

# Automotive Product Selection Guide



For a complete list of IR Automotive products go to [www.irf.com/product-info/auto](http://www.irf.com/product-info/auto)

International  
**IR** Rectifier  
THE POWER MANAGEMENT LEADER

## Key Automotive Part Features

### Wafer Level Quality Control



- Wafers assigned as automotive grade from very beginning of production
- 100% wafer level probe
- Automated 100% visual inspection to check for defects
- Spatial outlier detection and dynamic part average testing

### Enhanced Packaging and Testing



- Bill Of Materials specially optimized for automotive applications to offer improved robustness and durability
- Final test using static part average testing routine
- PbF and Halogen Free\*

\* Not all package types are Halogen Free at this time

### Industry Standard Automotive Services

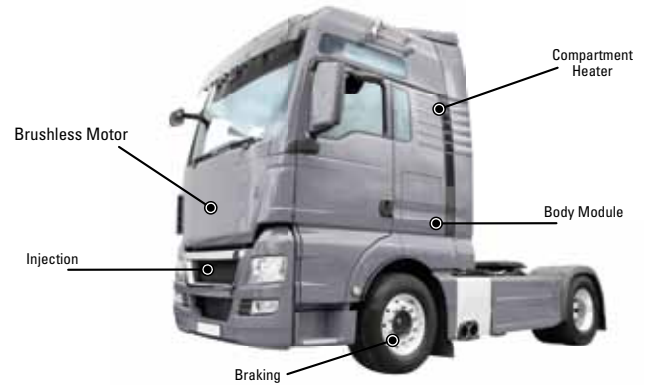


- PPAP (level3)
- Product change notification
- EOL notification per JSTD 48B
- 15 year record retention
- Dedicated AU datasheet
- AEC-Q10X qualified

## Automotive 24V Applications

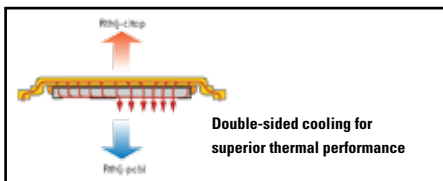
Topology	Body module	Injection	Braking	Compartment heater	Brushless motor
Low side AUIPS20xx	•	•	•		
Current sense High side AUIPS71xx	•				
High side AUIPS70xx			•		
Fast switching high side AUIPS72xx		•		•	
3 phases drive AUIRS20302S MOSFET					•

- Excellent robustness for harsh environment
- In production for more than 10 years
- Dedicated 75V process
- Automotive grade AEC-Q100
- Zero defect initiative
- Design flexibility for customization



## DirectFET® 2

IR has undertaken extensive research and development to produce the DirectFET®2 platform, specifically aimed at Automotive applications. The new Automotive DirectFET®2 product platform combines the outstanding performance of the DirectFET packaging technology with IR's latest trench silicon which can be optimized by application for next-generation vehicle platforms for ultra-low on-state resistance ( $R_{DS(on)}$ ), gate charge ( $Q_g$ ) or logic level operation.

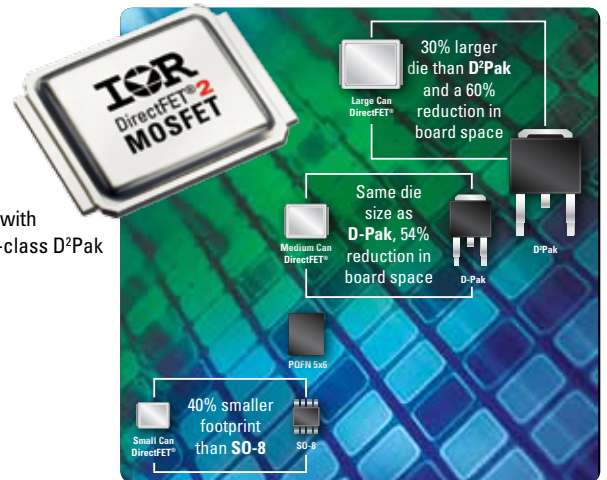


### Features:

- Automotive Qualified to AEC-Q101
- Exceptional power density
- Low parasitic inductance
- Double-sided cooling
- MSL1 Rated
- New large can: 60% area reduction, with improved  $R_{DS(on)}$  compared to best-in-class D<sup>2</sup>Pak

