

TABLE IV
PERFORMANCE COMPARISON

Reference	[25]	[26]	[27]	[28]	[29]	This work
Year	2011	2004	2004	1997	2012	
Topology	Buck	Cascaded Buck	Buck	Cascaded buck	Cascaded buck	Merged two-stage
Technology	0.35 μm	0.25 μm	0.6 μm	0.15 μm	0.35 μm	0.18 μm
Input Voltage	2.7-4.2 V	2.8-5.5 V	3-5.2 V	3.3 V	2.5-5 V	4.0-5.5 V
Output Voltage	2.4 V	1.0-1.8	$V_{in} - 0.2$ V	1.65 V	1.0-1.8 V	0.8-1.3 V
Switching Frequency	5 MHz	0.5-1.5 MHz	300 kHz-1 MHz	12.8 MHz	1.3 MHz	10 MHz
Efficiency (η_{peak})	91 %	92%	89.5%	75%	94%	81%
Voltage step-down at η_{peak}	3.3 V to 2.4 V	4 V to 1.5 V	3.6 V to 2.0 V	3.3 V to 1.65 V	2.5 V to 1.8 V	5.0 V to 1.3 V
Output power	0.12 W to 1.2 W	0.15 mW to 0.6 W	0.1 W to 0.8 W	8.25 mW to 82.5 mW	18 mW to 0.675 W	0.3W to 0.8 W

IEEE Int. Solid-State Circuits Conf. Digest of Technical Papers (ISSCC), pp. 210–211, 2010.

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David J. Perreault (S'91, M'97, SM '06) received the B.S. degree from Boston University, Boston, MA, and the S.M. and Ph.D. degrees from the Massachusetts Institute of Technology, Cambridge, MA. In 1997 he joined the MIT Laboratory for Electromagnetic and Electronic Systems as a Post-doctoral Associate, and became a Research Scientist in the laboratory in 1999. In 2001, he joined the MIT Department of Electrical Engineering and Computer Science, where he is presently Professor of Electrical Engineering. His research interests include design, manufacturing, and control techniques for power electronic systems and components, and in their use in a wide range of applications. Dr. Perreault received the Richard M. Bass Outstanding Young Power Electronics Engineer Award from the IEEE Power Electronics Society, an ONR Young Investigator Award, and the SAE Ralph R. Teetor Educational Award, and is co-author of four IEEE prize papers.



Robert Pilawa-Podgurski (S'06, M'11) was born in Hedemora, Sweden. He received dual B.S. degrees in physics, electrical engineering and computer science in 2005, the M.Eng. degree in electrical engineering and computer science in 2007, and the Ph.D. degree in electrical engineering in 2012, all from the Massachusetts Institute of Technology.

He is currently an Assistant Professor in the Electrical and Computer Engineering Department at the University of Illinois, Urbana-Champaign, and is affiliated with the Power and Energy Systems group. He performs research in the area of power electronics. His research interests include renewable energy applications, energy harvesting, CMOS power management, and advanced control of power converters.