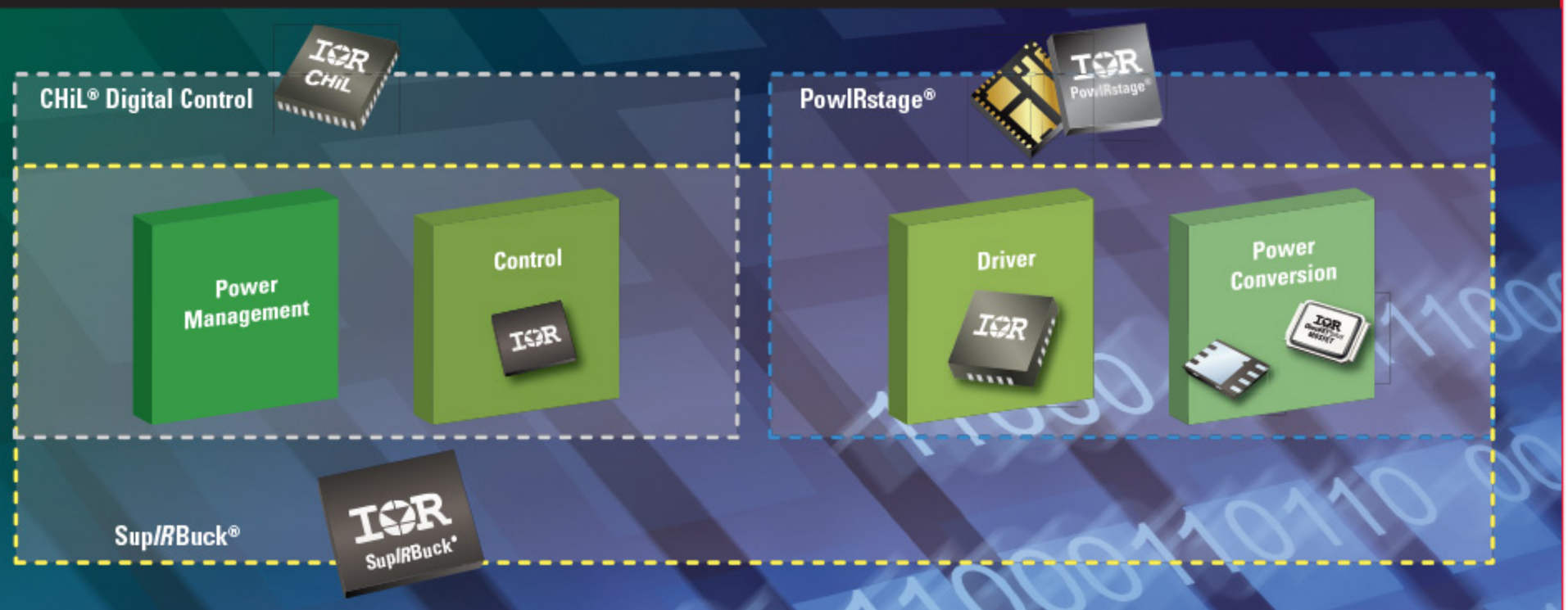
DC-DC Point-of-Load Solutions
Product Selection Guide



infineon + IOR = A Powerful Combination

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DC-DC Point -of-Load Solutions

Broad portfolio of products targeting multiple market segments

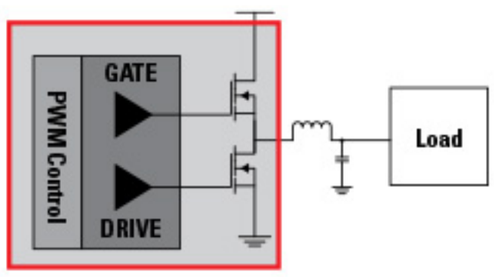
- Computing & Storage
- Networking & Communications
- Test & Measurement

