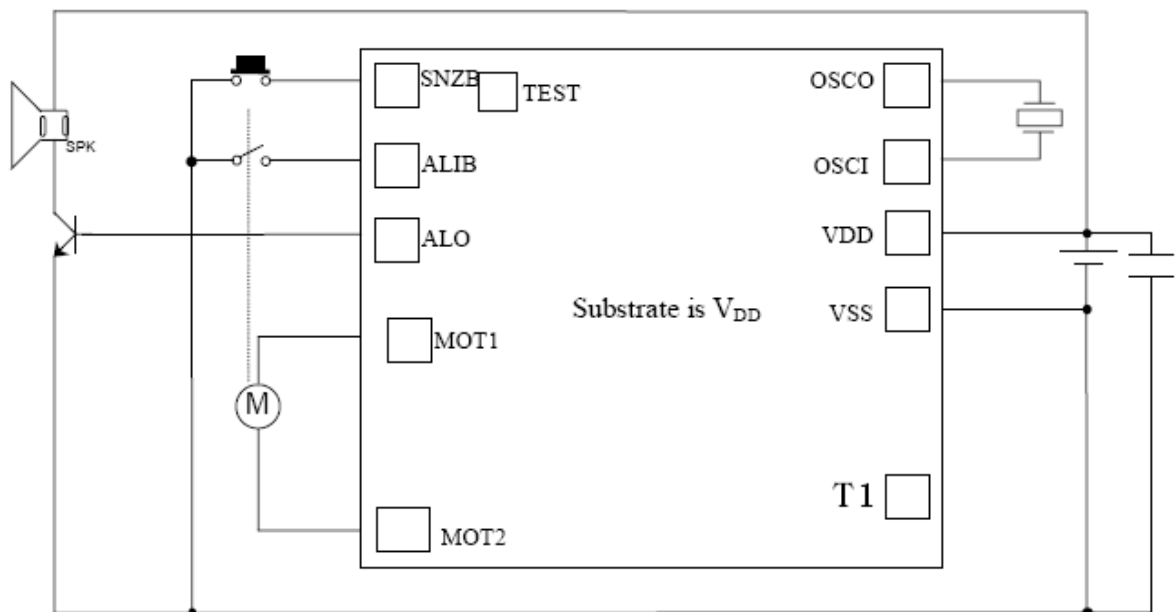


**Motor Output Driving**



**Application Diagram**

Speaker application



**DC Characteristics**(V<sub>DD</sub>=1.5V, V<sub>SS</sub>=0V, F<sub>osc</sub>=32768Hz Ta=25°C unless specified otherwise)

Item	Symb.	Condition	Min.	Typ.	Max.	Unit
Supply Voltage	V <sub>DD</sub>		1.1		1.8	V
Operating Current	I <sub>DD</sub>	No Load		1.2	2.0	μA
Output Current		V <sub>DD</sub> =1.2V				
Motor	I <sub>M</sub>	RL=200Ω	4.5			mA
Alarm high	I <sub>OHA</sub>	V <sub>OHA</sub> =0.7V	0.1	0.25	0.35	mA
Alarm low	I <sub>OLA</sub>	V <sub>OLA</sub> =0.5V	0.1	0.25	0.35	mA
OSC. Start time		V <sub>DD</sub> =1.2V			2	sec
OSC. Stability	Δf/f	ΔV <sub>DD</sub> =0.1V		0.5	1	ppm
Internal Cap.	C <sub>d</sub>			25		pF
Internal Cap.	C <sub>g</sub>	Mask Option	5		25	pF