WT164

Automatic Control Chip for Handwriting Pad Scraping

FEATURES

- 不擦写状态下基本零功耗（nA级别）
- 一键式自动擦写
- 自动升压
- 正负脉冲
- 擦写脉冲电压可调（外置调压电阻）
- 最高输出电压可达50V

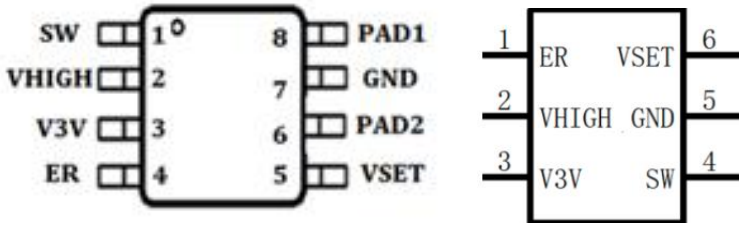
APPLICATIONS

- 手写板(Writing tablet)

DESCRIPTION

WT164是一款通用的手写板擦写自动控制芯片。它采用3V纽扣电池或者两节普通干电池供电，自带升压电路，并自动产生4个或者1个极性连续切换的高压擦写脉冲，以达到一次性对手写板进行擦写的目的。

PACKAGE

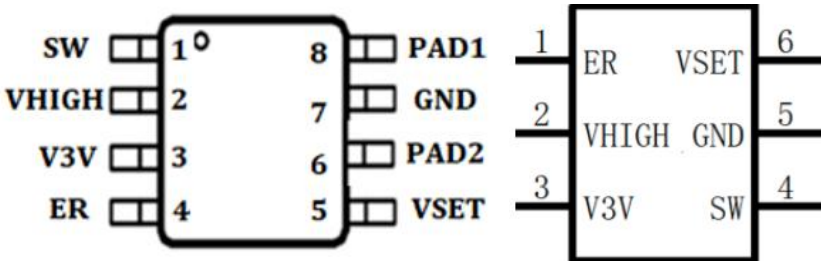


SOP8 and OT23-6

ORDING information

Part Number	Package Type	Package Qty	Op Temp(°C)	Mark
WT164	SOP8	4000	-40~85	WT164 XXX
WT164	SOT23-6	3000	-40~85	WT164 XXX

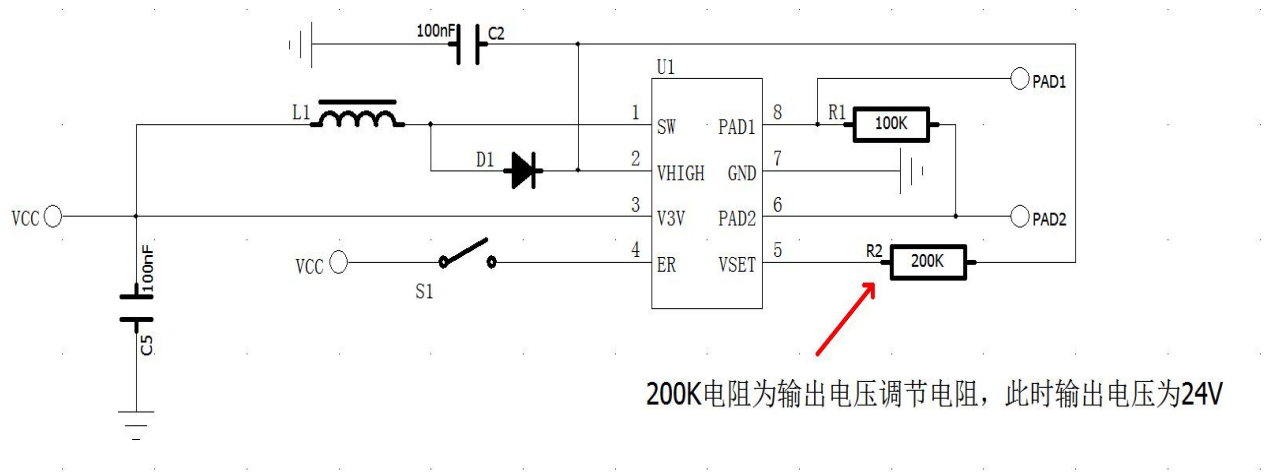
PINOUT



PIN FUNCTIONS

Pin number		PIN NAME	Description
SOT23-6	SOP8		
4	1	SW	Switching pin for boost circuit
2	2	VHIGH	Boost voltage pin
3	3	V3V	3V battery supply
1	4	ER	Erase button to trigger the erasing procedure
6	5	VSET	To set the boost voltage level using an external resistor
	6	PAD2	One of the pads of the writing tablet
5	7	GND	Ground.
	8	PAD1	One of the pads of the writing tablet

APPLICATION CIRCUIT



SOT23-6 application

注：1.R1、R2 根据实际膜片调整阻值

2.画 PCB 板时，锅仔片内部接芯片第四脚，锅仔片外圈接电池正极

3.SW 和 VHIGH 脚为高压信号脚，其他走线和铺地要尽量远离，电感尽量靠近芯片

Absolute Maximum Ratings[NOTE]

