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Over operating free-air temperature unless otherwise noted [1]

DESCRIPTION	MIN	MAX	UNIT
VIN, EN	-0.3	32	V
SW	-1	32	V
BST	-0.3	38	V
BST-SW	-0.3	6	V
VOUT	-0.3	16	V
PG, FSEL, MODE, VCC, FB	-0.3	6	V
Operating junction temperature [2]	-40	125	C
Storage temperature T_{STG}	-65	150	C

Top View: FCUTQFN3*3-12L, Plastic

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VIN	1	Input voltage. Decouple the input rail with at least 0.1uF input ceramic capacitor. Place the capacitor as close to VIN and PGND pins as possible. Use wide PCB traces and multiple vias to make the connection.
PGND	2	Power ground. Using wide PCB traces and multiple vias large enough to handle the load current.
PG	3	Power good open-drain output. PG is high if the output voltage is higher than 95% and lower than 105% of the nominal voltage.
FSEL	4	Switching frequency selection. Connecting to ground sets clock frequency to 400KHz. Floating sets clock frequency to 800KHz. Connecting to VCC sets clock frequency to 1.2MHz.
VOUT	5	VOUT is used to sense the output voltage of the buck regulator. Connect VOUT to the output capacitor of the regulator directly. Keep the VOUT sensing trace far away from the SW node. VIAs should also be avoided on the VOUT sensing trace. A trace larger than 25mil is required.
MODE	6	PFM, USM or FCCM mode selection. Connect the pin to VCC to force the device in Forced Continuous Current Modulation (FCCM) operation mode. Ground the pin to operate the device in Pulse Frequency Modulation (PFM) mode without Ultrasonic Mode (USM). Floating the pin to operate the device in PFM with USM.

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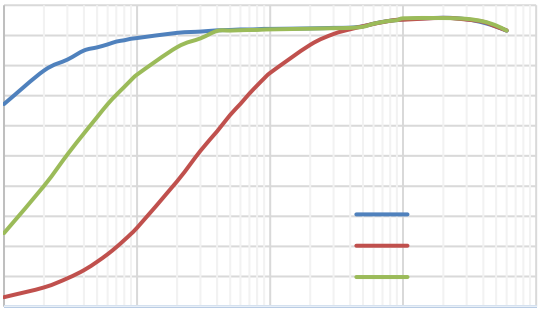

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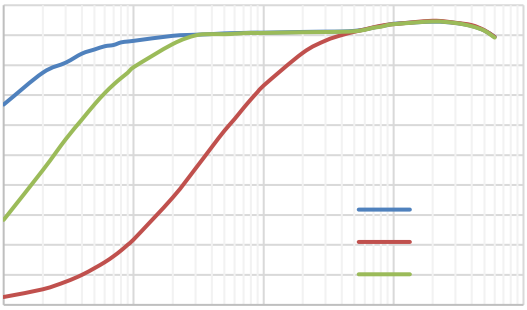

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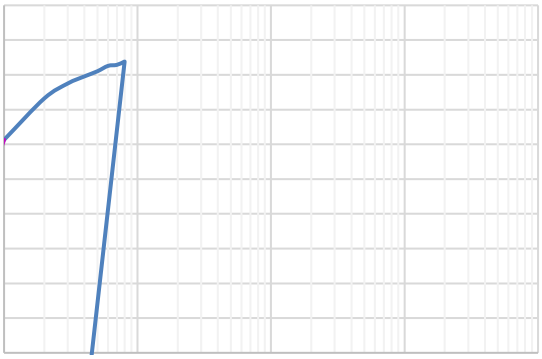

