

The circuit diagram illustrates the power management system for the TP4057 module. It shows the connection of various power sources (VCC\_BAT, VCC, VCC\_3V3, VCC\_USB) to the module's components. Key components include transistors Q1 (AO3401A) and Q2 (AO3400A), resistors R1 through R12, capacitors C1 through C7, diodes D1 and D2, LEDs LED1R and LED2G, and integrated circuits U1 (AO3401A), U2 (BL9198-33BAPRN), and U3 (TP4057ST26P). The diagram also includes a pin header for PWR\_EN, BAT\_DET, EC\_KEY\_DET, and CHG\_DET, and a table mapping these pins to GPIOs.

PWR_EN	GPIO_21
BAT_DET	GPIO_37
EC_KEY_DET	GPIO_27
CHG_DET	GPIO_38

U5  
LCD-1.54-ZJY

1 GND  
2 LEDK  
3 LEDA  
4 VDD VCC\_3V3  
5 GND  
6 GND  
7 LCD\_DC  
8 D/C  
9 CS LCD\_SCL  
10 SCL  
11 SDA LCD\_SDA  
12 RES LCD\_RST  
GND

VCC\_3V3

R17 10k

LCD\_BLK

Q6 AO3400A\_C344010

R18 10k

GND

C8 0.1u

VCC\_3V3

GND

Signal	GPIO
LCD_BLK	GPIO_12
LCD_DC	GPIO_2
LCD_SCL	GPIO_18
LCD_SDA	GPIO_23
LCD_RST	GPIO_4

**特殊引脚说明**

GPIO0 : boot引脚, 0进入下载模式, 1正常启动  
 GPIO2 : boot引脚, 下载时上电需要为0  
 GPIO12 : 选择Flash电压, 上电时必须为0  
 GPIO5 : 上电时必须为1  
 GPIO14 : 内部上拉, 上电时为1  
 GPIO15 : 上电时必须为1

The diagram shows two separate circuit modules. The left module is a buzzer driver circuit. It features a buzzer connected to a red wire labeled 'BUZZER'. This wire is connected to the emitter of an NPN transistor, Q5 (AO3400A\_C344010). The base of Q5 is connected to a red wire labeled 'EC\_A' through a 10k resistor (R16). The collector of Q5 is connected to a red wire labeled 'VCC' and a speaker icon. The emitter of Q5 is connected to a red wire labeled 'GND'. The right module is a key input circuit. It features a key switch labeled 'EC\_KEY'. One terminal of the switch is connected to a red wire labeled 'VCC\_3V3'. The other terminal is connected to a red wire labeled 'EC\_B' through a 10k resistor (R14). The other end of R14 is connected to a red wire labeled 'GND'. The switch is also connected to a red wire labeled 'EC\_A' through a 10k resistor (R13). The other end of R13 is connected to a red wire labeled 'GND'. The switch is also connected to a red wire labeled 'GND' through a 10k resistor (R14). The other end of R14 is connected to a red wire labeled 'GND'.

**BUZZER** GPIO\_25

**EC\_A** GPIO\_34

**EC\_B** GPIO\_35

VCC\_3V3

R2 R2R1 R2R2 R2R3  
10k 10k 10k 10k

SD\_CS  
SD\_MOSI  
SD\_CLK  
SD\_MISO  
SD\_DET

VCC\_3V3  
GND

CARD1  
THD2528-11SD-GF

1 DAT2  
2 CD/DAT3  
3 CMD  
4 VDD  
5 CLX  
6 VSS  
7 DAT0  
8 DAT1  
9 CD

13 SHELL  
12 SHELL  
11 SHELL  
10 SHELL

GND

SD_CS	GPIO_15
SD_MOSI	GPIO_13
SD_CLK	GPIO_14
SD_MISO	GPIO_26
SD_DET	GPIO_22

	7	8	
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