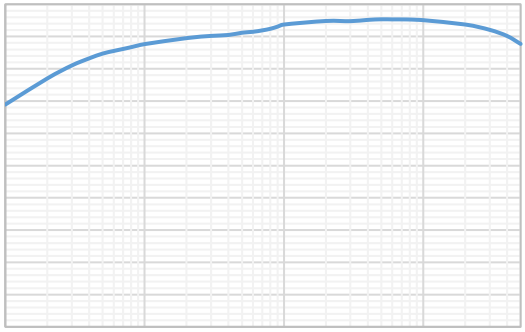
TYPICAL CHARACTERISTICS



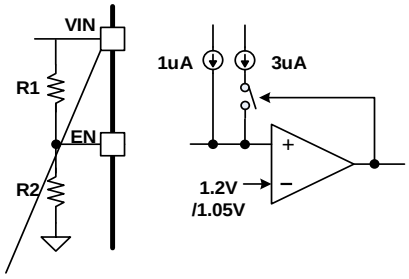
OPERATION

Overview

Peak Current Mode Control

$$1 = \frac{0.875 -}{3.125}$$

$$2 = \frac{_1 \times 1.05}{-1.05 + _1 \quad 4}$$



-
-

Output Voltage

±

= (—— − 1)

-
-

Internal Soft-Start

Bootstrap Voltage Regulator and Low Drop-out Operation

$$(\max) = \frac{}{} \times \left(\frac{\times \quad + \quad - \quad +}{- \quad \times \quad (\ ) +}\right)$$

Over voltage Protection

Thermal Shutdown

APPLICATION INFORMATION

Typical Application

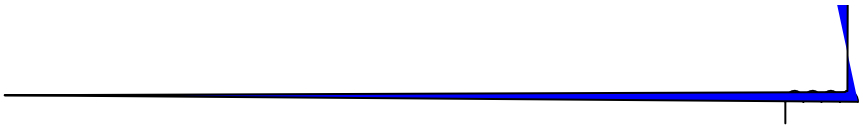


Figure 11. SCT2450C Design Example, 3.3V Output with Programmable UVLO

Design Parameters

Design Parameters	Example Value

Output Voltage

V_{OUT}	R_5	R_6

$_5 = (\text{——} - 1)$ $_6$

-

Inductor Selection

$$= \frac{(\quad - \quad)}{\qquad}$$

-
-
-
-
-

$$= \frac{\qquad\qquad}{(\quad)} \quad (1 -$$

Diode Selection

$$= \frac{(\quad - \quad) \times \quad \times \quad}{\quad} + \frac{\times \quad \times (\quad + \quad)^2}{2}$$

Input Capacitor Selection

$$I_{CINRMS} = I_{OUT} \quad \sqrt{\frac{V_{OUT}}{V_{IN}} \quad (1 - \frac{V_{OUT}}{V_{IN}})}$$

