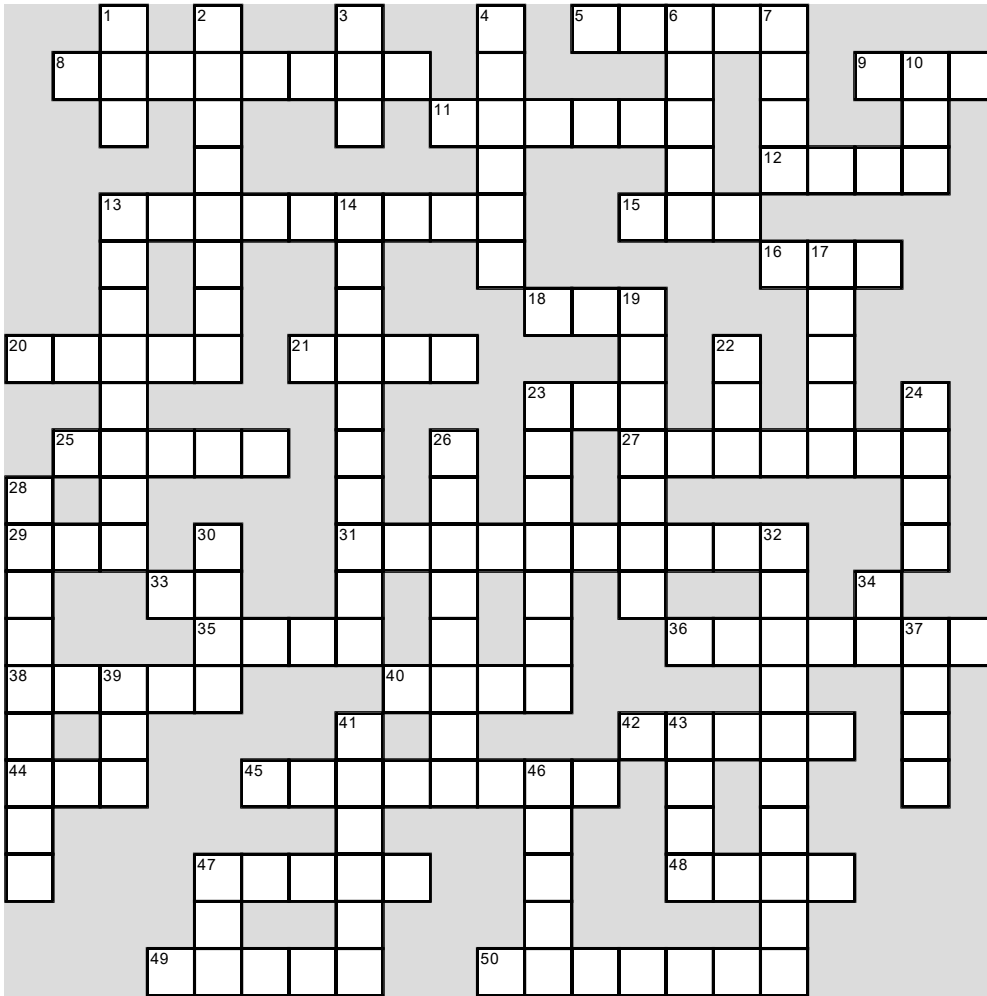


# EE-Sim® Power Designer Challenge

Complete as much of the crossword as you can and email your puzzle to [ee-sim@maximintegrated.com](mailto:ee-sim@maximintegrated.com) by September 27, 2017.

You will be entered in a drawing to win a Garmin fēnix® 5 watch (US\$599.99 value).

For complete sweepstakes rules, see [http://ic.maximintegrated.com/Maxim\\_EESIM\\_Puzzle\\_Sweepstakes\\_Rules](http://ic.maximintegrated.com/Maxim_EESIM_Puzzle_Sweepstakes_Rules).



## ACROSS

- |   |                                 |
|---|---------------------------------|
| 5 _____ factor correction                 | 29 0% duty cycle                |
| 8 EE-Sim's waveform viewer                | 31 What Henries expresses       |
| 9 It has a gate, source, and drain        | 33 Edison's choice for the grid |
| 11 Three parallel, horizontal lines       | 35 Two $V_{OUTS}$               |
| 12 Demand on a power supply               | 36 Powered by AC                |
| 13 A line fluctuation                     | 38 Buck-boost topology          |
| 15 Typical $f_{SW}$ unit                  | 40 The perfect ripple plot      |
| 16 Not through-hole                       | 42 Make this short and wide     |
| 18 Converts without switching             | 44 Volt/Ohm                     |
| 20 Six _____ shielding                    | 45 Groundless                   |
| 21 Charge ____: capacitor-based converter | 47 Digital power protocol       |
| 23 Inductor current never goes to zero    | 48 Heat _____                   |
| 25 Step-up                                | 49 Measurement device           |
| 27 Fastest simulator for switch-mode ICs  | 50 Power _____ ( $W/in^3$ )     |

## DOWN

- 1 Resistor color for "2"
- 2 Uses a transformer
- 3 Xilinx® spreadsheet
- 4 Assume lower capacitance
- 6 Pulse \_\_\_\_\_ Modulation
- 7 Tape & \_\_\_\_\_
- 10 \_\_\_\_\_ strap (engineer's bracelet)
- 13 Size or efficiency?
- 14 4.5V to 60V market
- 17 SPICE or Simplis file
- 19  $V=IR$
- 22 List of components
- 23 Integrated \_\_\_\_\_
- 24 Advanced engineering degree
- 26 AC loop analysis result
- 28 Limits inrush current
- 30 Australian rock band
- 32  $P_{OUT}/P_{IN}$
- 34 \_\_\_\_\_ Day (March 14)
- 37 Rechargeable battery chemistry
- 39 Transistor type
- 41 MAXM17504, for example
- 43 European Directive 2002/95/EC
- 46 Increases with switching speed
- 47 Pin for  $\mu P$