# 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

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# Description
# KIT_6W_12V_ICE5




**Ordering code: KIT_6W_12V_ICE5**

## Board components

- CoolSET™ standalone controller (ICE5QSAG)
- 800 V CoolMOS™ P7 SJ MOSFET (IPU80R4K5P7)

## Board specifications

- Input voltage: 90 $V_{DC}$ - 400 $V_{DC}$
- Output voltage: 12 $V_{DC}$ (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


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# Product features

## ICE5QSAG

## Description:

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

## Summary of Features:



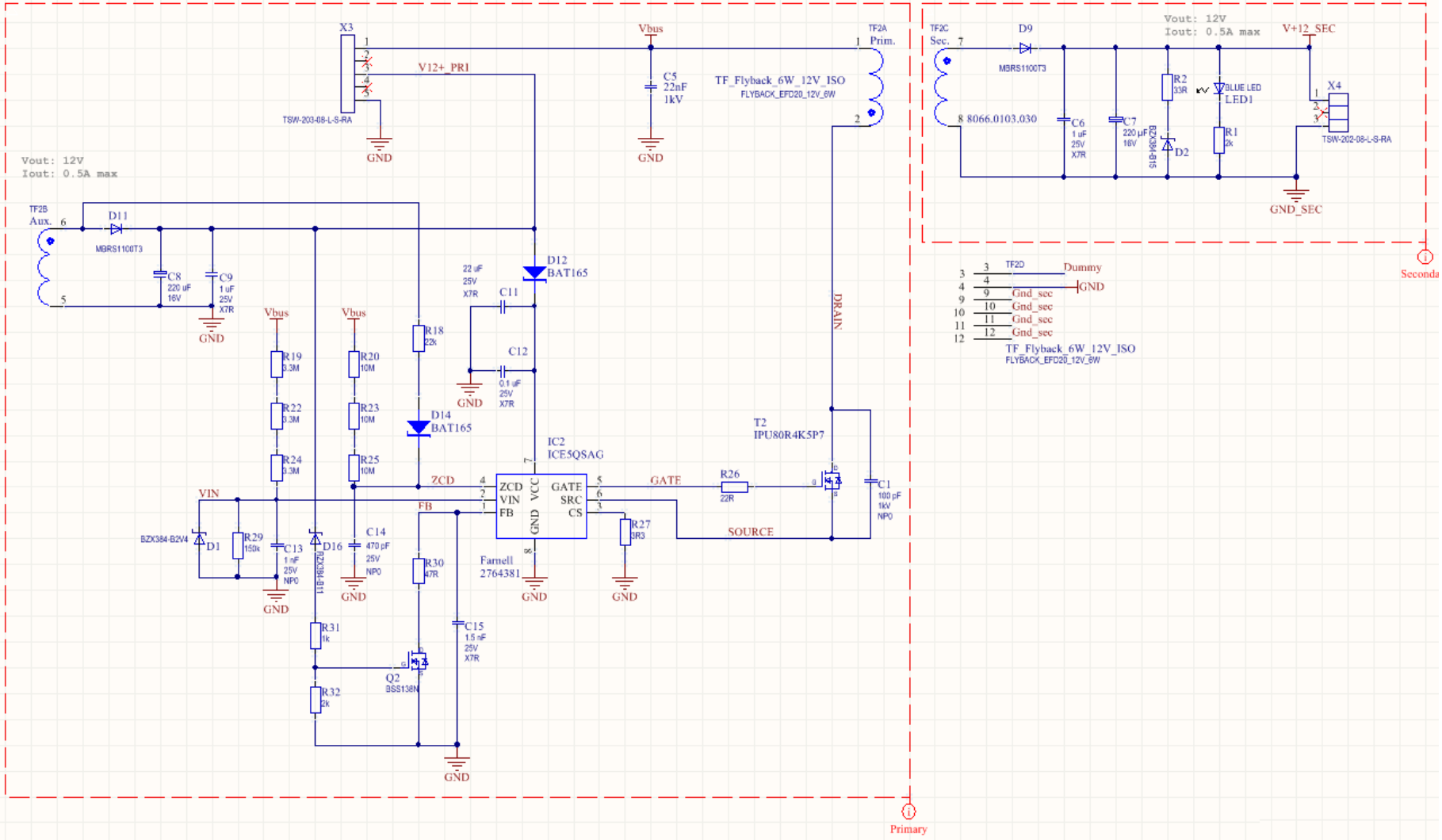

› Novel quasi-resonant switching scheme
› Rapid and adjustable start-up with cascode configuration
› 2 level selectable active burst mode level
› Built-in digital soft-start
› Cycle by cycle peak current limitation
› Digital frequency reduction with decreasing load for higher efficiency
› Adjustable 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


