



SCT2230A

Rev. 1.7



SCT2230A

| ORDERABLE DEVICE | PACKAGING TYPE | STANDARD PACK QTY | PACKAGE MARKING | PINS | PACKAGE DESCRIPTION | MSL |
|---------------------|-------------------|----------------------|--------------------|------|------------------------|-----|
| | | | | | | |



| NAME | PIN | PIN FUNCTION |
|------|-----|--------------|
|------|-----|--------------|

SCT2230A

| SYMBOL | PARAMETER | TEST CONDITION | MIN | TYP | MAX | UNIT |
|---|-----------|----------------|-----|-----|-----|------|
| Power Supply and Output | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Enable, Soft Start and Working Modes | | | | | | |
| | | | | | | |

SCT2230A

Under Voltage Lockout UVLO

Enable and Start up

Over Current Protection (OCP) and Hiccup Mode

Bootstrap Voltage Regulator

Thermal Shutdown

Typical Application

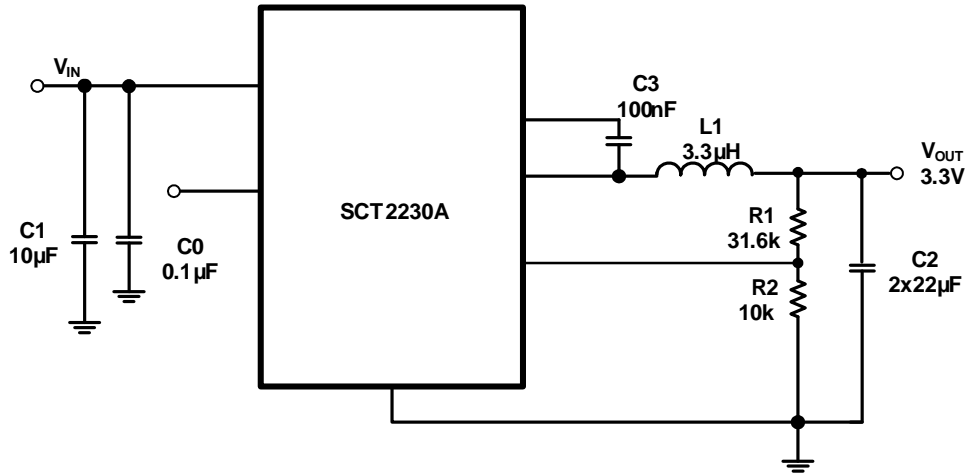


Figure 8. 12V Input, 3.3V/3A Output

Design Parameters

| Design Parameters | Example Value |
|-------------------|---------------|
| | |
| | |
| | |
| | |

Input Capacitor Selection

RII

SCT2230A

Output Feedback Resistor Divider Selection

$$V_1 = \frac{(V_{in} - V_{out}) \times R_2}{R_1 + R_2}$$

Table 2. Recommended Component Selections

| Output Voltage (V) | R1 (k) | R2 (k) | L (μH) | C1 (μF) | C2 (μF) | C3 (nF) |
|--------------------|---------|---------|--------|---------|---------|---------|
|--------------------|---------|---------|--------|---------|---------|---------|