### Applications:

- Injection
- DC-DC
- Motor Drive
- Battery Switch
- Class D Audio
- Steering Systems



## AUIR3330S – Brushed Motor Drive with Active di/dt Control

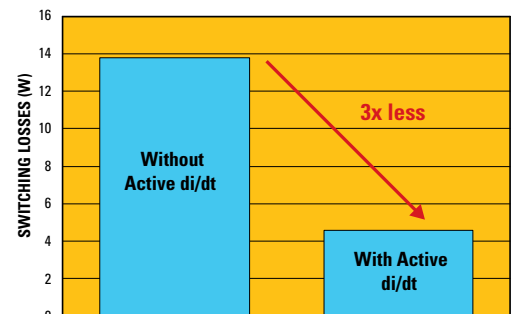
IR provides a fully integrated solution for motor control in Automotive : the AUIR3330S with a proprietary active di/dt control feature, significantly reduces EMI and switching losses in order to simplify design and to lower the overall system cost.

### Applications:

- Fuel pump
- Engine cooling
- Fan for HVAC
- Braking pump

### Features:

- Active di/dt control to reduce EMI
- Up to 40Khz PWM switching capability
- Integrated bootstrap regulator
- Charge pump for DC operation
- Load current feedback
- Programmable over current shutdown
- Short-circuit protection
- Over temperature shutdown
- Diagnostic feedback



# Intelligent Power Switch

Topology	R <sub>DS(on)</sub> mOhm	V clamp V	OverCurrent Protection		Package				
			Typ value (A)	Type	T0220	D <sup>2</sup> Pak	DPak	SOIC	SOT-223
Single Low Side	13	39	85	Shutdown	AUIPS1011	AUIPS1011S	AUIPS1011R		
	25	36	35	Shutdown	AUIPS1021	AUIPS1021S	AUIPS1021R		
	50	36	18	Shutdown	AUIPS1031	AUIPS1031S	AUIPS1031R		
	100	39	6	Shutdown			AUIPS1041R		AUIPS1041L
	200	39	3	Shutdown					AUIPS1051L
	60	68	14	Shutdown			AUIPS2031R		
	130	68	5	Shutdown			AUIPS2041R		AUIPS2041L
Dual Low Side	300	70	1.8	Shutdown					AUIPS2051L
	2*100	39	6	Shutdown				AUIPS1042G	
	2*200	39	3	Shutdown				AUIPS1052G	
2*300	70	1.8	Shutdown				AUIPS2052G		
Topology	R <sub>DS(on)</sub> mOhm	V clamp V	OverCurrent Protection		Package				
			Typ value (A)	Type	T0220	D <sup>2</sup> Pak	DPak	SOIC	SOT-223
Single High Side	14	39	55	Limit	AUIPS6011	AUIPS6011S	AUIPS6011R		
	30	39	32	Limit	AUIPS6021	AUIPS6021S	AUIPS6021R		
	55	39	16	Limit	AUIPS6031	AUIPS6031S	AUIPS6031R		
	130	39	6.5	Limit	AUIPS6041	AUIPS6041S	AUIPS6041R	AUIPS6041G	
	70	70	7	Limit	AUIPS7081*	AUIPS7081S*	AUIPS7081R*		
	120	70	5	Limit	AUIPS7091*	AUIPS7091S*		AUIPS7091G*	
Dual High Side	2*100	65	25	Shutdown				AUIPS7142G	
Quad High Side	4*130	39	6.5	Limit				AUIPS6044G	
I sense High Side	7	40	10 to 90	Shutdown	AUIR3313	AUIR3313S			
	12	40	6 to 60	Shutdown	AUIR3314	AUIR3314S			
	20	40	3 to 30	Shutdown	AUIR3315	AUIR3315S			
	7	40	10 to 90	Shutdown	AUIR3316	AUIR3316S			
	7	40	120	Shutdown	AUIR3317	AUIR3317S			
	30	65	60	Shutdown			AUIPS7121R		
	30	65	60	Shutdown			AUIPS7125R		
	100	65	25	Shutdown			AUIPS7145R		
PWM High Side	100	65	7	Shutdown				AUIPS71411G	
	7.5	65	45	Shutdown		AUIPS7111S			
	3.5	40	10 to 40	Shutdown		AUIR33401S			
100Khz High Side	3.5	40	10 to 40	Shutdown		AUIR3330S			
	3.5	40	10 to 40	Shutdown		AUIR3340S			
100Khz High Side	40	70	30	Shutdown			AUIPS7221R		
	40	70	30	Shutdown			AUIPS72211R		

