

# Bias supply DC-DC KIT\_6W\_12V\_ICE5

Auxiliary supply solution featuring off-line  
SMPS current mode controller IC with  
800 V CoolMOS™ P7 SJ MOSFET

# Description

## KIT\_6W\_12V\_ICE5



**Ordering code:**  
**KIT\_6W\_12V\_ICE5**

### Board components

- › QR flyback PWM controller 5th generation ([ICE5QSAG](#))
- › 800 V CoolMOS™ P7 SJ MOSFET ([IPU80R4K5P7](#))

### Board specifications

- › Input voltage: 90 V<sub>DC</sub> - 400 V<sub>DC</sub>
- › Output voltage: 12 V<sub>DC</sub> (prim. and sec. side)
- › Output power max.: 6 W (prim. + sec. side)

### To be used with the following boards

- › [EVAL\\_800W\\_ZVS\\_FB\\_CFD7](#)
- › [EVAL\\_2KW\\_ZVS\\_FB\\_CFD2](#)
- › [EVAL\\_2KW\\_ZVS\\_FB\\_CFD7](#)
- › [EVAL\\_2.5KW\\_CCM\\_4PIN](#)
- › [EVAL\\_2K5W\\_CCM\\_4P](#)

# Product features

## ICE5QSAG

### Description:

- › Infineon latest 5<sup>th</sup> generation quasi-resonant flyback PWM controller offers high performance and comprehensive suite of protection to increase system robustness.

### Summary of Features:

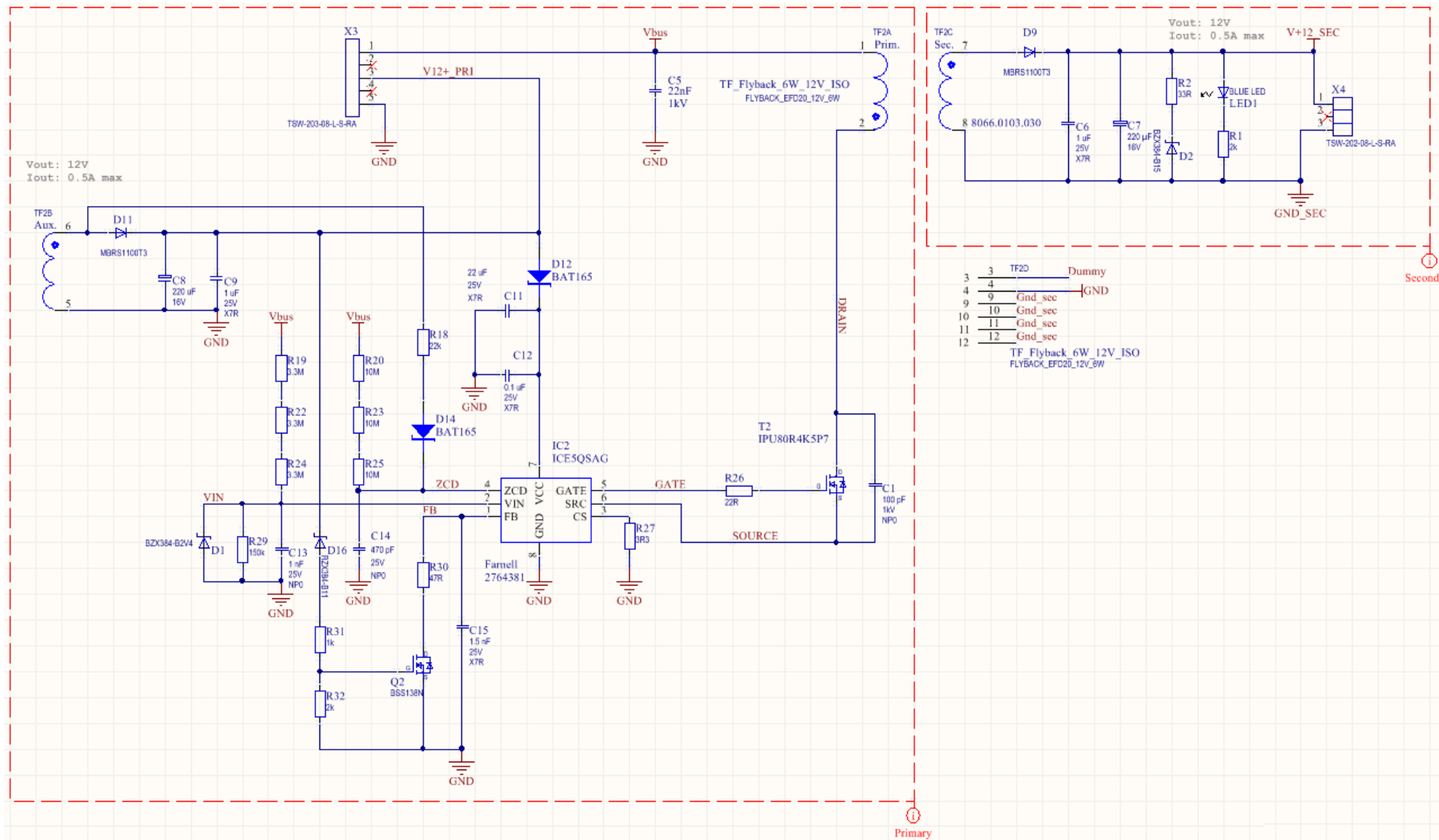
- › Novel quasi-resonant switching scheme
- › Rapid and adjustable start-up with cascode configuration
- › 2 level selectable active burst mode level
- › Built-in digital soft-start
- › Cycle by cycle peak current limitation
- › Digital frequency reduction with decreasing load for higher efficiency
- › Adjustable line input over-voltage and brown IN/OUT protection
- ›  $V_{CC}$  and CS pin short to ground protection
- › OLP, output short, output over-voltage, OTP with hysteresis and  $V_{CC}$  over/under voltage protection
- › Auto-restart for all protection features



### Benefits:

- › High efficiency with latest CoolMOS™ P7 SJ MOSFET family and quasi-resonant switching scheme
- › Auto-restart recovery scheme to minimize interruption to system operation
- › Extensive protection coverage to increase system robustness
- › Rapid start-up performance with cascode configuration

# Schematic

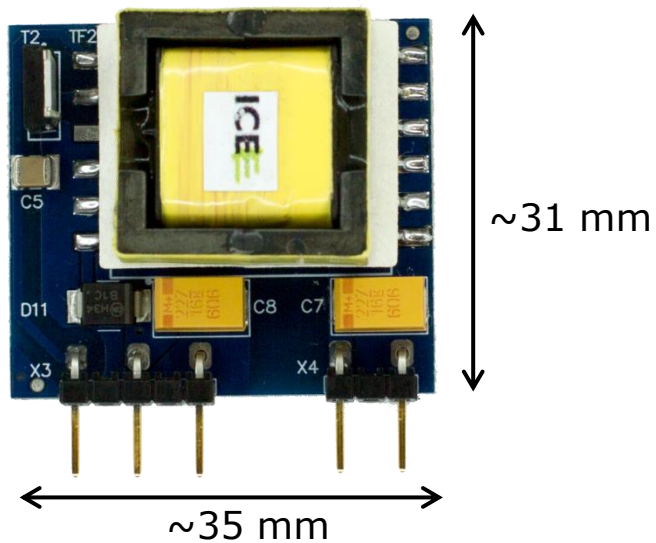


# Base board KIT\_6W\_12V\_ICE5



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## Technical Material

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- > PCB Design Data

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