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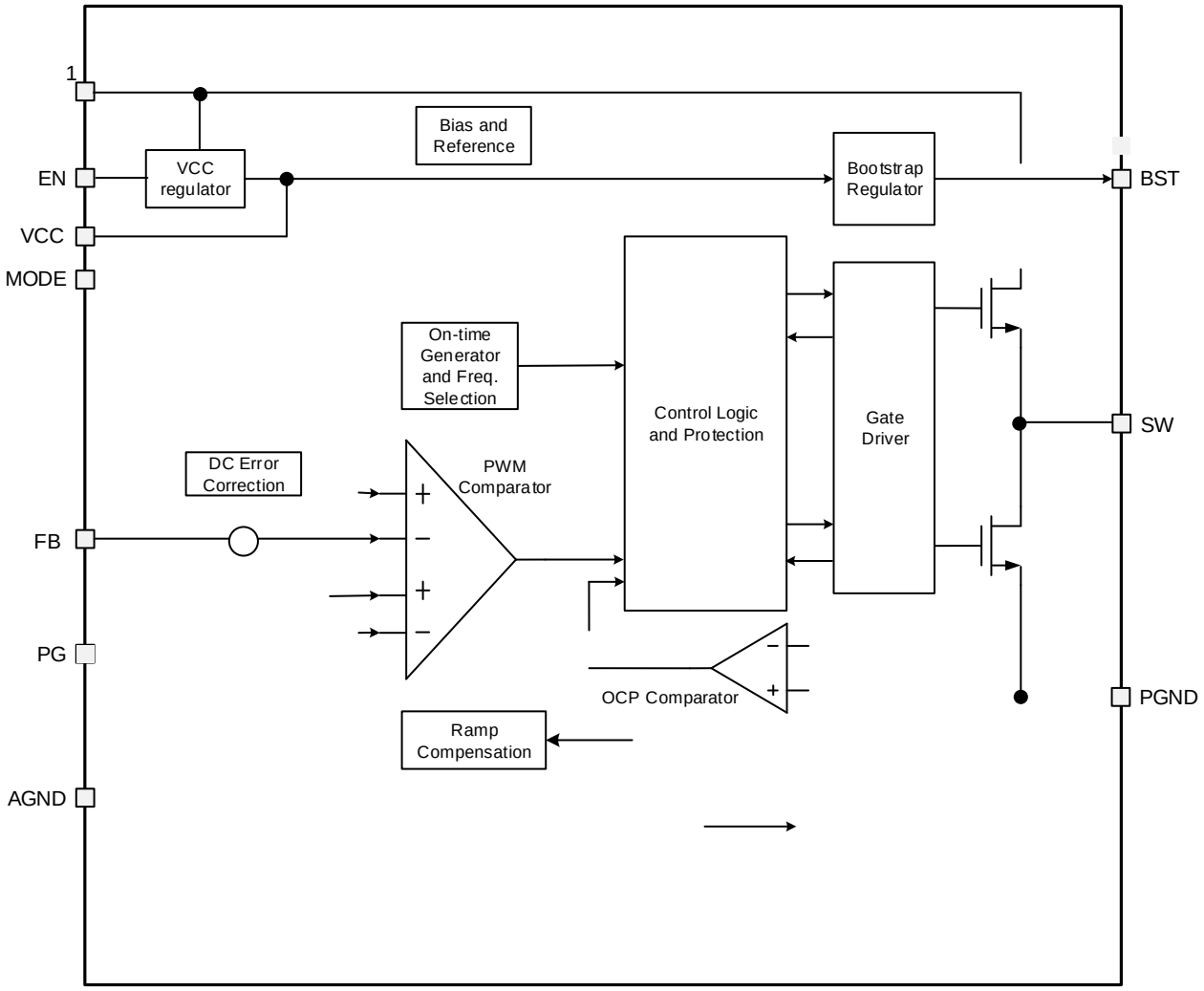
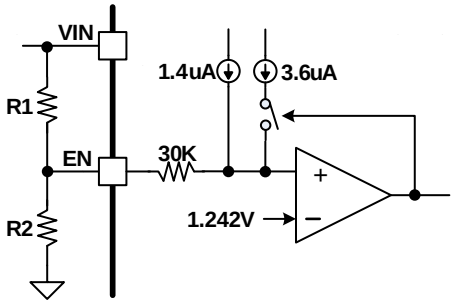

1
EN
VCC
MODE
FB
PG
AGND
VCC regulator
Bias and Reference
Bootstrap Regulator
BST
On-time Generator and Freq. Selection
Control Logic and Protection
Gate Driver
SW
DC Error Correction
PWM Comparator
OCP Comparator
Ramp Compensation
PGND