- Broadcast
- Industrial
- Consumer

Products & Solutions

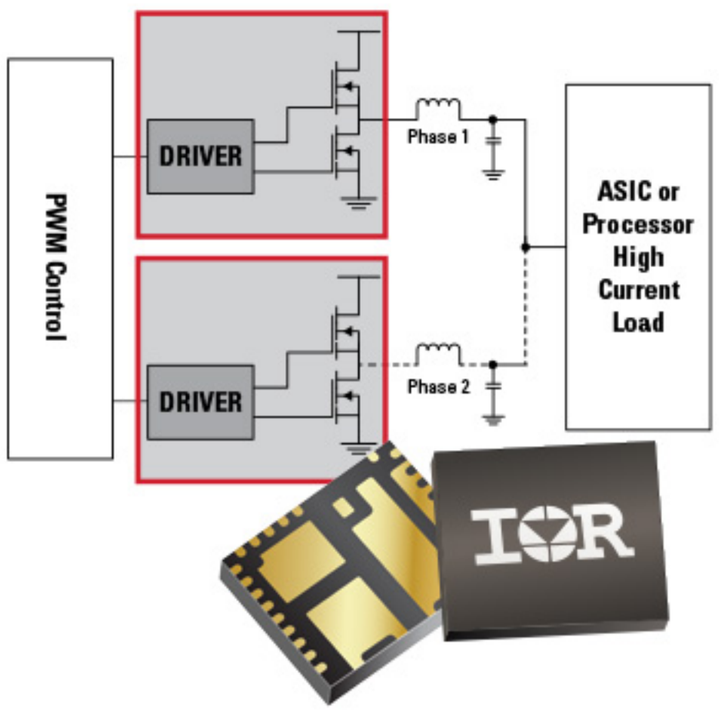
Integrated

Point-of-Load Sup*IR*Buck®



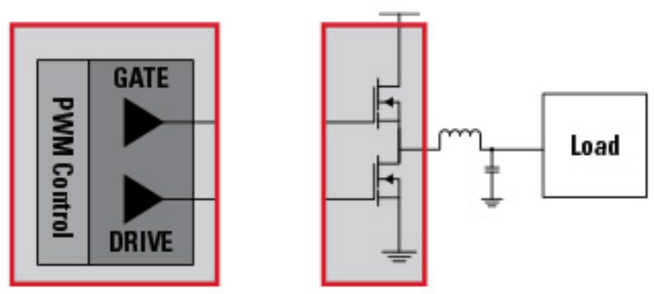
- Fully Integrated DC/DC POL

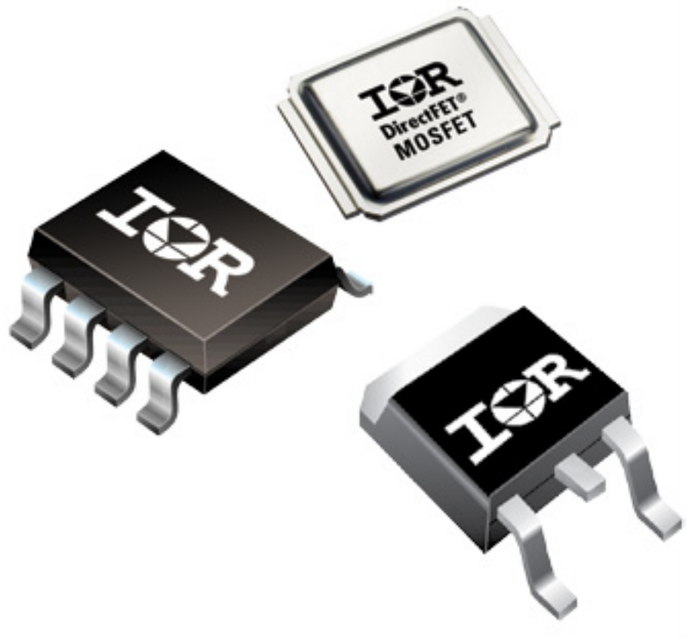
Multi-Phase PowIRstage®



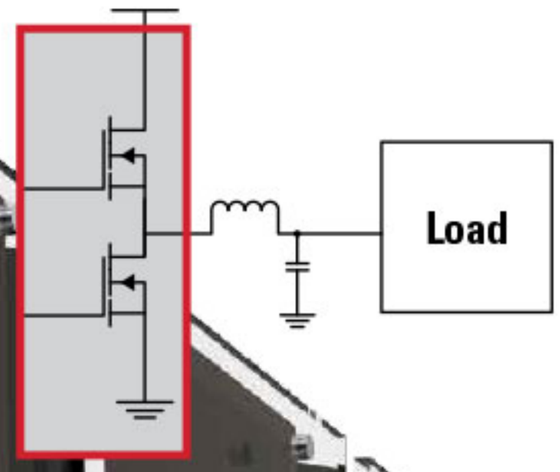
- Integrated MOSFETs and Driver for higher density solutions