SW/VHIGH/VSET/PAD1/PAD2 to GND ----------50V

ALL OTHER PINS to GND ----------5.5V

Maximum Junction Temperature ----------150℃

Operating Ambient Temperature Range (T_A) ---------- -40℃ to85℃

Storage Temperature ---------- -45℃ to165℃

Maximum Soldering Temperature (at leads, 10 sec) ----------260℃

Note 1. Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

Thermal Information

Maximum Power Dissipation (DFN10, P_D, T_A=25℃) ---------- 2W

Thermal Resistance (DFN10, θ_{JA}) ----------50℃/W

Maximum Power Dissipation (TDFN-10, P_D, T_A=25℃) ----------1.5W

Thermal Resistance (TDFN-10, θ_{JA}) ----------65℃/W

ESD Susceptibility

HBM (Human Body Mode) ----------2KV

MM (Machine Mode) ----------200V

Electrical Characteristics

(T_A=25°C, V_{v3v}= 3V, Rset=200k, unless otherwise noted)

Symbol	Parameter	Condition	Min	Typ	Max	Units
V_{v3v}	Battery supply		1.6		5.5	V
I_{stby}	Input Supply Current	Standby Mode (no erasing pulse triggered)		0		uA
V_{HIGH}	Boosted supply	R set=200k		24		V
Npulse	Pulse count			4/1		
Pulse Time	The time width			880		ms

Application Information

WT164 为一款内置升压电路并可以自动产生擦写脉冲的手写板擦写控制芯片。擦写脉冲为频率 1Hz 的交替高压脉冲，脉冲数为 4（可以设置为 1）。

脉冲电压可以通过外置电阻设置，其电压值满足：

Rset=10K*Vpulse-40K

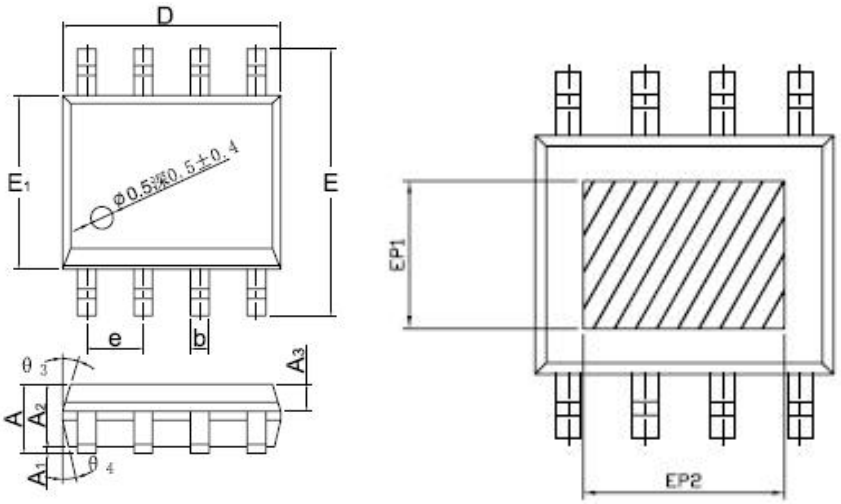
如果想获得 24V 的脉冲电压，则:

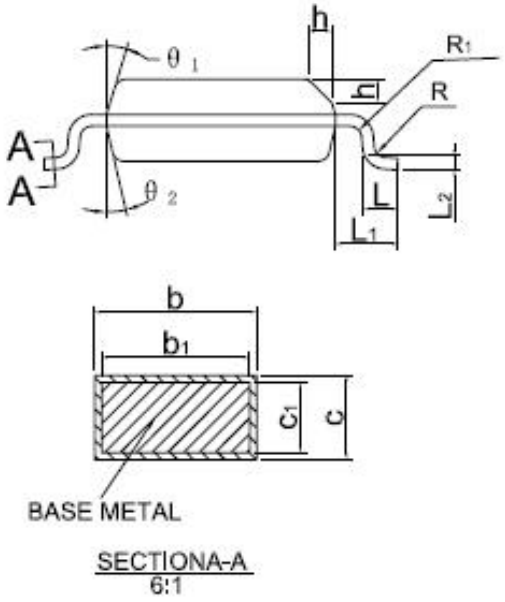
Rset=200KΩ

WT164 为一键式自动擦写控制器，其触发为 ER 端从低到高的上升沿，亦即连接该 pin 的锅片开关按压行为。在一次脉冲产生周期内的多次按压行为仅触发一次擦写脉冲的产生，直至 4(或 1)个脉冲完全结束，等待下一个按压动作触发。

Package information

SOP8





DIMENSIONS IN MUILLIMETERS

SYMBOL	MIN	NOM	MAX
A	1.35	1.55	1.75
A1	0.00	——	0.10
A2	1.25	1.40	1.65
A3	0.50	0.60	0.70
b	0.39	——	0.49
b1	0.28	——	0.48
c	0.10	——	0.25
c1	0.10	——	0.23
D	4.80	4.90	5.00
E	5.80	6.00	6.20
E1	3.80	3.90	4.00
e	1.27BSC		
L	0.45	——	1.00
L1	1.04REF		
L2	0.25BSC		
R	0.07	——	——
R1	0.07	——	——
h	0.3	0.4	0.5
θ	0°	——	8°
θ1	11°	17°	19°
θ2	11°	13°	15°
θ3	15°	17°	19°
θ4	11°	13°	15°
EP1	2.40	——	——
EP2	3.30	——	——