



A751

User Manual

- User Manual
- Data Sheet

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1 General Description

The A751 is CMOS digital clinical thermometer IC for measuring body temperature from 32.0°C ~ 42.9°C (90°F ~ 109.9°F). It also provides stable alarm, fever alarm, automatic power off and the memory function of the last time measured temperature. The chip provides multi stable time for various of the mister also. The other electronic components are LCD display, the mister, 1.5Vbattery, ON/OFF switch, buzzer, resistors and capacitors.

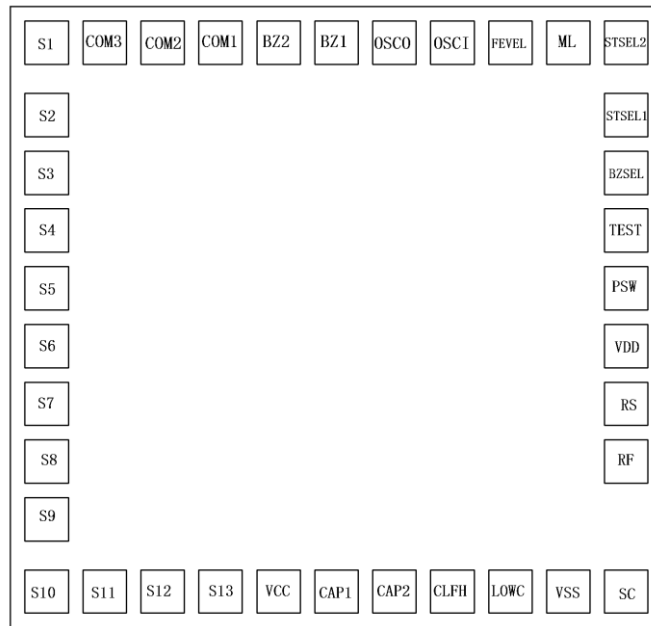
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2 Features

- Single-chip CMOS construction
- Measurement range: 32.0 ~42.9°C (90°F ~109.9°F)
- Measurement accuracy: $\pm 0.1^{\circ}\text{C}$ ($\pm 0.2^{\circ}\text{F}$)
- Resolution: 0.1°C (0.1°F)
- Single 1.5V battery operation
- Highest temperature hold
- Round off function
- Multi stable time selection: 16s/32s
- Automatic power off
- One ON/OFF switch input key
- Bonding option for °C and °F
- Display the last time measured temperature
- Alarm warning for fever
- Buzzer output: 6k/8kHz
- For various sensor application, change one layer only