Discrete

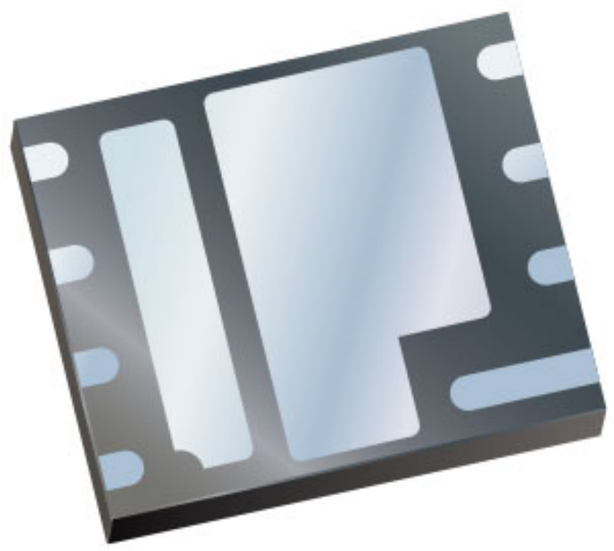




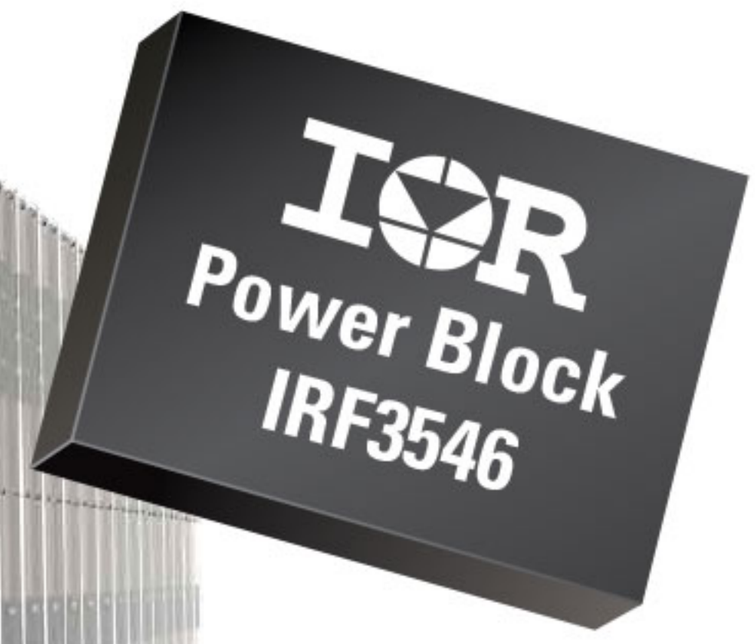
Dual MOSFETs for Compact DC-DC Converter



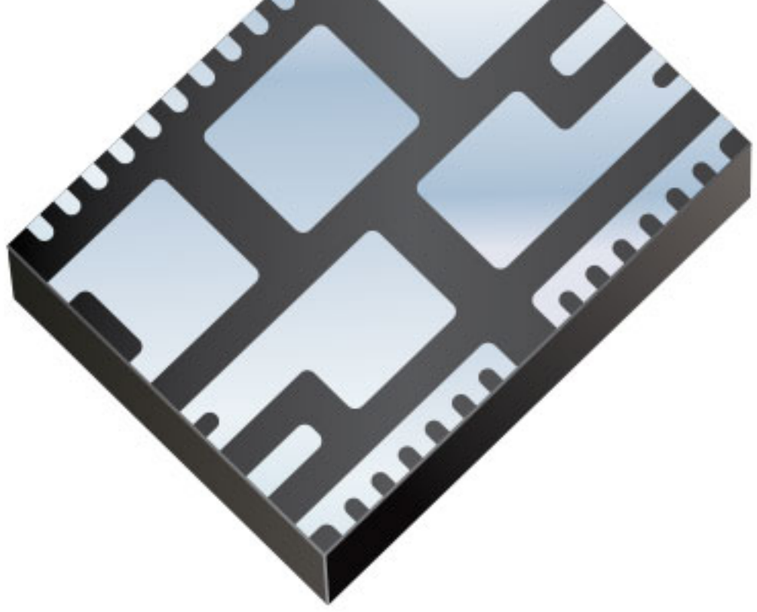
- Power Blocks utilizing IR's PowIRstage® Packaging Platform for increased current density
- Dual Half-Bridge offers 2 phases at 30A per phase in 6x8 package