\* Non AU version available

Coming in 2011

# DirectFET®2

V <sub>BRIDSS</sub> (V)	R <sub>DS(on)</sub> Max. @ 10V <sub>GS</sub> (mOhm)	R <sub>DS(on)</sub> Max. @ 4.5V <sub>GS</sub> (mOhm)	I <sub>D</sub> Max @ TC = 25°C (A)	Q <sub>G</sub> Typ. @ 10V <sub>GS</sub> (nC)	Q <sub>G</sub> Typ. @ 4.5V <sub>GS</sub> (nC)	Pad Outline	Optimized Feature	Package		
								Small Can	Medium Can	Large Can
40	1.0		270	220		L8	Low R <sub>DS(on)</sub>			AUIRF7739L2
40	1.6		210	147		L6	Low R <sub>DS(on)</sub>			AUIRF7738L2
40	1.9		156	89		L6	Low R <sub>DS(on)</sub>			AUIRF7737L2
40	3.0		108	72		M4	Low R <sub>DS(on)</sub>		AUIRF7736M2	
40	4.1	2.9	143		59	M4	Low R <sub>DS(on)</sub>		AUIRL7736M2	
40	9.9	6.4	65		24	SC	Low R <sub>DS(on)</sub>	AUIRL7732S2		
60	7.0		68	35		M4	Low Q <sub>G</sub>		AUIRF7648M2	
60	36.0		21	7		SB	Low Q <sub>G</sub>	AUIRF7640S2		
75	1.8		160	200		L8	Low R <sub>DS(on)</sub>			AUIRF7759L2
100	4.4		114	81		L8	Low Q <sub>G</sub>			AUIRF7669L2
100	10.0	10.5	51		44	M4	Low R <sub>DS(on)</sub>		AUIRL7766M2	
100	31.0		24	14		SC	Low Q <sub>G</sub>	AUIRF7647S2		
100	62.0		14	8		SB	Low Q <sub>G</sub>	AUIRF7665S2		
150	56.0		18	21		M2	Low Q <sub>G</sub>		AUIRF7675M2	
250	32.0		35	110		L8	Low R <sub>DS(on)</sub>			AUIRF7799L2

# IGBT

Part Number	B <sub>V</sub> (V)	Diode Config	Package	SCSOA min	ICE @ 100°C	V <sub>CE(sat)</sub> max @ 25°C (V)	Frequency Range	Typical Application
AUIRG4BC30S-S	600	Discrete	D <sup>2</sup> PAK	na	18	1.6	< 1 kHz	PTC heater, discharge switch and other relay replacements
AUIRG4BC30U-S	600	Discrete	D <sup>2</sup> PAK	na	12	2.1	4-30 kHz	SMPS, PFC
AUIRG4BH40S-S	1200	Discrete	D <sup>2</sup> PAK	0	26	1.47	< 1 kHz	PTC heater, discharge switch and other relay replacements
AUIRG4PH50S	1200	Discrete	T0-247	10	33	1.7	< 1 kHz	PTC heater, discharge switch and other relay replacements
AUIRG35B60PD(E)	600	Co-Pack	T0-247	10	35	1.85	20-50 kHz	SMPS, PFC
AUIRG50B60PD1(E)	600	Co-Pack	T0-247	10	50	2.35	20-50 kHz	SMPS, PFC
AUIRG30B60K	600	Discrete	D <sup>2</sup> PAK	10	50	2.35	4-16 kHz	SMPS, PFC
AUIRGR4045D	600	Co-Pack	DPak	5	6	2	4-30 kHz	HID
AUIRG34056D	600	Co-Pack	D <sup>2</sup> PAK	5	12	1.85	4-30 kHz	Injection, motor drive
AUIRG(B,P,SL)4062D(E)	600	Co-Pack	T0220, T0247, D <sup>2</sup> PAK	5	24	1.95	4-30 kHz	HV AC motor drive
AUIRG4063D(E)	600	Co-Pack	T0247	5	48	2.14	4-30 kHz	HV AC motor drive
AUIRG4066D(1)(E)	600	Co-Pack	T0247	5	75	1.7	4-30 kHz	High power inverter
AUIRGPS4067D1	600	Co-Pack	Super247	10	160	2.05	4-30 kHz	High power inverter
AUIRG7CH73K10B	1200	Discrete	die sale	10	75	2.3	4-16 kHz	High power inverter
AUIRG7CH73K6B	1200	Discrete	die sale	6	75	2.2	4-16 kHz	High power inverter
AUIRG7CH80K6B-M	1200	Discrete	die sale (SFM)	6	200	2.45	4-30 kHz	High power inverter