3 Pad Assignment



Note: The IC substrate should be connect to VSS

4 Pad Coordinates

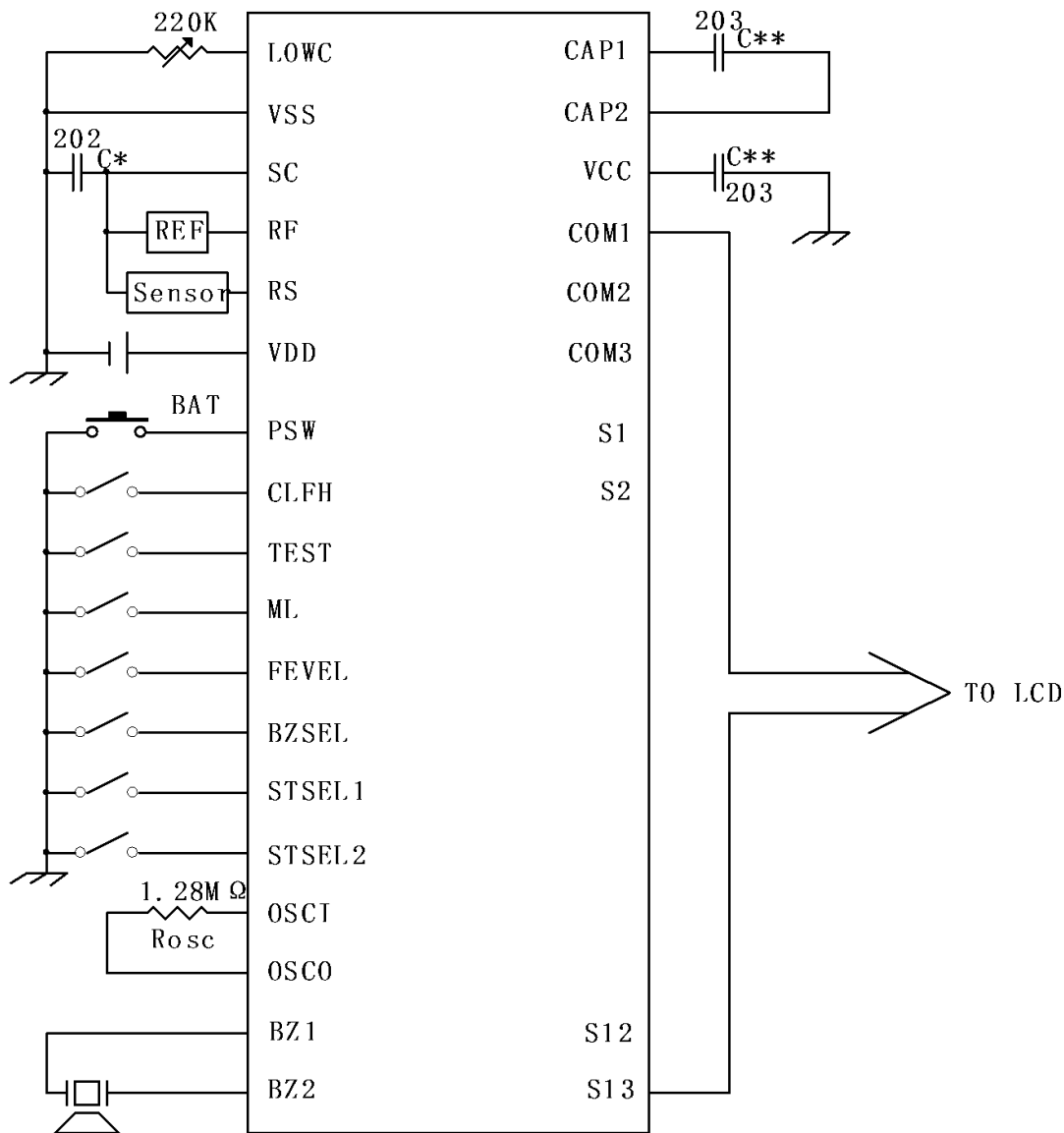
Pad No.	Pad Name	X (um)	Y (um)	Pad No.	Pad Name	X (um)	Y (um)
1	S1	-575.00	559.90	20	SC	575.00	-560.00
2	S2	-575.00	415.45	21	RF	575.00	-274.55
3	S3	-575.00	300.45	22	RS	575.00	-159.55
4	S4	-575.00	185.45	23	VDD	575.00	-44.55
5	S5	-575.00	70.45	24	PSW	575.00	70.45
6	S6	-575.00	-44.55	25	TEST	575.00	185.45
7	S7	-575.00	-159.55	26	BZSEL	575.00	300.45
8	S8	-575.00	-274.55	27	STSEL1	575.00	415.45
9	S9	-575.00	-389.55	28	STSEL2	575.00	559.90
10	S10	-575.00	-560.00	29	ML	460.00	559.90
11	S11	-460.00	-560.00	30	FEVEL	345.00	559.90
12	S12	-345.00	-560.00	31	OSCI	230.00	559.90
13	S13	-230.00	-560.00	32	OSCO	115.00	559.90
14	VCC	-115.00	-560.00	33	BZ1	0.00	559.90
15	CAP1	0.00	-560.00	34	BZ2	-115.00	559.90
16	CAP2	115.00	-560.00	35	COM1	-230.00	559.90
17	CLFH	230.00	-560.00	36	COM2	-345.00	559.90
18	LOWC	345.00	-560.00	37	COM3	-460.00	559.90
19	VSS	460.00	-560.00				



5 Electrical Characteristics

Symbol	Parameter	Test Conditions		Min	Typ	Max	Unit
		VDD	Conditions				
VDD	Operating voltage	-	-	1.3	1.5	1.65	V
IDD	Operating current	1.5V	No load	-	20	50	uA
ISTB	Standby current	1.5V	OSC OFF	-	-	1.0	uA
Fosc		1.5V	ROSC = 1.28MΩ	25.6	32	38.4	KHz
R°C	Temperature measurement Accuracy at range 35 °C~39 °C	-	VDD = 1.3V~1.5V	-0.1	-	0.1	°C
R°F	Temperature measurement Accuracy at range 95°F ~102°F	-	VDD = 1.3V~1.5V	-0.2	-	0.2	°F

6 Application Circuit



Note:

REF=30kΩ, 1%

C* = 272~202

C** = 103~104