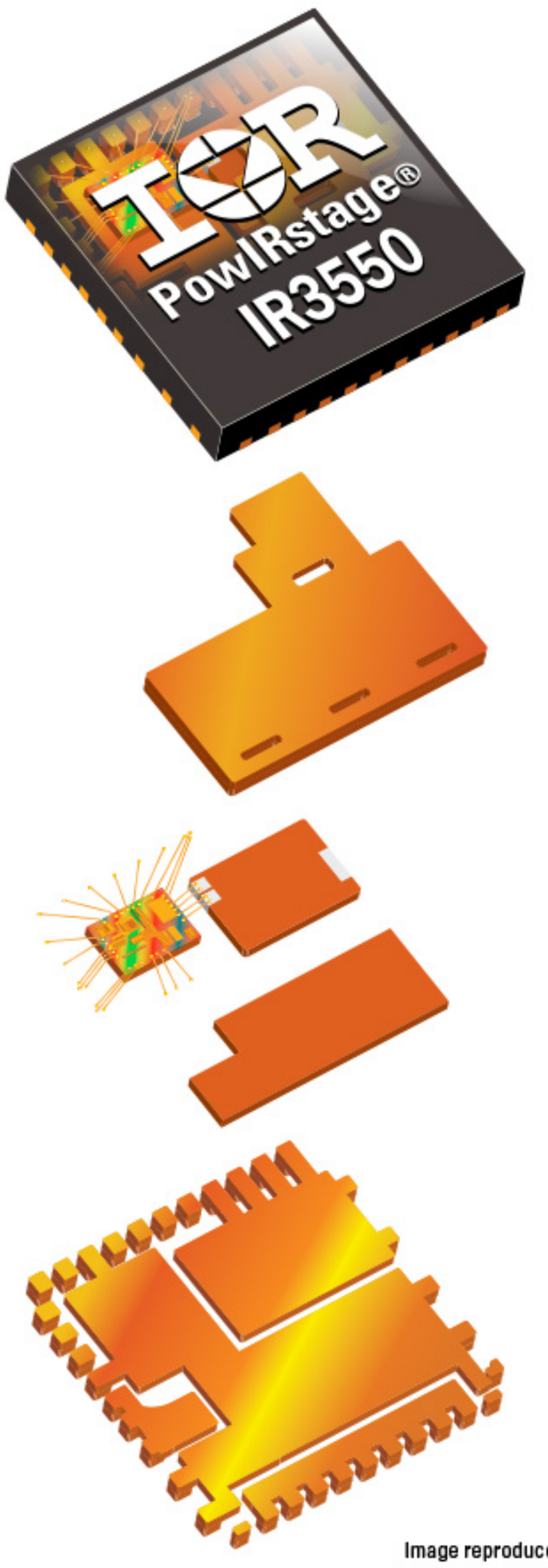
Voltage (V)	ID @ Tc = 25C (A)	Configuration	PQFN	
			Part Number	Footprint (mm)
25	25	Half-bridge Asymmetric	IRFH4255D	5 x 6
	35	Half-bridge Asymmetric	IRFH4253D	5 x 6
	45	Half-bridge Asymmetric	IRFH4251D	5 x 6
	30/phase	Dual Half-bridge	IRF3546	6 x 8
	60	Half-bridge Asymmetric	IRFHE4250D	6 x 6