All IGBT parts have die sale options

## HVICs

Part	Application	Voltage	Package	Output Source / Sink Current	Vcc Range	Vbs Range	Typ. Prop Delay	Features
AUIRS2334S*	3-phase Inverter Drivers	600V	SOIC20	+290 / -600mA	10-20V w/ UVLO	10-20V w/ UVLO	530/530ns On/Off	Under voltage lockout, 3.3V logic input, independent half-bridge drivers, shoot through protection, tolerant to negative transient voltage, matched propagation delays, fixed deadtime, separate low and high side inputs in-phase with output
AUIRS2336S	3-phase Inverter Drivers	600V	SOIC28	+200 / -350mA	10-20V w/ UVLO	10-20V w/ UVLO	530/530ns On/Off	Under voltage lockout, over current and temperature shutdown, 3.3V logic input, cross conduction prevention logic, tolerant to negative transient voltage, adjustable fault clear timing, separate logic and power grounds, advanced input filter
AUIRS20302S*	3-phase Inverter Drivers with PFC/Brake Driver	200V	SOIC28	+200 / -350mA	6-20V w/ UVLO	6-20V w/ UVLO	700/700ns On/Off	Full three phase gate driver, Under-voltage lockout for all channels, Cross-conduction prevention logic, Charge pump for pre-regulator N-ch Mosfet, Power-on reset, FAULT mode operation, Current sense comparator, 3.3V logic compatible, Matched propagation delay for all channels, Fully operational up to +200V, Floating channels for bootstrap operation, Tolerant to negative transients (-dV/dt immune), Lower di/dt gate drive for better noise immunity
AUIRS2332J	3-phase Inverter Drivers	600V	PLCC44	+200 / -420mA	10-20V w/ UVLO	0-20V w/ UVLO	500/500ns On/Off	Under voltage lockout, 3.3V logic input, independent half-bridge drivers, tolerant to negative transient voltage, matched propagation delays, over current shutdown turn off all 6 switches, output out of phase with input, integrated op-amp
AUIRS2004S	Dual Channel High- and Low- Side Drivers	200V	SOIC8	+130 / -270mA	10-20V w/ UVLO	10-20V w/ UVLO	680/150ns On/Off	Under voltage lockout, 3.3V, 5V, and 15V input logic compatible, matched propagation delay, cross conduction prevention
AUIRS2110S	Dual Channel High- and Low- Side Drivers	500V	SOIC16	+2.5A / -2.5A	10-20V w/ UVLO	10-20V w/ UVLO	140/120ns On/Off	Under voltage lockout, 3.3V input logic compatible, separate logic supply from 3.3V to 20V, CMOS Schmitt-triggered inputs with pull-down, matched propagation delay, separate logic and power ground, 10ns delay matching
AUIRS2112S	Dual Channel High- and Low- Side Drivers	600V	SOIC16	+290 / -600mA	10-20V w/ UVLO	10-20V w/ UVLO	140/140ns On/Off	Under voltage lockout, 3.3V input logic compatible, separate logic supply from 3.3V to 20V, CMOS Schmitt-triggered inputs with pull-down, matched propagation delay, separate logic and power ground, 30ns delay matching
AUIRS2113S	Dual Channel High- and Low- Side Drivers	600V	SOIC16	+2.5A / -2.5A	10-20V w/ UVLO	10-20V w/ UVLO	140/120ns On/Off	Under voltage lockout, 3.3V input logic compatible, separate logic supply from 3.3V to 20V, CMOS Schmitt-triggered inputs with pull-down, matched propagation delay, separate logic and power ground, 20ns delay matching
AUIRS2181S	Dual Channel High- and Low- Side Drivers	600V	SOIC8	+1.9A / -2.3A	10-20V w/ UVLO	10-20V w/ UVLO	160/200ns On/Off	Under voltage lockout, 3.3V, 5V input logic compatible, matched propagation delay
AUIRS21811S	Dual Channel High- and Low- Side Drivers	600V	SOIC8	+1.9A / -2.3A	10-20V w/ UVLO	10-20V w/ UVLO	160/200ns On/Off	Under voltage lockout, 3.3V, 5V input logic compatible, CMOS Schmitt-triggered inputs, matched propagation delay, lower di/dt gate driver for better noise immunity
