

Rev.A1

SOT-23 P-MOSFET (NX2301P for example)
Configure GPID pin to input to disable FET.

Diagram illustrating the speaker connection for the SP1 module. The speaker is connected to the circuit board via a 2-pin header. The connections are as follows:


- SPK1N** (Pin 1) connects to **P5** (GSM-SPK).
- SPK1P** (Pin 2) connects to **P6** (GSM-MIC).
- MIC1N** (Pin 1) connects to **P5** (GSM-SPK).
- MIC1P** (Pin 2) connects to **P6** (GSM-MIC).
- The speaker terminals are connected to **SPK1N** and **SPK1P**.
- The speaker is labeled **BUZZER** and **SP1**.
- The speaker terminals are also connected to **R4** (SPEAKER+).
- The speaker terminals are also connected to **R5** (SPEAKER-).

LED1 — 1 — D1 — 2 — R8 — 3.30 —

LED2 — 1 — D2 — 2 — R9 — 3.30 —

GSM_NETLIGHT — 1 — D3 — 2 — R10 — 3.30 —

VLM51300-G500 Super red (Vt typical 2V0)
 VLM51300-G520 Soft orange (Vt typical 2V0)
 VLM51300-G520H Yellow green (Vt typical 2V0)

[illegible][illegible][illegible]

BATTERY_TEMP

If no battery present, it's also possible to power the device using 3V2 – 4V2 regulated power source.

If so, don't connect simultaneously Micro-USB charger.

The diagram illustrates two power sources connected to the MCP73831-2ACI/GT (U8) via a common ground.

- Battery Connection:** A +5V battery terminal is connected to the VDD pin (pin 4) through a 2uF capacitor (C25). The GND pin (pin 1) is connected directly to the common ground.
- Charger Connection:** A +5ATT terminal is connected to the VBAT pin (pin 3) through a 2uF capacitor (C27). The PROG pin (pin 5) is connected to the same +5ATT source through a resistor R21 (10k). The VSS pin (pin 2) is connected to the common ground.

Current consumption typically 1uA when VDD=VBAT.

Select the correct version:
MCP73831-2ACI/GT
MCP73831-2ACI/GT
MCP73831-2ATI/GT

STATS_PIN-STATES
Shutdown = H/L
No Battery Present = H/L
Preconditioning = L
Constant-Current Fast Charge = L
Constant-Voltage = L
Charge Complete - Standby = H

The current regulation set input pins (PPROG) can be used to terminate a charge at any time during the charge cycle as well as to initiate a charge or initiate a recharge cycle.
The termination of the charge is achieved by pulling down the PPROG input to float or by applying a logic-high input signal. This disables the device's supply. Applying the PPROG input to float or by applying a logic-high input signal, disables the device's supply. The current regulation set input pins (PPROG) can be used to terminate a charge at any time during the charge cycle as well as to initiate a charge or initiate a recharge cycle.

PPROG = 2k >> Charge current = 500mA
PPROG = 10k >> Charge current = 100mA

SIM-VDD 14
 SIM-RST 13
 SIM-CLK 12
 SIM-DATA 11
 SIM-CLK 10
 SIM-DATA 9
 SPI1_MISO 8
 SPI1_SCK 7
 MEM_CARD_PWR 6
 SPI1_MOSI 5
 MICROSD_CS 4
 SD_CARD_INSERTED 3
 SW-B 2
 SW-A 1
 HOLDER_COVER 15

SIM_C1_VCC
 SIM_C5_GND
 SIM_C2_RESET
 SIM_C6_VPP/NC
 SIM_C3_CLK
 SIM_C7_ID
 SD_NC/DAT1
 SD_D0/DAT0
 SD_VSS
 SD_SCKL/CLK
 SD_VDD
 SD_DI/CMD
 SD_CS/CD_DAT3
 SD_NC/DAT2

C28
 C29
 2u2
 2u2
 SIM-VDD
 MEM_CARD_PWR

Place bypass capacitors +
 SIM's ESD (TVS) protection array
 close to the card holder.

MICROSD_SIM_COMBO
 U9

Inserting MicroSD card shorts SW-B to SW-A
 i.e. SD_CARD_INSERTED goes low (I2U required).

Compatible holders:
 • GCTF MFC3051
 • Cheap Chinese version