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# Schematic

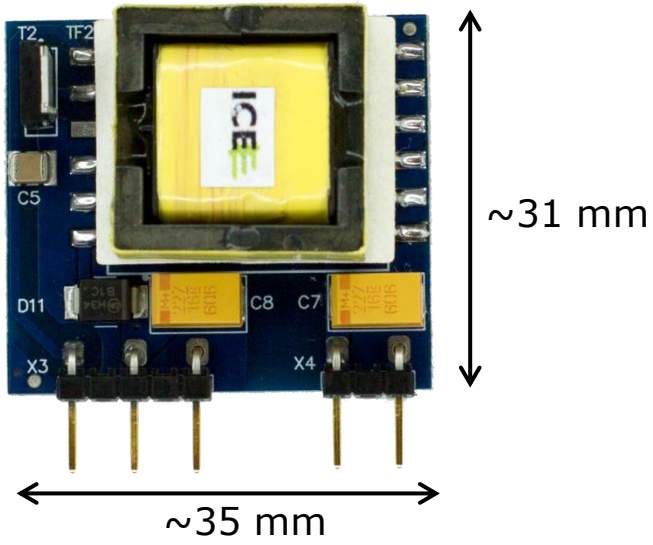




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# Base board
# KIT_6W_12V_ICE5




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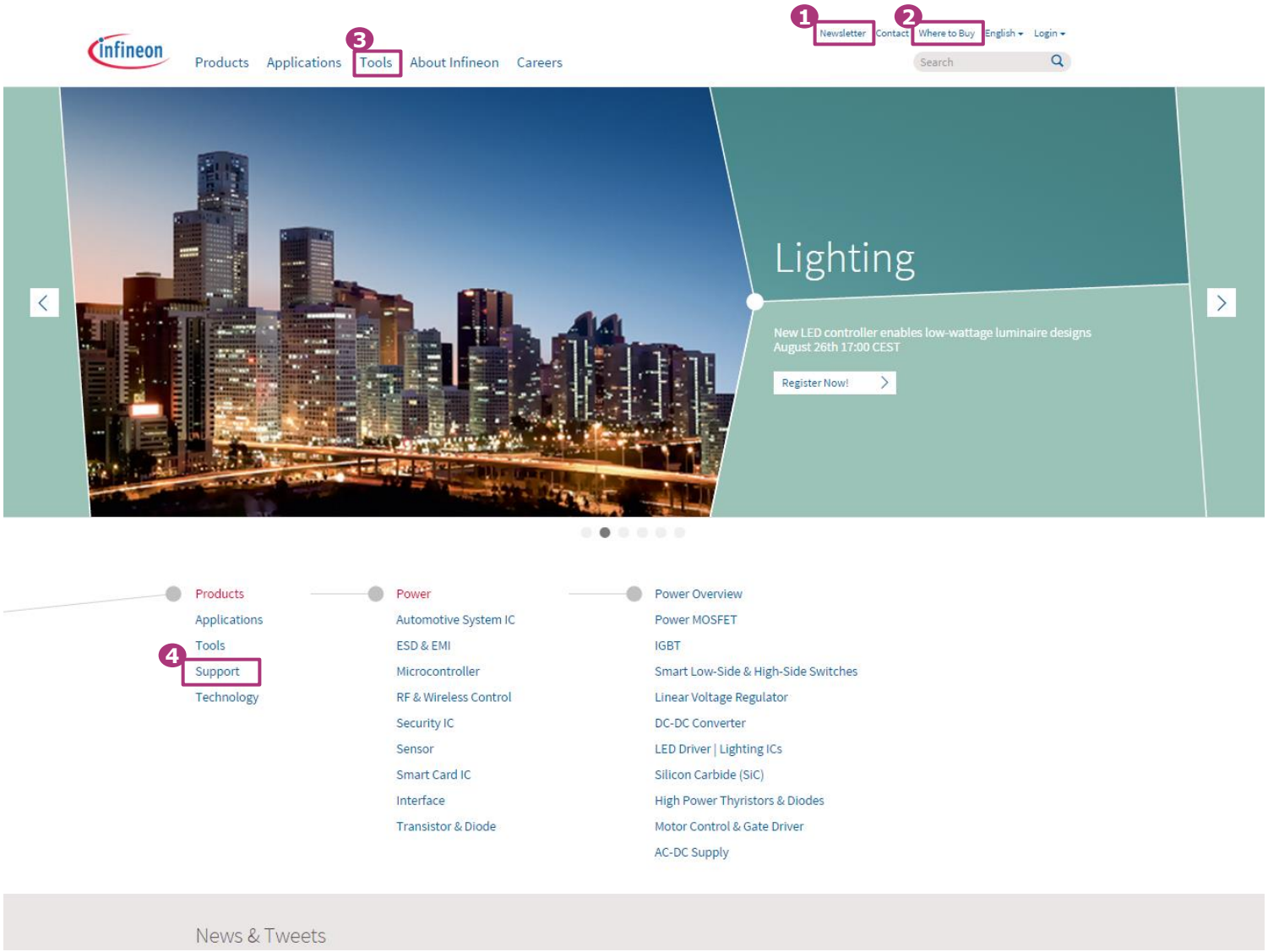

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# Support

| | | |
|---|---|---|
| Technical Material | › Application Notes<br>› Simulation Models<br>› Datasheets<br>› PCB Design Data | |
| Evaluation Boards | › Evaluation Boards<br>› Demoboards<br>› Reference Designs | › www.infineon.com/evaluationboards |
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