AUIRS21814S	Dual Channel High- and Low- Side Drivers	600V	SOIC14	+1.9A / -2.3A	10-20V w/ UVLO	10-20V w/ UVLO	160/200ns On/Off	Under voltage lockout, 3.3V, 5V input logic compatible, matched propagation delay, separate logic and power ground
AUIRS2191S*	Dual Channel High- and Low- Side Drivers	600V	SOIC16	+3.5A / -3.5A	10-20V w/ UVLO	10-20V w/ UVLO	90/90ns On/Off	Under voltage lockout for both channels, 3.3V, 5V and 15V input logic compatible, matched propagation delay, CMOS Schmitt-triggered inputs with pull-down
AUIRS2301S	Dual Channel High- and Low- Side Drivers	600V	SOIC8	+120 / -250mA	5-20V w/ UVLO	5-20V w/ UVLO	220/200ns On/Off	Under voltage lockout for both channels, 3.3V, 5V and 15V input logic compatible, matched propagation delay
AUIRS2011S	Dual Channel High- and Low- Side Drivers	200V	SOIC8	+1.0 / -1.0A	10-20V w/ UVLO	10-20V w/ UVLO	60/60ns On/Off	Under voltage lockout for both channels, 3.3V and 5V input logic compatible, Tolerant to negative transient (-dV/dt), CMOS Schmitt-triggered inputs with pull-down
AUIRS4426S	Dual Channel Low-Side Drivers	Low side	SOIC8	+2.3A / -3.3A	6-20V w/ UVLO	6-20V w/ UVLO	70/65ns On/Off	3.3V, 5V input logic compatible, matched propagation delay
AUIRS4427S	Dual Channel Low-Side Drivers	Low side	SOIC8	+2.3A / -3.3A	6-20V w/ UVLO	6-20V w/ UVLO	50/50ns On/Off	3.3V, 5V input logic compatible, matched propagation delay
AUIRS4428S	Dual Channel Low-Side Drivers	Low side	SOIC8	+2.3A / -3.3A	6-20V w/ UVLO	6-20V w/ UVLO	70/65ns On/Off	3.3V, 5V input logic compatible, matched propagation delay
AUIRS2092S	Single Channel Class-D Audio Amplifier	200V	SOIC16	+1.0 / -1.2A	10-18V w/ UVLO	10-18V w/ UVLO	360/335ns On/Off	Analog input, Programmable bidirectional over-current protection with self-reset, Under voltage protection, Programmable preset deadtime, reduced THD+N
AUXS20956S	Single Channel Class-D Audio Amplifier	200V	SOIC16	+1.0 / -1.2A	10-18V w/ UVLO	10-18V w/ UVLO	80/65ns On/Off	Floating PWM input (non-inverting and 3.3V and 5V logic compatible), Programmable bi-directional over-current protection with self-reset, Under voltage protection, Programmable preset deadtime, improved sound quality with optimized THD+N, 200V rating delivers up to 500W output power
AUIRS20161S*	Single Channel High-Side Drivers	150V	SOIC8	+250 / -250mA	4.4-20V w/ UVLO	4.4-20V w/ UVLO	150/150ns On/Off	One high side output and internal low side Vs recharge, CMOS Schmitt trigger inverted input with pull up resistor, CMOS Schmitt trigger inverted reset with pull down resistor, 5V compatible input logic, Under voltage lockout, immune to negative Vs spike and transient
AUIRS2117S	Single Channel High-Side Drivers	600V	SOIC8	+290 / -600mA	10-20V w/ UVLO	10-20V w/ UVLO	140/140ns On/Off	Under voltage lockout, Schmitt-triggered inputs with pull-down, output in phase with input
AUIRS2118S	Single Channel High-Side Drivers	600V	SOIC8	+290 / -600mA	10-20V w/ UVLO	10-20V w/ UVLO	140/140ns On/Off	Under voltage lockout, inverting Schmitt-triggered inputs with pull-down, output in phase with input
AUIRS2123S	Single Channel High-Side Drivers	600V	SOIC8	+500 / -500mA	10-20V w/ UVLO	10-20V w/ UVLO	140/140ns On/Off	CMOS Schmitt-triggered inputs with pull-down, output in phase with input
AUIRS2124S	Single Channel High-Side Drivers	600V	SOIC8	+500 / -500mA	10-20V w/ UVLO	10-20V w/ UVLO	140/140ns On/Off	CMOS Schmitt-triggered inputs with pull-down, output out phase with input



