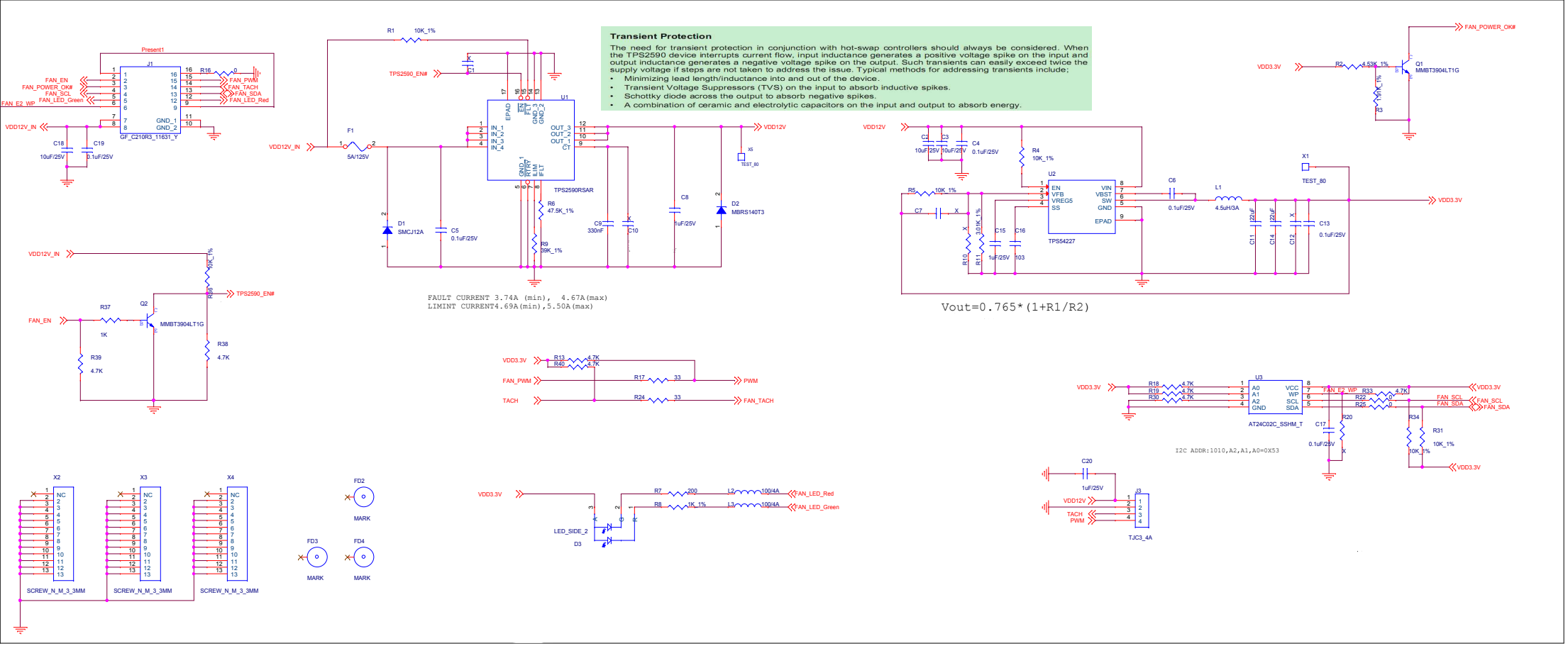
Transient Protection
The need for transient protection in conjunction with hot-swap controllers should always be considered. When the TPS2590 device interrupts current flow, input inductance generates a positive voltage spike on the input and output inductance generates a negative voltage spike on the output. Such transients can easily exceed twice the supply voltage if steps are not taken to address the issue. Typical methods for addressing transients include;
• Minimizing lead length/inductance into and out of the device.
• Transient Voltage Suppressors (TVS) on the input to absorb inductive spikes.
• Schottky diode across the output to absorb negative spikes.
• A combination of ceramic and electrolytic capacitors on the input and output to absorb energy.
FAULT CURRENT 3.74A (min), 4.67A(max)
LIMINT CURRENT4.69A(min),5.50A(max)
Vout=0.765*(1+R1/R2)
I2C ADDR:1010,A2,A1,A0=0X53
TPS2590RSAR
TPS54227
AT24C02C_SSHM_T
MMBT3904LT1G
MBRS140T3
SMCJ12A
GF_C210R3_11631_Y
TJC3_4A
SCREW_N_M_3_3MM
VDD12V_IN
VDD12V
VDD3.3V
FAN_POWER_OK#
FAN_EN
FAN_PWM
FAN_TACH
FAN_SDA
FAN_SCL
FAN_LED_Red
FAN_LED_Green
TPS2590_EN#
PWM
TACH
TEST_80