Voltage (V)	ID @ TA = 25C (A)	Configuration	$R_{DS(on)}$ (mΩ)	PQFN		SO-8
				Part Number	Footprint (mm)	Part Number
20	4.5	Independent Symmetric	45	IRLHS6276	2 x 2	
30	3.6	Independent Symmetric	63	IRLHS6376	2 x 2	
	9.7	Independent Symmetric	21.6			IRF8313
	13	Half-bridge Asymmetric	4	IRFH7911	5 x 6 C	
	8	Half-bridge Asymmetric	16.9			IRF8513



PowIRstage® for High Current MultiPhase POL



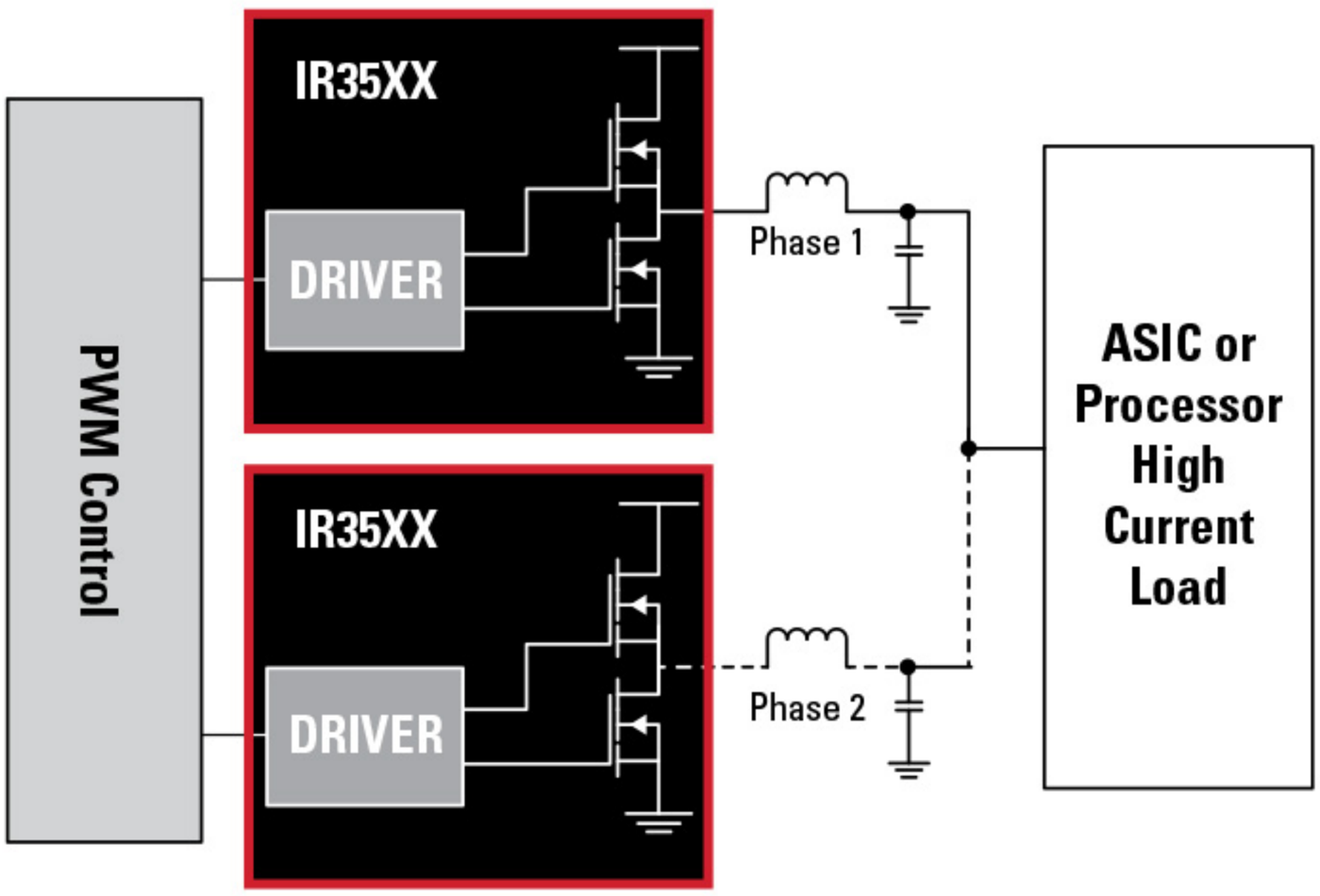
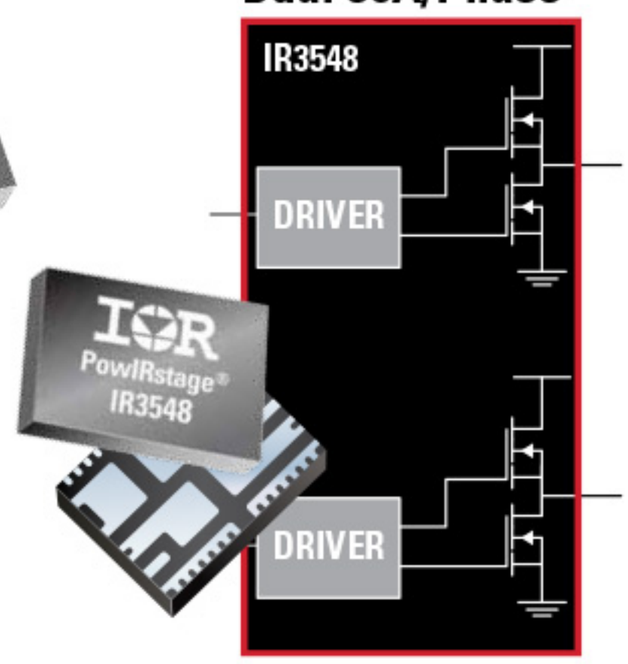


