

L L L d I d hede I e d ed h h
C H ed

KH I

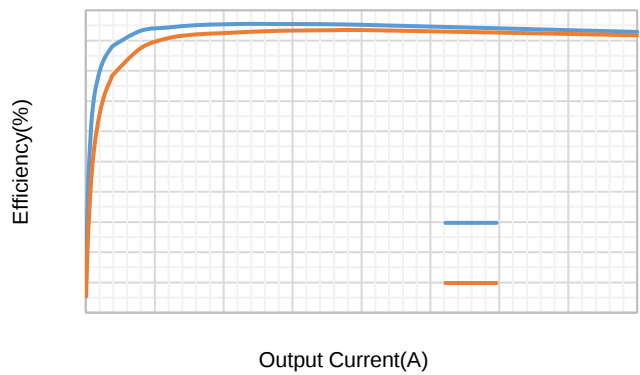
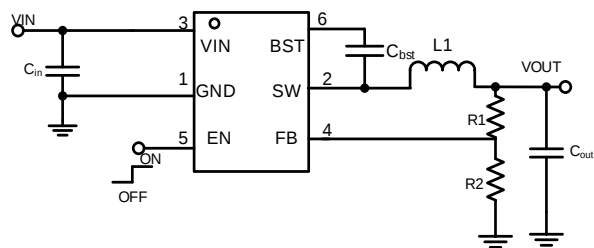
I H F ED

-

FF

EDI

OF FF ED



HLIED I EHO

L EH H D EHC ED

IE K C NCKCH DI

Over operating free-air temperature unless otherwise noted ⁽¹⁾

DESCRIPTION	MIN	MAX	UNIT
BST	-0.3	38	V
VIN ⁽²⁾	-0.3	32	V
SW	-0.3	32	V
SW (<10ns) ⁽³⁾	-3	32	V
BST-SW	-0.3	5.5	V
EN, FB	-0.3	5.5	V
Operating junction temperature ⁽⁴⁾	-40	150	°C
Storage temperature T _{STG}	-65	150	°C

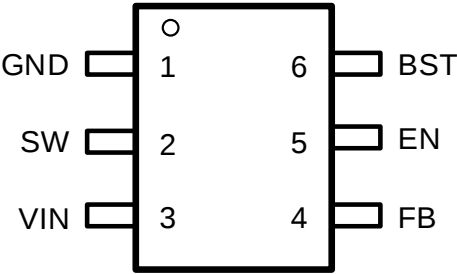
(1)

(2)

(3)

(4)