$$I_{CINRMS} = 0.5 \quad I_{OUT}$$

=

$$_1 = \frac{1}{2^{\quad 7}} = \frac{}{2^{\quad 7}}$$

$$_2 = \frac{1}{2} = \frac{}{2}$$

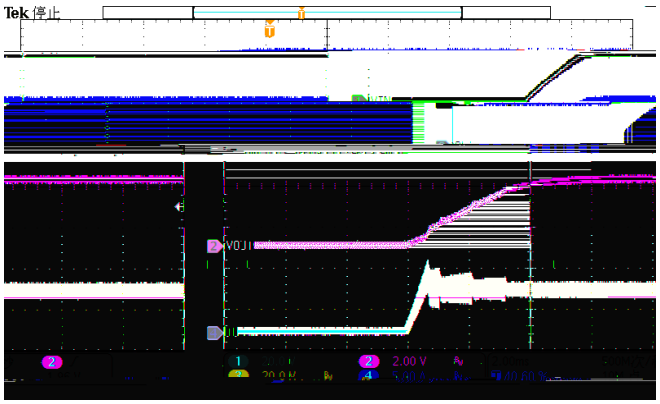
•

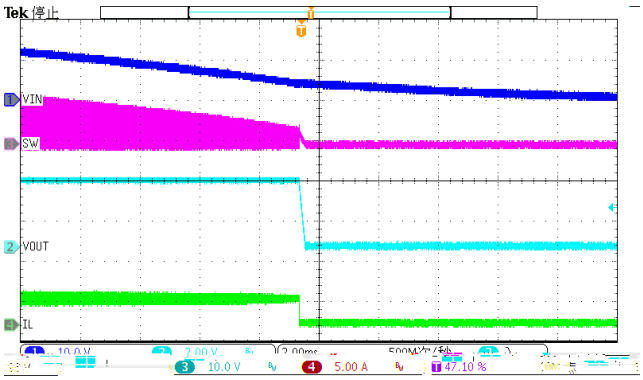
Table 3: Compensation Values for Typical Output Voltage/Capacitor Combinations at fsw=500KHz

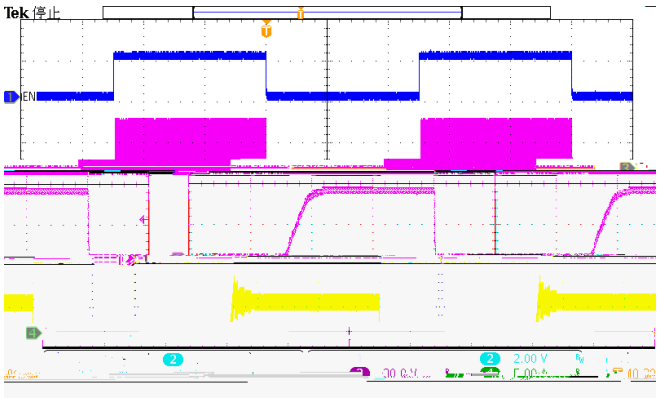
Vout	L1	COUT	R4	C7	C6
2.5V	4.7uH	4*47uF	16.9K	4.7nF	68pF (optional)
3.3V	5.5uH	4*47uF	20K	4.7 nF	47pF (optional)
5V	7.8uH	4*47uF	33.2K	3.3nF	22pF (optional)
12V	10uH	4*47uF	53.6K	1nF	220pF
24V	15uH	4*47uF	105k	1nF	