Image reproduced courtesy of GIGABYTE Technology Co. Ltd

Dual 30A/Phase

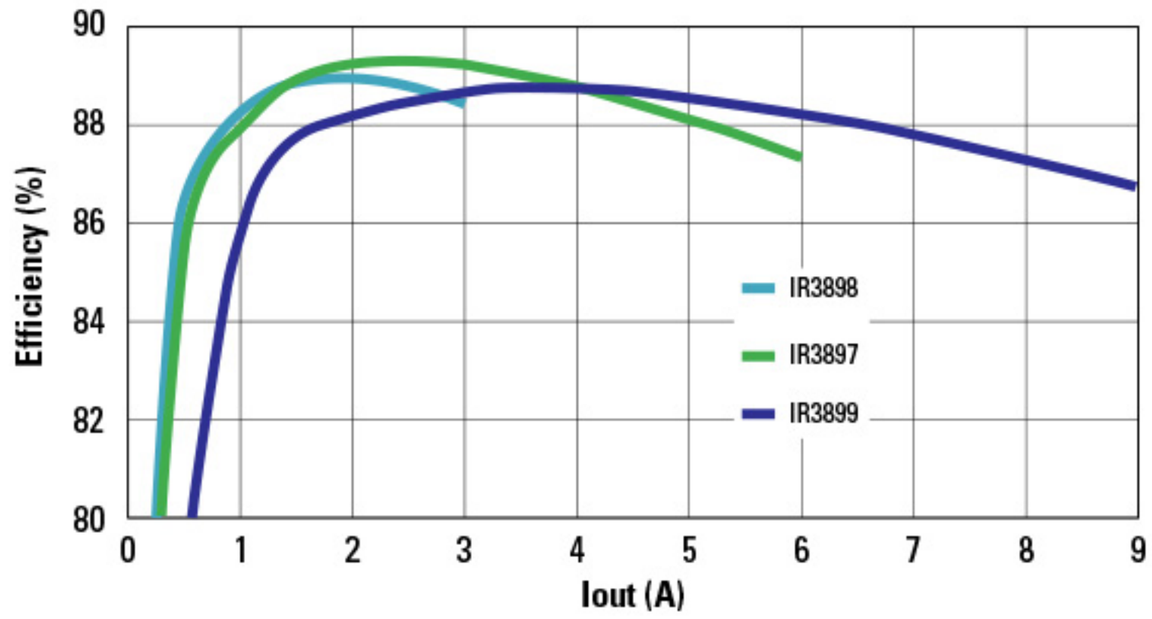


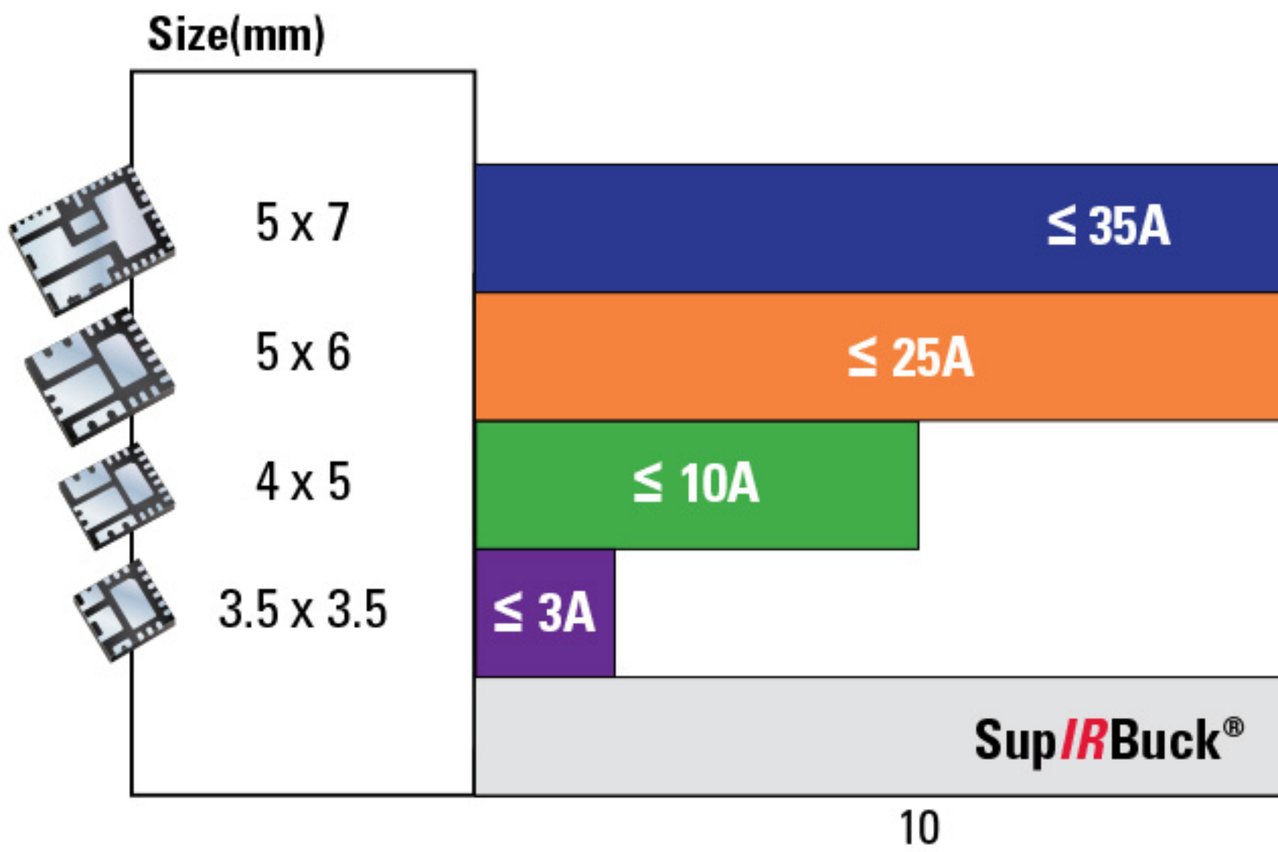
	IR3553	IR3558	IR3551	IR3550	IR3548 Two-Phase
Continuous Output Current (A)	40	45	50	60	30 per Phase
Package Dimensions (mm)	4 x 6	5 x 6	5 x 6	6 x 6	6 x 8

Sup*IR*Buck® Integrated Voltage Regulators

	PWM	Constant On-Time
	1 - 21 V	3 - 27 V
	Integrated LDO	5V bias required
1-3 A	IR3823	
2-4 A	IR3897*	
	IR3891†	
4-6 A	IR3892†	IR3473
	IR3898*	
6-10 A	IR3899*	IR3475
10-16 A	IR3894*	IR3476
	IR3895*	IR3477
16-25 A	IR3847*	
25-35 A	IR3846*	