FD ED KH ED



Top View: SOT23-6L, Plastic

D E q a \$ S — q \$ y ñ Ò (b 4 U f “ & Â ë I Á P a) 7 Â G Y " † # A • V i a " è

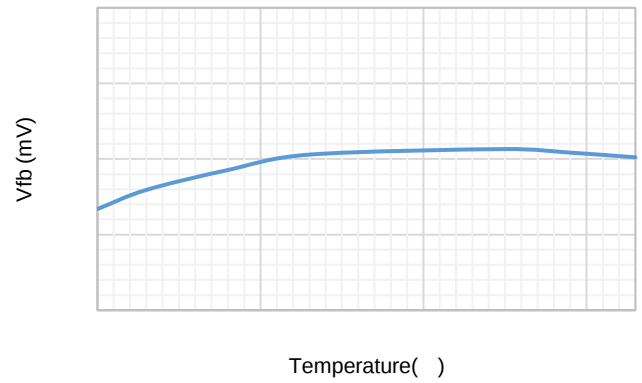
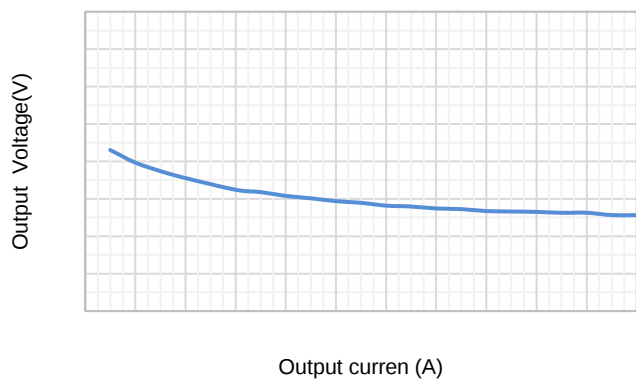
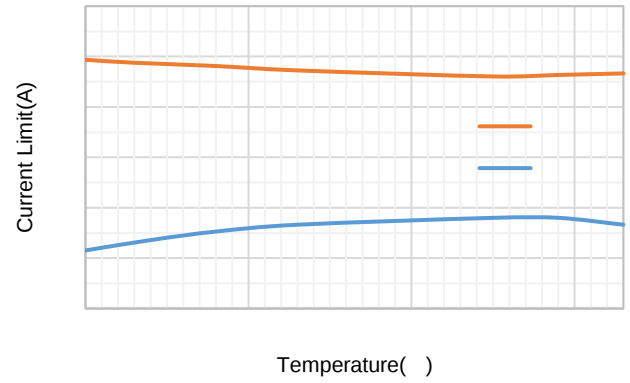
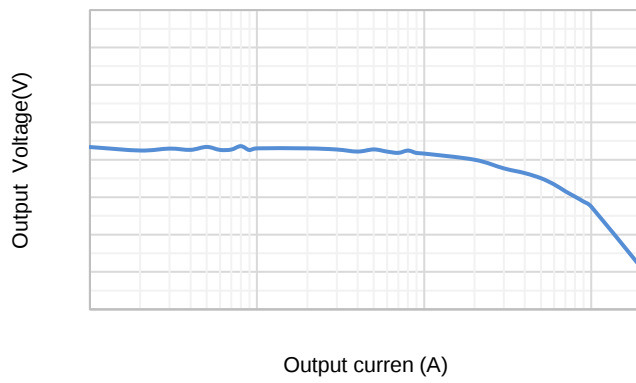
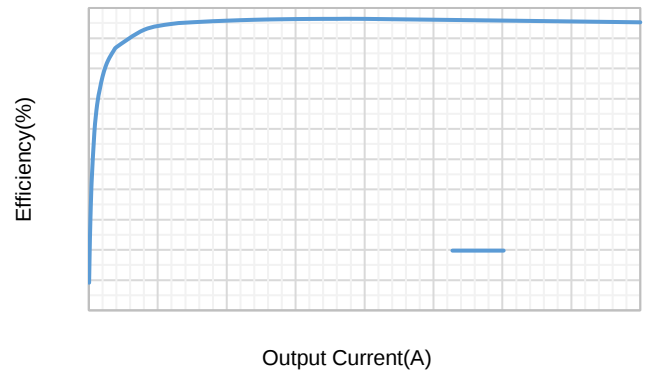
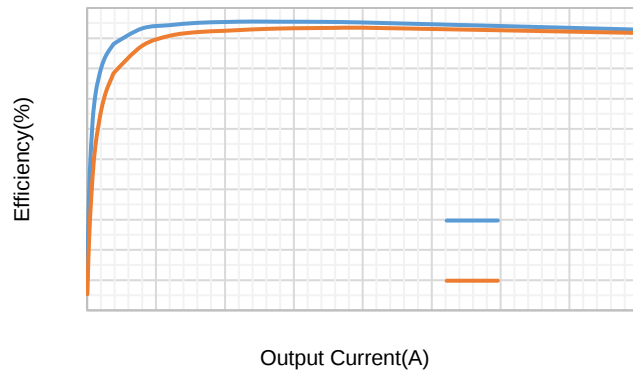
H E C C D E F H D E D E D I