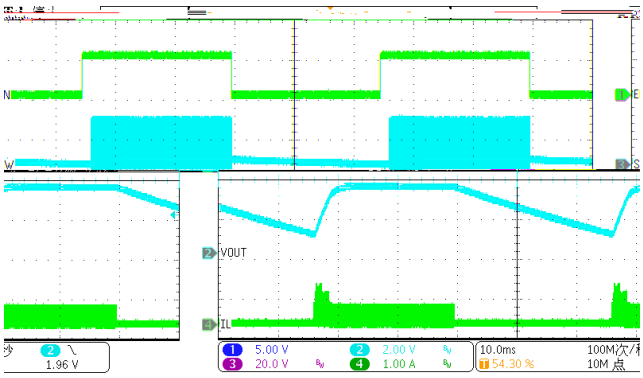
Inverting Power application

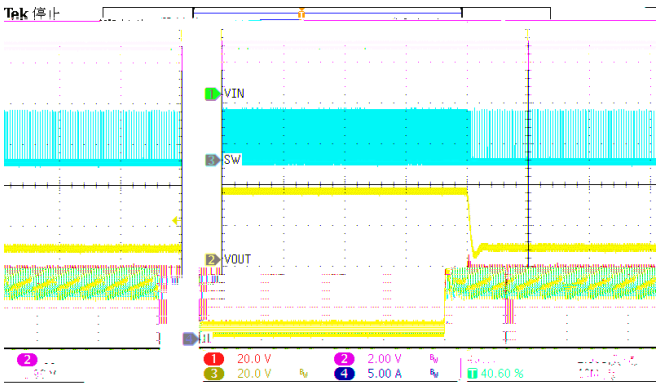
Application Waveforms

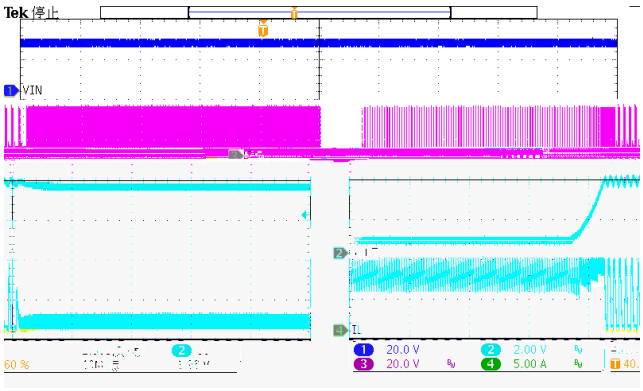




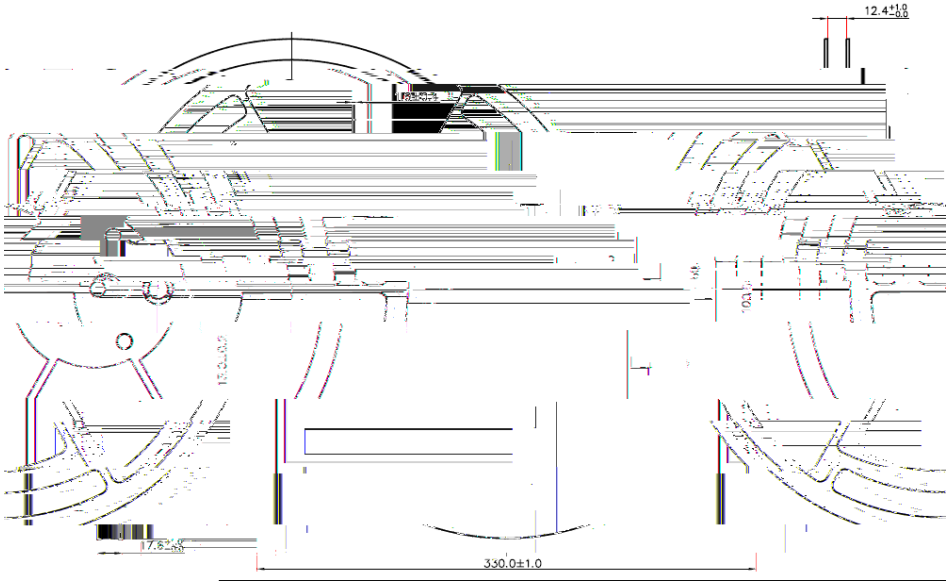
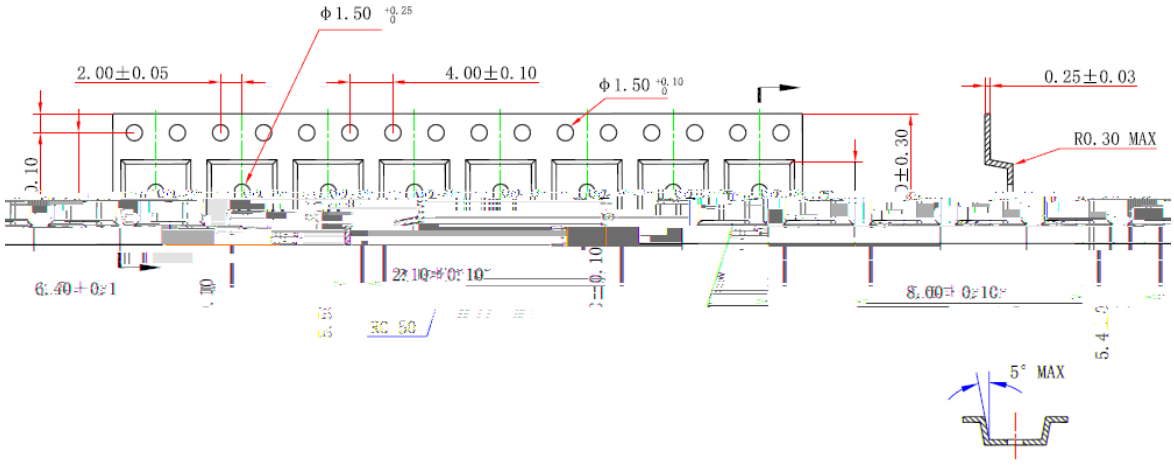








Application Waveforms(continued)

PACKAGE INFORMATION

TAPE AND REEL INFORMATION