*DDR Tracking †Dual Output





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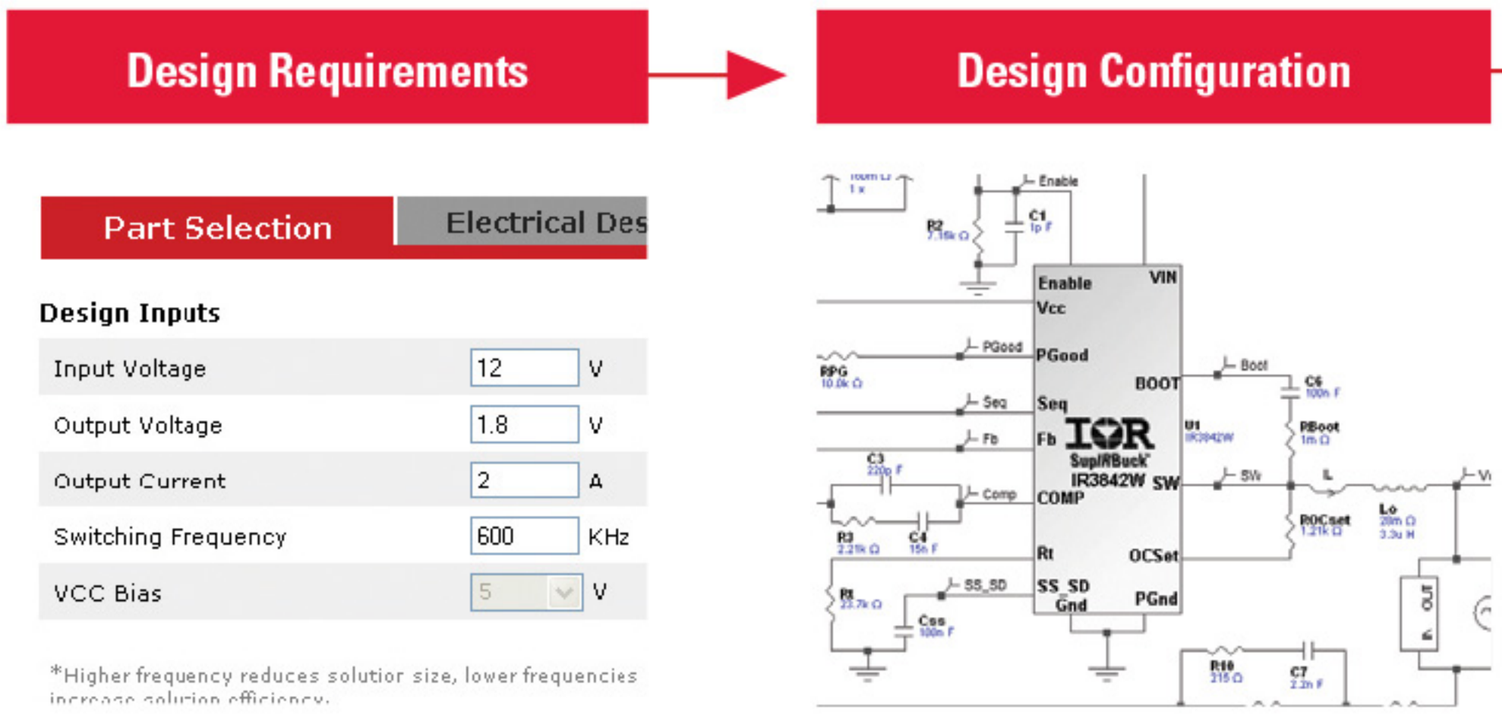
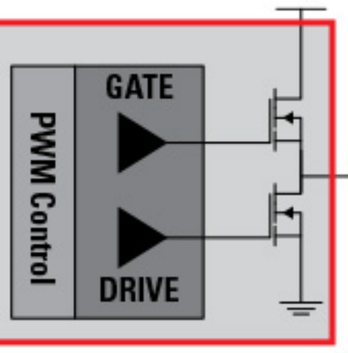
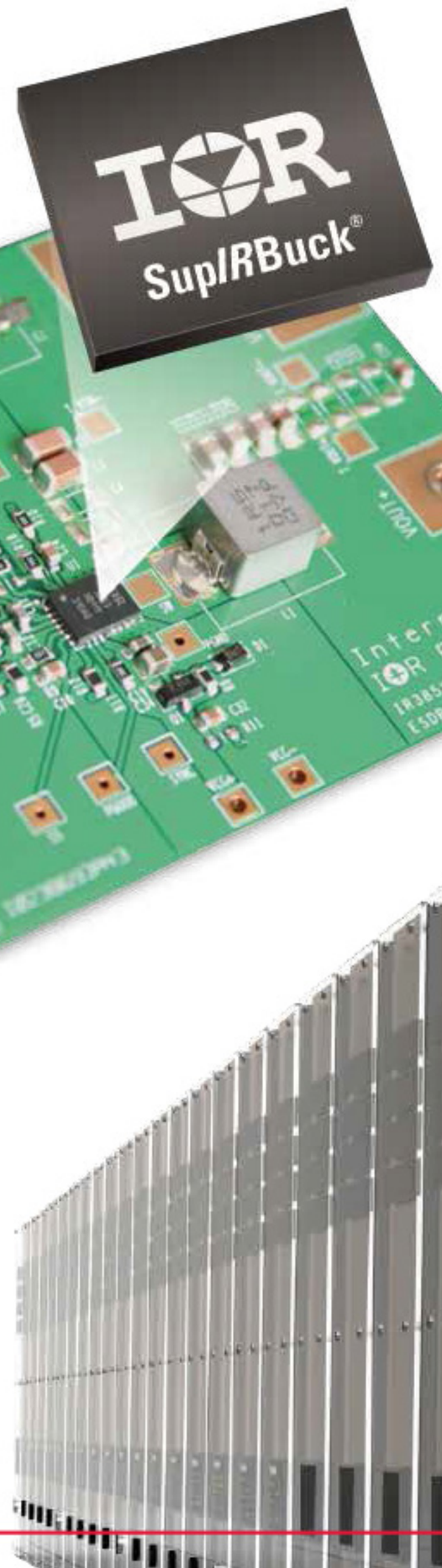
Sup*IR*Buck® Online Design Tool Simplifies Design

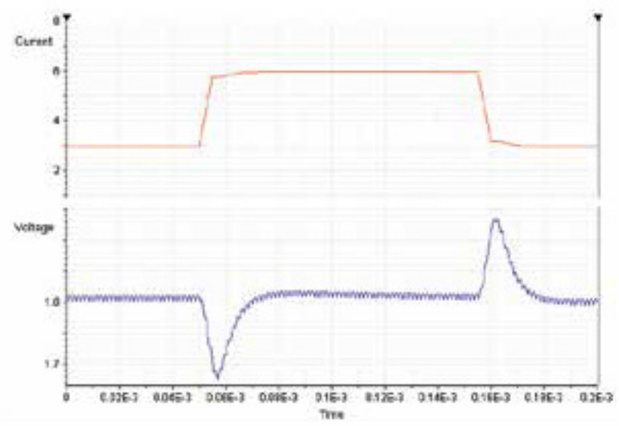
Comprehensive online design tool featuring parametric search, schematic capture, AC, Steady State, Transient Analysis, Thermal Analysis, BOM creation, and more…



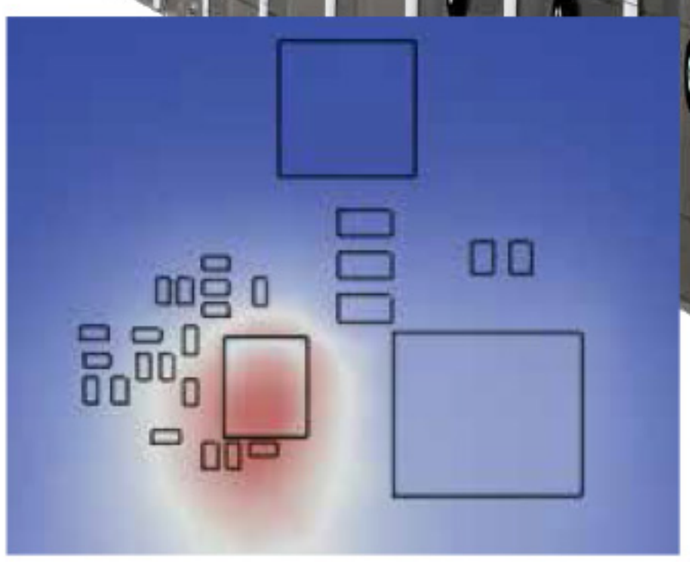




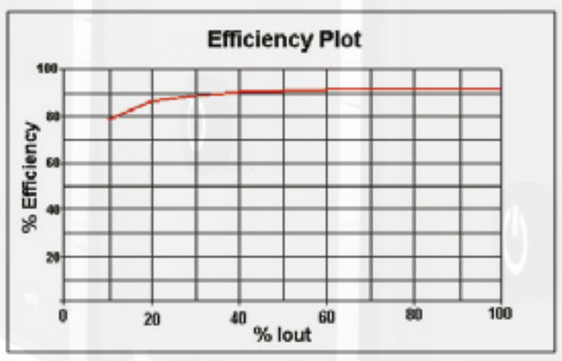
Simulation



PCB Layout and Thermal Analysis

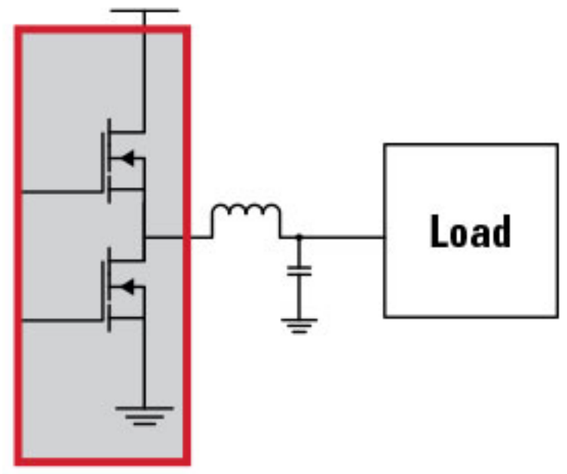


Summary



Power MOSFETs

- Ultra-low on-resistance
- Low gate charge
- Integrated Schottky diodes
- Innovative packaging improves efficiency and thermal performance
- High current capability (>200A)
- Industry standard footprints



Voltage (V)	ID @ TC = 25C (A)	$R_{DS(on)}$ max @ 10Vgs (mΩ)	Qg typ @ 10Vgs (nC)	Integrated Schottky	DirectFET®		PQFN	
					Part Number	Footprint	Part Number	Footprint (mm)
25	40	3.3	10				IRFHM4231	3.3 x 3.3
	40	2.2	17				IRFHM4226	3.3 x 3.3
	40	4.4	7.7				IRFHM4234	3.3 x 3.3
	60	3.5	10				IRFH4231	5 x 6 B
	60	4.5	8.2				IRFH4234	5 x 6 B
	74	3.7	11		IRF6811S	SQ		
	100	0.95	46				IRFH4201	5 x 6 B
	100	1.1	36	X			IRFH4210D	5 x 6 B
	100	1.1	36				IRFH4210	5 x 6 B
	100	1.35	26	X			IRFH4213D	5 x 6 B
	100	1.35	26				IRFH4213	5 x 6 B
	125	1.7	17		IRF6892S	S3C		
	160	1.3	26	X	IRF6894M	MX		
	168	1.6	25	X	IRF6893M	MX		
	213	1.1	35	X	IRF6898M	MX		
	16*	5.2	7.4		IRF6810S	S1		
30	25	9	7.1				IRFHM8334	3.3 x 3.3
	40	4.3	13				IRFHM830D	3.3 x 3.3
	40	3.8	31				IRFHM830	3.3 x 3.3
	44	9	7.1				IRFH8334	5 x 6 E
	47	7.8	7.3				IRFHM831	3.3 x 3.3
	56	6.6	9.3				IRFH8330	5 x 6 E
	60	7.3	9.2		IRF8327S	SQ		
	82	5	15				IRFH8325	5 x 6 E
	90	4.1	14				IRFH8324	5 x 6 E
	120	3.1	41				IRFH8318	5 x 6 E
	140	2.5	25	X	IRF8306M	MX		
	150	2.5	28		IRF8308M	MX		
	169	2.1	30				IRFH8311	5 x 6 E
	170	2.2	28		IRF8304M	MX		
	190	1.8	35	X	IRF8302M	MX		

* ID measured at TA=25C

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- Product Selection
- Verification of Product Datasheet Parameters
- Cross Reference and Replacement Recommendations
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