Application Waveforms



Figure 9. SW node waveform and Output Ripple
VIN=12V, IOUT=3A

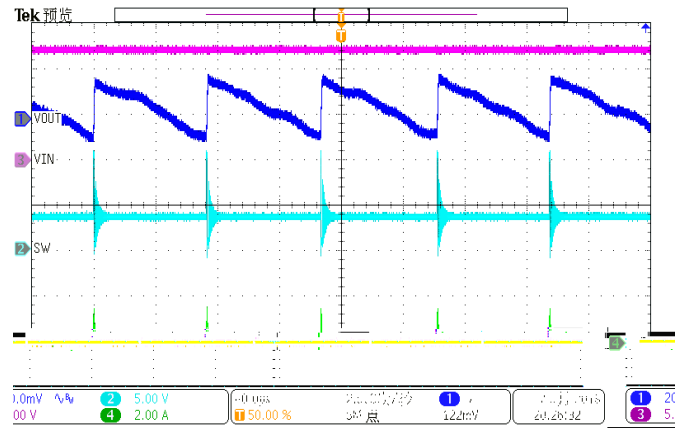


Figure 10. SW node Waveform and Output Ripple
VIN=12V, IOUT=10mA

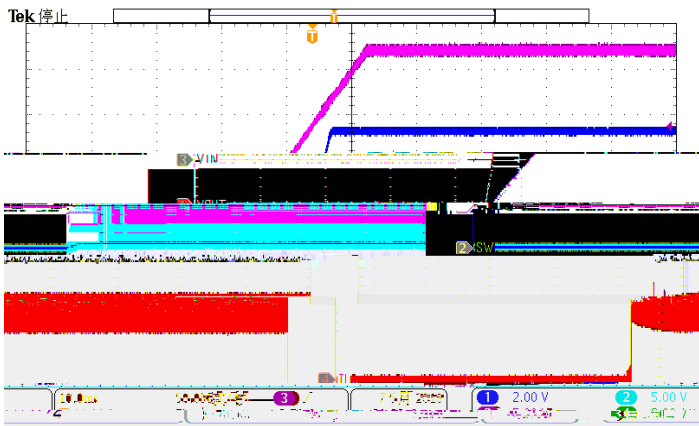


Figure 11. Power Up
VIN=12V, VOUT=3.3V, IOUT=3A

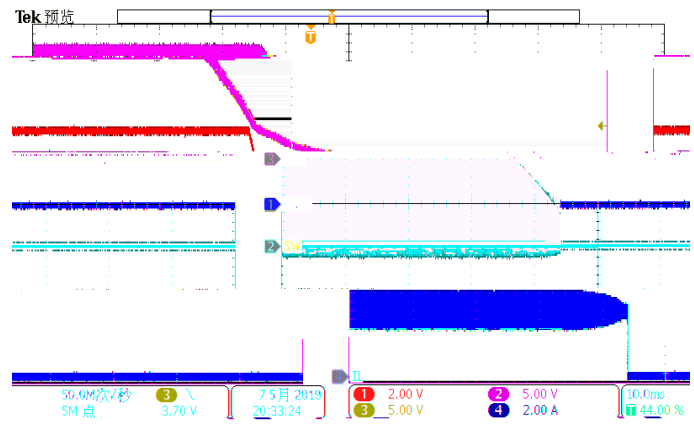


Figure 12. Power Down
VIN=12V, VOUT=3.3V, IOUT=3A

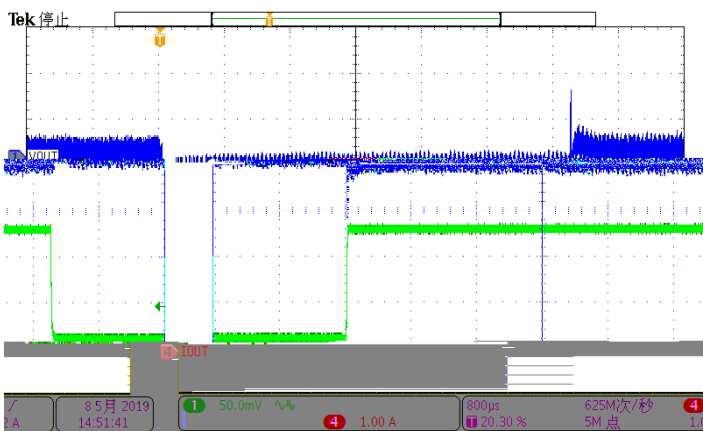


Figure 13. Load Transient
VOUT=3.3V, IOUT=0.3A to 2.7A, SR=250mA/us

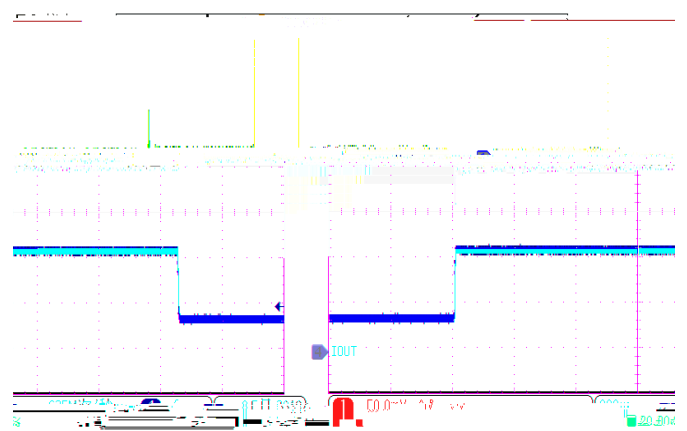


Figure 14. Load Transient
VOUT=3.3V, IOUT=0.75A to 2.25A, SR=250mA/us

Layout Guideline

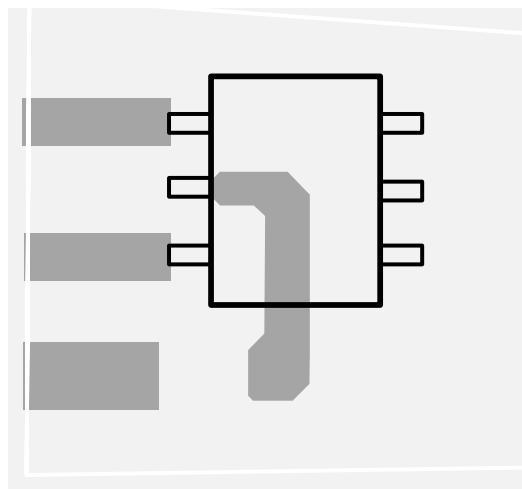


Figure 15. PCB Layout Example

Thermal Considerations

NOTE: