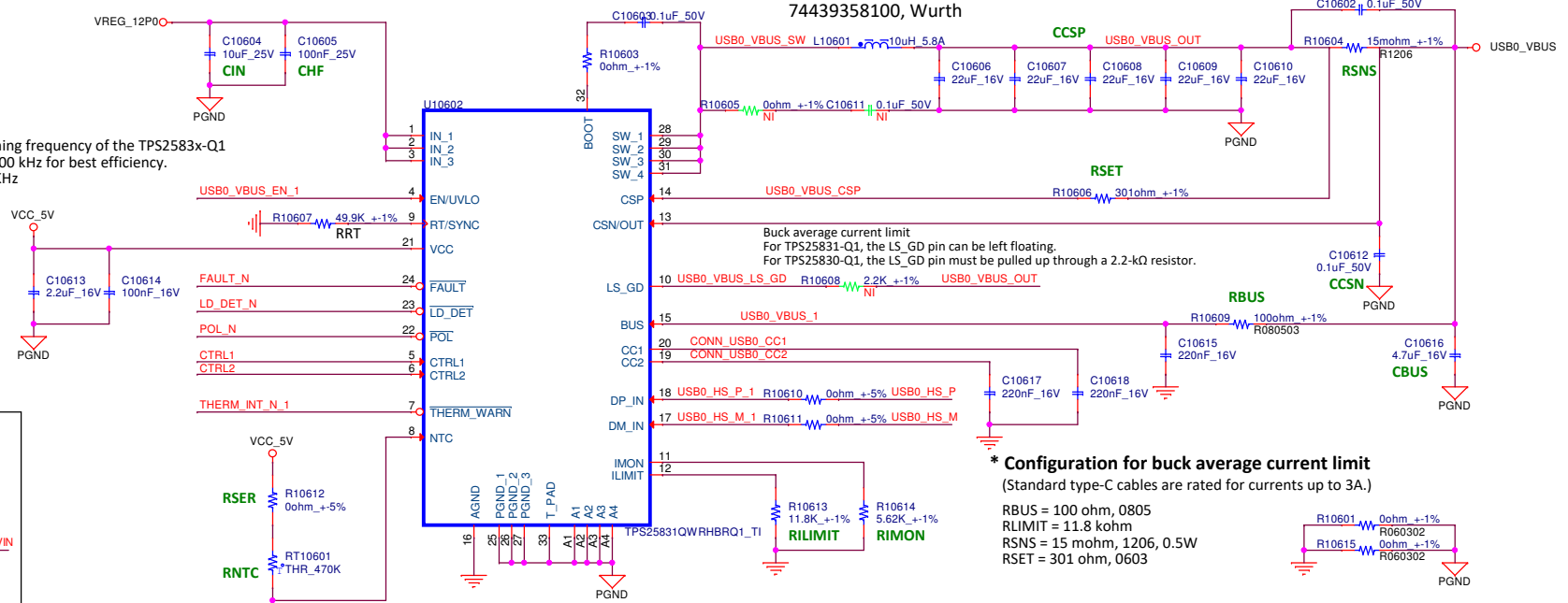


*** TPS25831-Q1 Configuration**
(Application: Apple CarPlay, MFi)

Switching Freq = 400 kHz
3A Type-C load current
Buck average current limit
w/ cable compensation
CDP mode

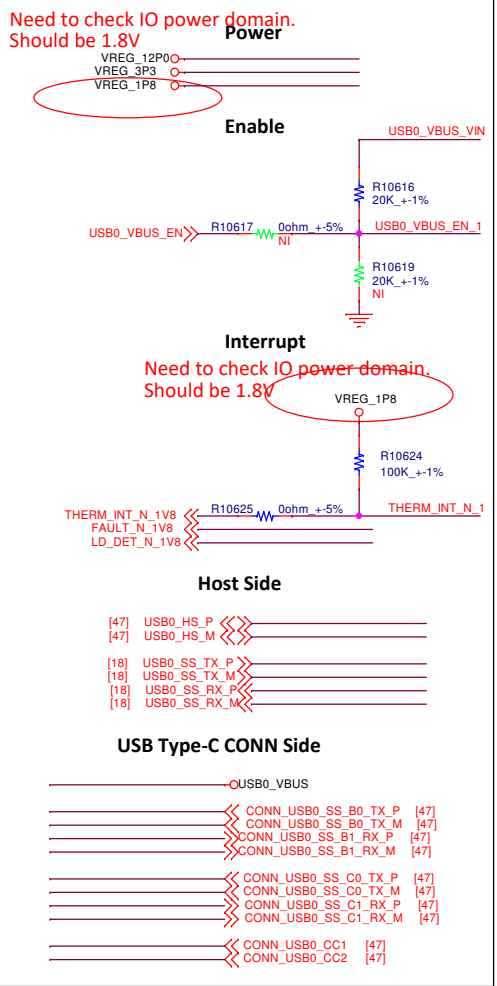
* The recommended switching frequency of the TPS25831-Q1 is in the range of 300 to 400 kHz for best efficiency.
RRT= 49.9 Kohm for 400 kHz



Buck average current limit
For TPS25831-Q1, the LS_GD pin can be left floating.
For TPS25830-Q1, the LS_GD pin must be pulled up through a 2.2-kΩ resistor.

*** Configuration for buck average current limit**
(Standard type-C cables are rated for currents up to 3A.)
RBUS = 100 ohm, 0805
RLIMIT = 11.8 kohm
RSNS = 15 mohm, 1206, 0.5W
RSET = 301 ohm, 0603

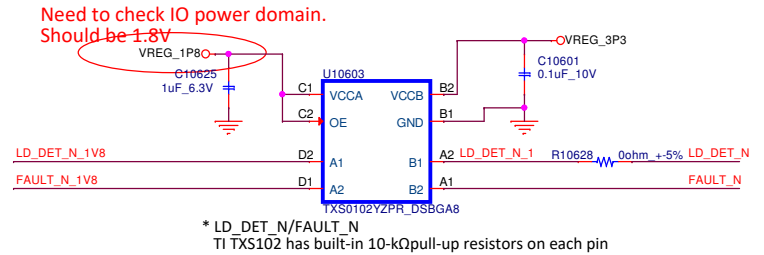
* NC1/NC2
Can be left not connected or can be fed to VCC or tied to GND.



DEVICE	CTR L1	CTR L2	CURRENT LIMIT SETTING	USB MODES
TPS25831-Q1	0	1	Current Limit Setting using R _{LIMIT}	Type-C (3 A) + DCP Auto Mode
	1	0		Type-C (1.5 A) + SDP Mode
	1	1		Type-C (3 A) + CDP Mode

Table 11-2. L and C_{OUT} Typical Values

f _{sw}	V _{OUT} WITHOUT CABLE COMPENSATION	C _{IN} + C _{HF}	L	CURRENT LIMIT	C _{CSP}	C _{CNS/OUT}	C _{BUS}
400 kHz	5.10 V	1 × 10 µF + 1 × 100 nF	10 µH	Buck Avg	5 × 22 µF	100 nF	1 to 4.7 µF



* LD_DET_N/FAULT_N
TI TXS102 has built-in 10-kΩ pull-up resistors on each pin