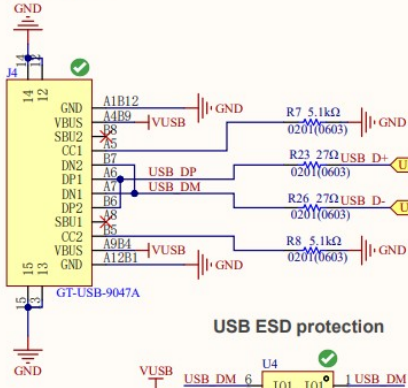
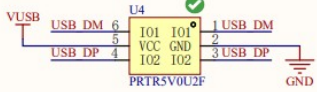


USB-C receptacle



USB ESD protection



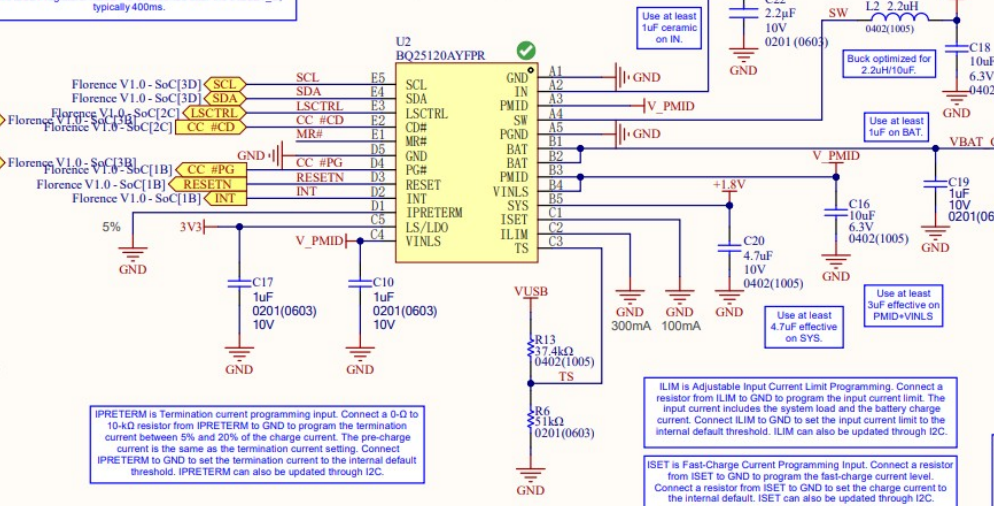
LSCTRL is load switch/LDO enable, active-high.

/CD is Chip Disable. Drive CD low to place the part in High-Z mode with battery only present, or enable charging when VIN is valid. Drive CD high for Active Battery mode when battery only is present, and disable charge when VIN is present. CD is pulled low internally with 900 kΩ.

/MR is Manual Reset Input. MR is a push-button input that must be held low for greater than tRESET to assert the reset output. If MR is pressed for a shorter period, there are two programmable timer events, tWAKE1 and tWAKE2, that trigger an interrupt to the host. The MR input can also be used to bring the device out of Sleep mode.

RESET is Reset Output, open drain active low output that goes low when MR is held low for longer than tRESET, which is configurable by the MRRESET registers. RESET is deasserted after the tRESET_D, typically 400ms.

Li-Ion Charger (IC20 0x6A)



TDK ML2100SM2R2W1000 0402
 • 60mA I_{sat} (inductance down 50%)
 • 350mA I_{temp} (20C temp rise)

This is the highest 2.2uH saturation current in 0402 (1005) package.

10.2.2.1 Default Settings

- Connect ISET, ILM and IPRETERM pins to ground to program fast charge current to 10mA, input current limit to 100mA and pre-charge/termination current to 2 mA.
- BAT_UVLO = 3 V.
- VSYS = 1.8 V.
- LS/LDO = LS.
- VBREG = 4.2 V.
- VIN_DPM is enabled and VIN_DPM Threshold = 4.6 V.
- Safety Timer = 3 hr.
- If the function is not needed, connect TS to the center tab of the resistor divider between V_{BAT} and the ground (pull up resistor = 14 kΩ, pull down resistor = 14.3 kΩ).

The coin-cell Li-Ion battery used in Florence does NOT have protection circuitry.

PLEASE ESTABLISH CHARGE R CURRENT/VOLTAGE CONFIG BITS AS STATIC VARIABLES AND DO NOT MODIFY!

ILIM is Adjustable Input Current Limit Programming. Connect a resistor from ILM to GND to program the input current limit. The input current includes the system load and the battery charge current. Connect ILM to GND to set the input current limit to the internal default threshold. ILIM can also be updated through I2C.

ISET is Fast-Charge Current Programming Input. Connect a resistor from ISET to GND to program the fast-charge current level. Connect a resistor from ISET to GND to set the charge current to the internal default. ISET can also be updated through I2C.

For system-side configurations, Kelvin sense connect SRP to the positive battery terminal side of the external sense resistor. Kelvin sense connect SRN to the other side of the external sense resistor with the positive connection to the charger/system.

If the fuel gauge is in SHUTDOWN mode, toggling GPOUT makes the gauge exit SHUTDOWN. It is recommended to connect GPOUT to a GPIO of the host MCU so that in case of any inadvertent shutdown condition, the gauge can be commanded to come out of SHUTDOWN.

Fuel Gauge (IC20 0x55)