I H D I

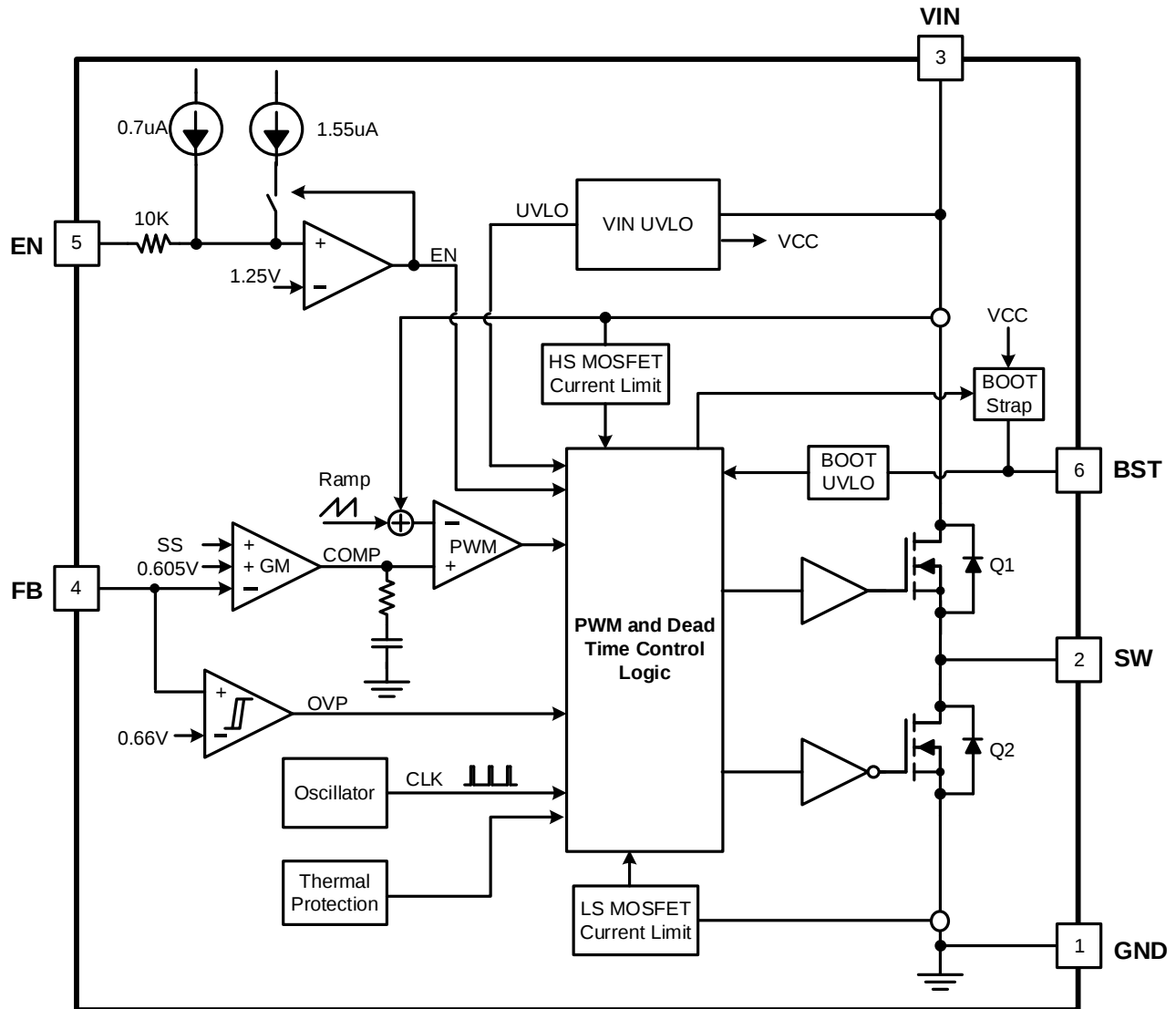
--	--	--	--	--

H H HI I

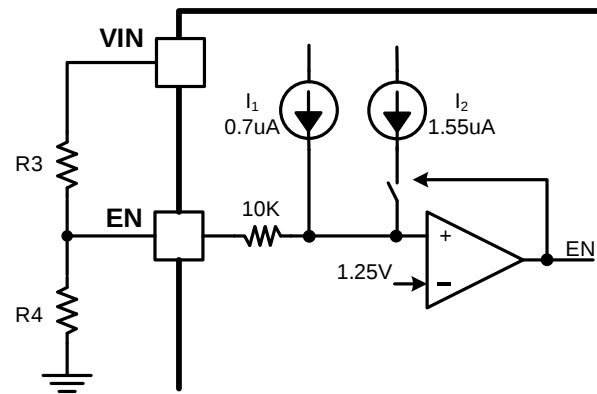
OF H H I I



KD ED E H C



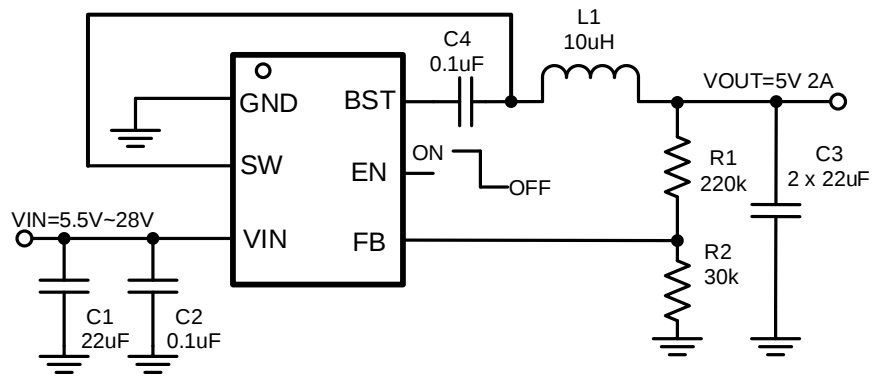
EF H ED



$$S_4 = \frac{W_f \frac{W_{FO}}{W_{FOS}} W_{fp}}{2 \cdot 2 \cdot \frac{W_{FO}}{W_{FOS}} 3} \quad (1)$$

$$S = \frac{S_4 W_{FO}}{W_{fp} W_{FO} S_4 2 3} \quad (2)$$

The inductor current is monitored during high-side MOSFET Q1 and low-side MOSFET Q2 on. The SCT2321E implements over current protection with cycle-by-cycle limiting high-side MOSFET peak current and low-side MOSFET valley current to avoid inductor current running away during unexpected overload or output hard short condition.



Design Parameters	Example Value
Input Voltage	12V typical, 5.5~28V
Output Voltage	5V
Output Current	2A
Output voltage ripple (peak to peak)	8mV
Switching Frequency	410kHz

$$W_o \quad \frac{PVU}{D_o \quad TX} \quad \frac{VU}{o}$$

$$VU \quad \frac{W_{PVU} \quad W_O \quad W_{PVU}}{TX^3 \quad M \quad D_{PVU} \quad W_O}$$