VIN
1.4uA
3.6uA
R1
EN
30K
R2
1.242V

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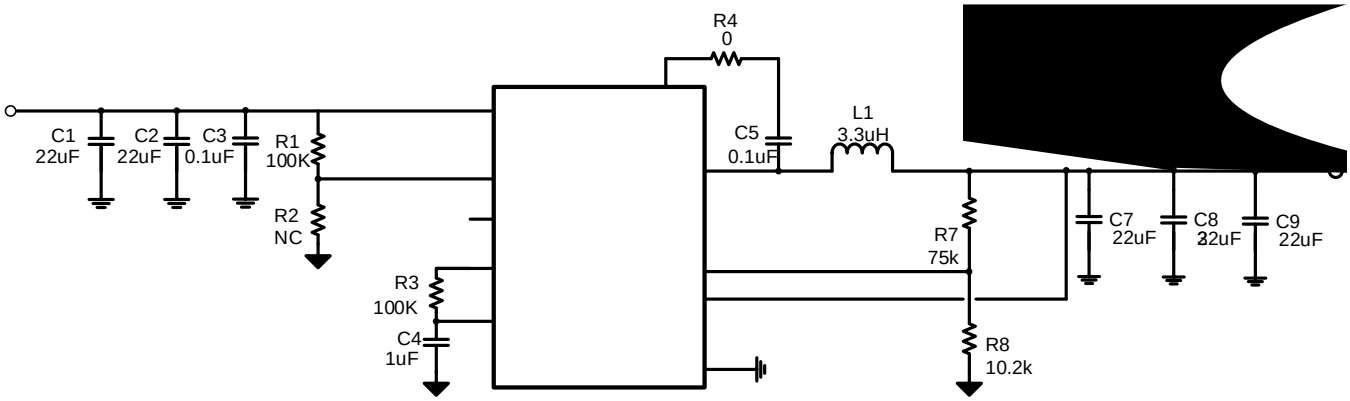

Design Parameters	Example Value
Input Voltage	12V
Output Voltage	5V
Output Current	6A
Output voltage ripple (peak to peak)	50mV
Switching Frequency	400kHz

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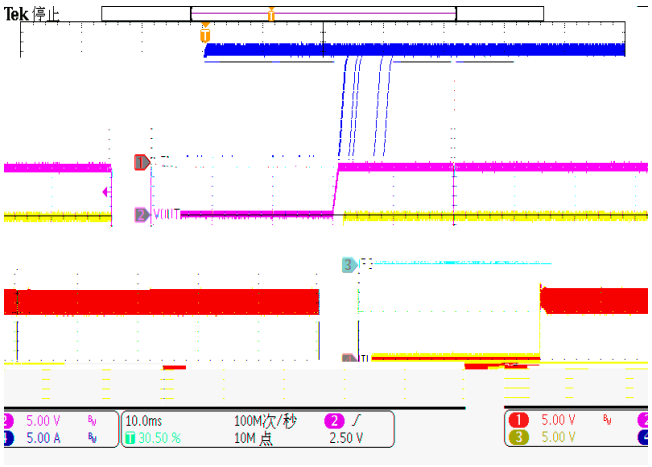

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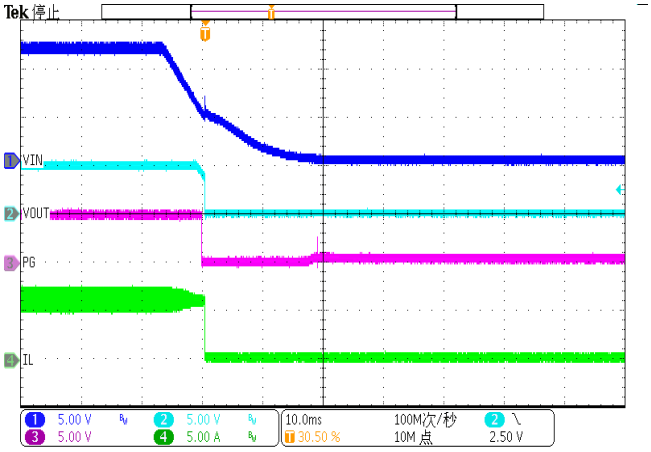

