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# KIT\_ACT\_BRD\_60R022S7

## Overview

Line rectifier module featuring 600V CoolMOS™ S7 with integrated control and driving scheme

The KIT\_ACT\_BRD\_60R022S7 aims to replace the standard diode bridge rectifier with an active full-bridge for line rectification in standard CCM boost PFCs. The active-bridge is based on new CoolMOS™ S7 22mΩ of  $R_{DS(on)}$ . The board is equipped with all control and driving circuitries. The board has to be connected via 5 pins: to line and neutral of the input AC network, to DC+ and DC- at the input of the boost converter and to the 12V supply for the driving logic. The GND of the logic is linked to DC-.

## Summary of Features

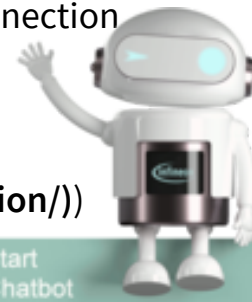
- Active-bridge daughter card for line rectification
- Integrated control and driving scheme
- Based on 22mΩ CoolMOS™ S7

## Benefits

- Efficiency increases compared to standard bridge solution
- Extremely compact design (almost the same size as that of the standard bridge)
- Lower temperature rises compared to standard bridge solution
- No need for heatsink connection

## Potential Applications

- Power supplies (SMPS ([/cms/en/applications/solutions/power-conversion/](#)))
- Telecom ([/cms/en/applications/information-communication-technology/telecommunication-infrastructure/ac-dc/](#))



## List of components:

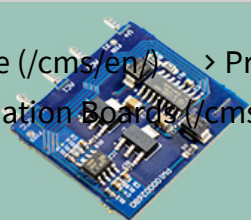
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- 600V CoolMOS™ S7 superjunction MOSFET  
> Evaluation Boards (/cms/en/product/evaluation-boards/) > KIT\_ACT\_BRD\_60R022S7  
(IPT60R022S7 (/cms/en/product/power/mosfet/n-channel/500v-950v/ipt60r022s7/))
- 200V dual SR controller IC  
(  
IR11688 (/cms/en/product/power/ac-dc-power-conversion/ac-dc-pwm-pfc-controller/synchronous-rectification-ics/ir11688s/)  
)
- Fast dual-channel isolated MOSFET gate-driver IC  
(2EDF7275F (/cms/en/product/power/gate-driver-ics/2edf7275f/))



(/cms/en/product/evaluation-boards/eval\_2k4w\_act\_brd\_s7/)



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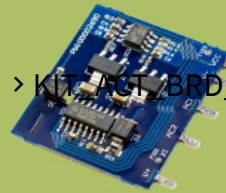