VU

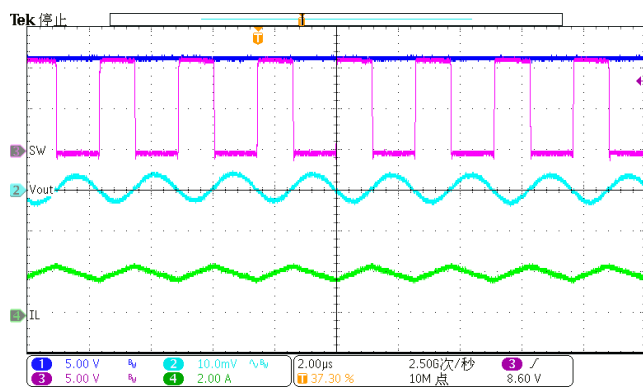
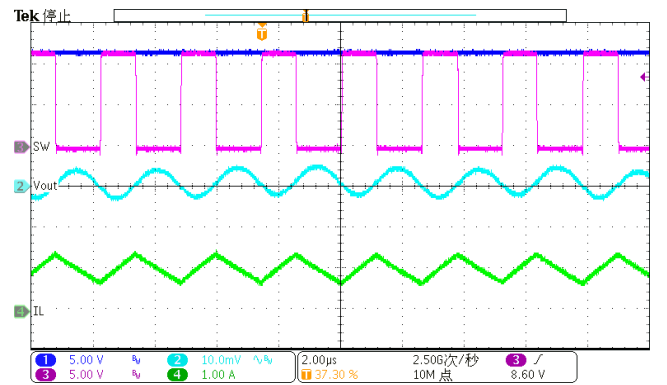
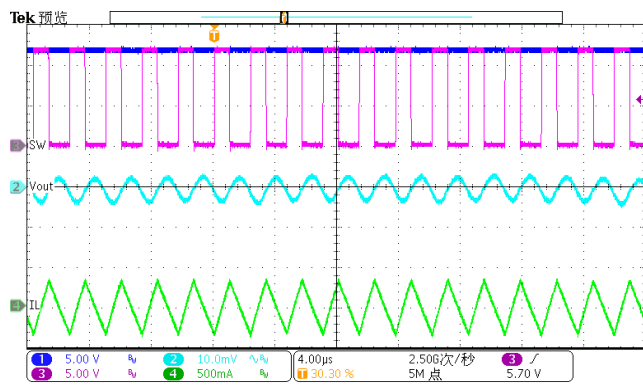
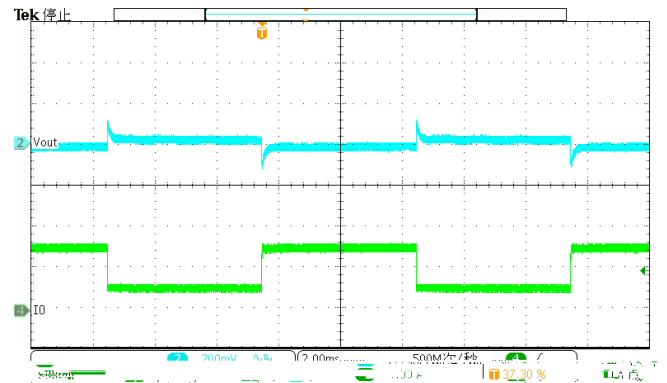
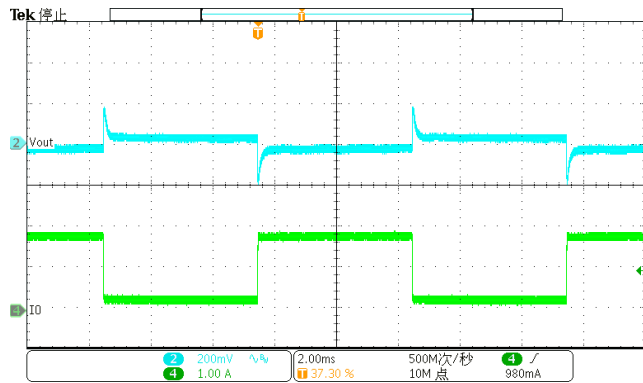
$$S_2 \quad \frac{W_{PVU} \quad W_f \quad S_3}{W_f}$$

(7)