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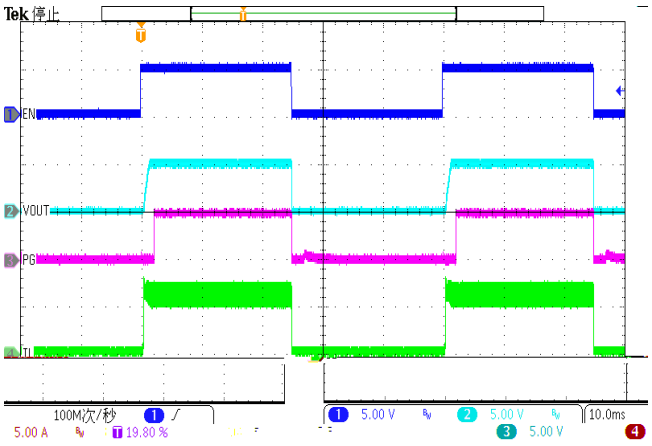

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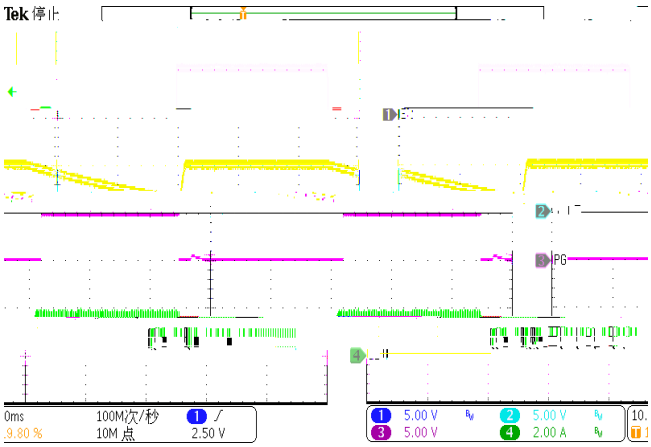

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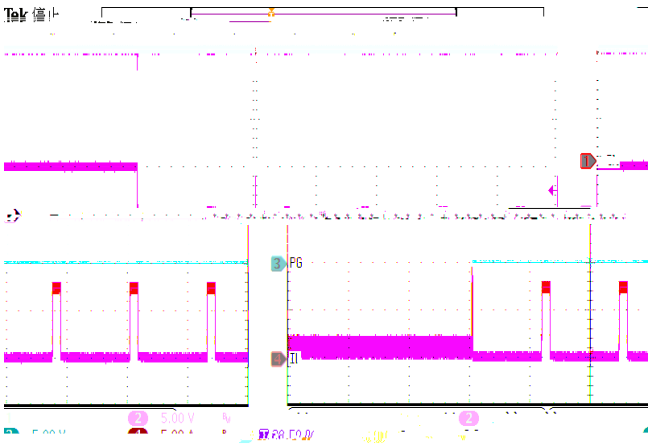

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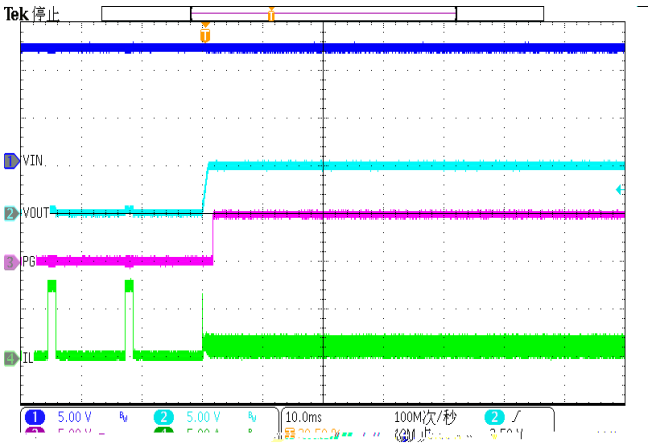