### Related kit

KIT\_ACT\_BRD\_60R040S7

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### Related kit

KIT\_ACT\_BRD\_60R065S7

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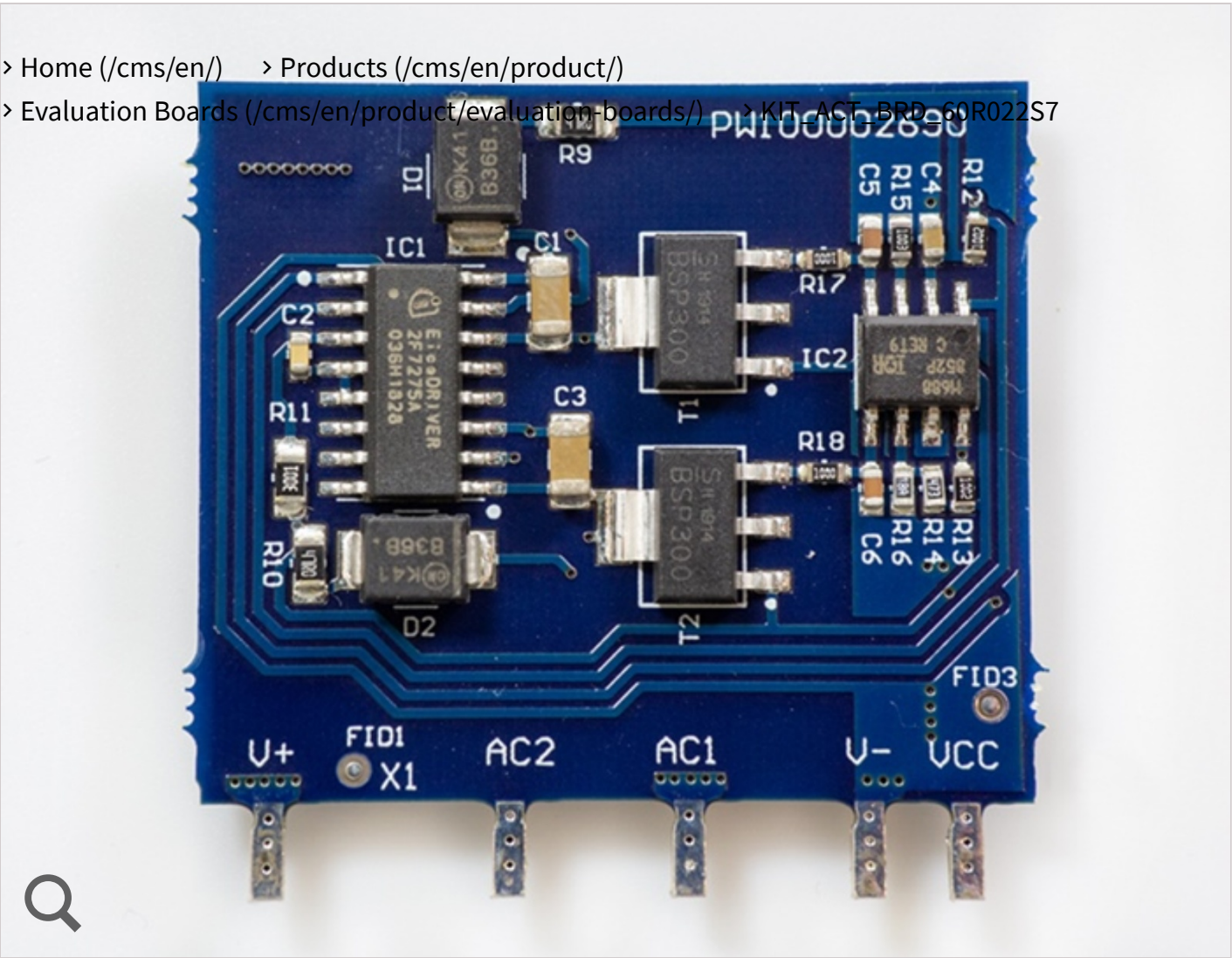


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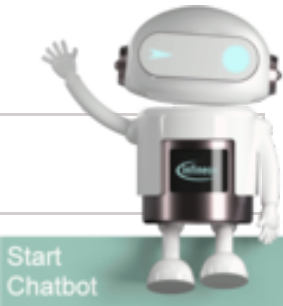
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Evaluation kit KIT\_ACT\_BRD\_60R022S7 (/dgdI/Infineon-Evaluation\_kit\_KIT\_ACT\_BRD\_60R022S7-ApplicationNotes-v01\_00-EN.pdf?fileId=5546d462700c0ae60170875742d51d3f) [Share](#)  
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Parametrics

|             |                      |
|-------------|----------------------|
| Parametrics | KIT_ACT_BRD_60R022S7 |
| Board Type  | Evaluation Board     |
| Dimensions  | 35mm×2.5mm×30.5mm    |



|                                                                                                      |                                                               |
|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| <b>Parametrics</b><br>> Home (/cms/en/) > Products (/cms/en/product/)                                | <b>KIT_ACT_BRD_60R022S7</b>                                   |
| > Evaluation Boards (/cms/en/product/evaluation-boards/) > KIT_ACT_BRD_60R022S7<br>Frequency min max | 0.045 kHz 0.065 kHz                                           |
| Input Type                                                                                           | AC                                                            |
| P <sub>out</sub> max                                                                                 | 2400 W                                                        |
| Product Category                                                                                     | CoolMOS™ ; Gate Driver ; SR Controller                        |
| Product Name                                                                                         | KIT_ACT_BRD_60R022S7                                          |
| Qualification                                                                                        | Standard                                                      |
| Supply Voltage<br>min max                                                                            | 85 V 265 V                                                    |
| Target Application                                                                                   | Power Supplies ; SMPS ; Telecom                               |
| Topology                                                                                             | Boost ; Continuous Conduction Mode (CCM) ; non-Isolated ; PFC |

## Documents

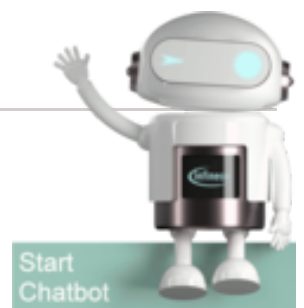
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## + Product Brief