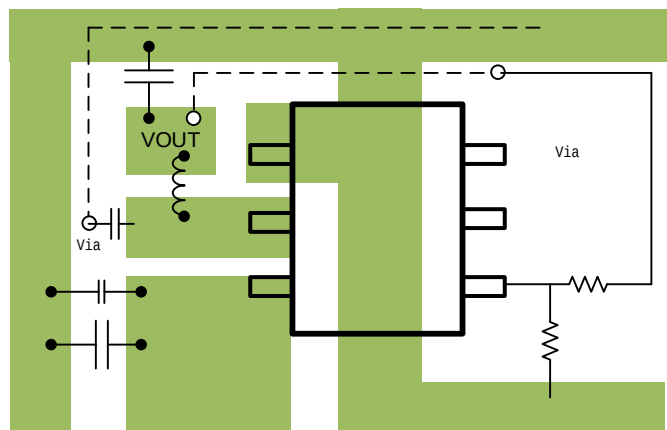
)LJXUH



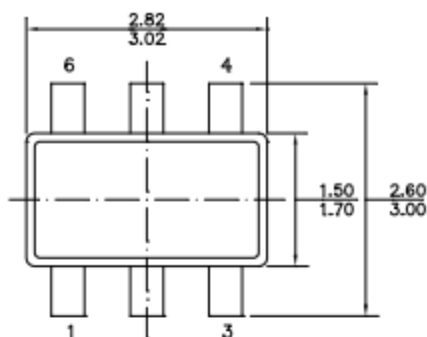
,



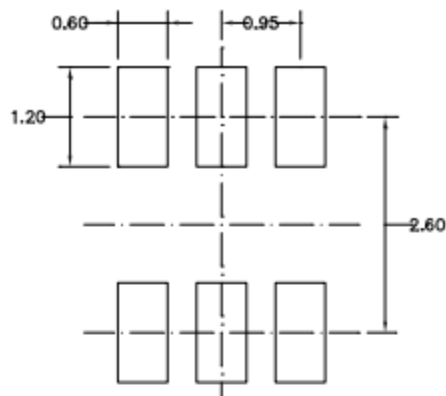
-
- 1.
 - 2.
 - 3.
 - 4.
 - 5.
 - 6.
 - 7.
 - 8.



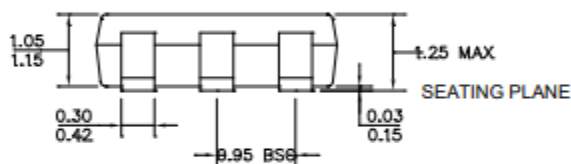
F D EHC ED



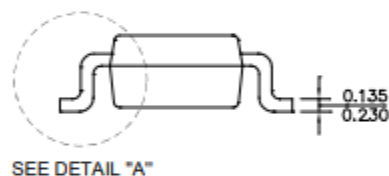
TOP VIEW



RECOMMENDED LAND PATTERN



END VIEW

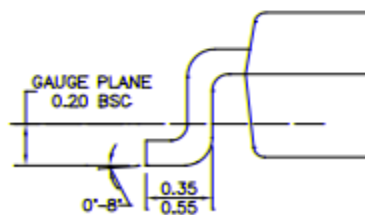


SEE DETAIL "A"

DIMENSIONS ARE IN MILLIMETERS.
 PACKAGE LENGTH DOES NOT INCLUDE MOLD FLASH,
 PROTRUSION OR GATE BURR.
 PACKAGE WIDTH DOES NOT INCLUDE INTERLEAD FLASH
 PROTRUSION.
 LEAD COPLANARITY (BOTTOM OF LEADS AFTER
 FORMING) SHALL BE 0.10 MILLIMETERS MAX.
 DRAWING CONFORMS TO JEDEC MO-193, VARIATION AB.
 DRAWING IS NOT TO SCALE.
 PIN 1 INDICATOR IS LOWER LEFT PIN WHEN READING TOP MARK
 (LEFT TO RIGHT, (SEE EXAMPLE TOP MARK))

NOTE:

- 1) ALL DIMENSIONS ARE IN MILLIMETERS
- 2) PACKAGE LENGTH DOES NOT INCLUDE MOLD FLASH, PROTRUSION OR GATE BURR
- 3) PACKAGE WIDTH DOES NOT INCLUDE INTERLEAD FLASH PROTRUSION
- 4) LEAD COPLANARITY (BOTTOM OF LEADS AFTER FORMING) SHALL BE 0.10 MILLIMETERS MAX
- 5) DRAWING CONFORMS TO JEDEC MO-193, VARIATION AB
- 6) DRAWING IS NOT TO SCALE
- 7) PIN 1 INDICATOR IS LOWER LEFT PIN WHEN READING TOP MARK (LEFT TO RIGHT, (SEE EXAMPLE TOP MARK))



DETAIL "A"

F D H D EHC ED