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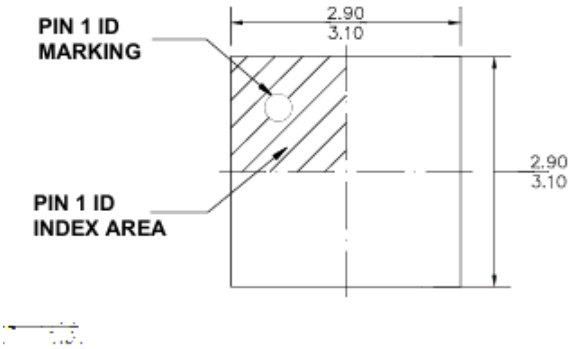
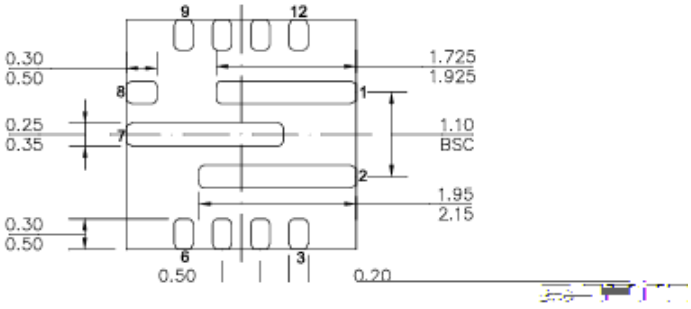
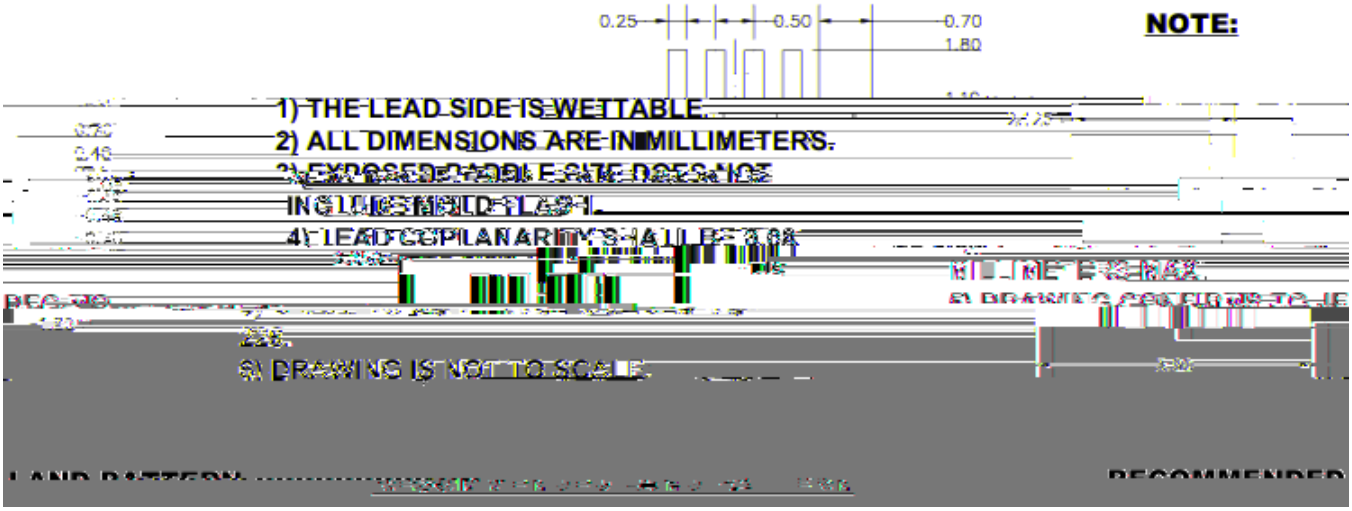




EW **TOP VIEW** **BOTTOM VI**

SIDE VIEW



12.4
1.9±0.4

Φ1.50
2.00±0.05
4.00±0.10
1.75±0.10
0.25±0.02
3.35±0.10
B
8.00±0.10
SECTION B-B
6° MAX.
SECTION A-A