**N Channel MOSFETs, continued**

V <sub>BRIDSS</sub> (V)	R <sub>DS(on)</sub> @10V <sub>GS</sub>	R <sub>DS(on)</sub> @4.5V <sub>GS</sub>	I <sub>D</sub> @ T <sub>C</sub> =25°C (A)	Q <sub>g</sub> Typ @ 10V <sub>GS</sub> (nC)	Q <sub>g</sub> Typ @ 4.5V <sub>GS</sub> (nC)	Package									
	max (mΩ)	max (mΩ)	(A)			SOT-223	SO-8	DPak	D <sup>2</sup> Pak	D <sup>2</sup> Pak-7	IPak	T0-220	T0-262	Full Pak	T0-247
55	8.0	12.0	86		40*				AUIRL3705ZS				AUIRL3705ZL		
55	8.0	13.0	58		130*									AUIRLI2505	
55	10.0	18.0	89		98*				AUIRL3705NS						
55	11.0		62	40				AUIRFR48Z							
55	11.0		61	43					AUIRFZ48ZS			AUIRFZ48Z			
55	13.5	22.5	60		23*			AUIRLR2905Z							
55	13.5	22.5	51		24*				AUIRLZ44ZS			AUIRLZ44Z	AUIRLZ44ZL		
55	13.9		51	29					AUIRFZ44ZS			AUIRFZ44Z			
55	14.0		64	54								AUIRFZ48N			
55	14.0	17.0	61	61				AUIRLR3915							
55	14.5		59	29				AUIRFR2905Z							
55	16.5		53	48									AUIRFZ46NL		
55	17.5		49	63					AUIRFZ44NS						
55	17.5		41	42								AUIRFZ44N			
55	24.0		28	43										AUIRFIZ44N	
55	24.5		30	18				AUIRFR4105Z							
55	27.0	40.0	36		48*			AUIRLR2905							
55	37.0	43.0	25		20*			AUIRLR3105							
55	40.0	65.0	5	32		AUIRLL2705									
55	40.0		19	23										AUIRFIZ34N	
55	40.0		26	23								AUIRFZ34N			
55	45.0		25	23				AUIRFR4105							
55	58.0	100.0	16		7*			AUIRLR024Z			AUIRLU024Z				
55	60.0	100.0	5		7*	AUIRLL024Z									
55	65.0	100.0	4		10*	AUIRLL024N									
55	65.0	110.0	17		15*			AUIRLR024N							
55	70.0		17	13					AUIRFZ24NS						
55	75.0		16	13				AUIRFR024N							
55	75.0		3	12		AUIRFL024N									
55	140.0	210.0	10		7.9*			AUIRLR014N							
55	140.0	280.0	3	10		AUIRLL014N									
55	160.0		2	7		AUIRFL014N									
60	1.9	2.2	300		110					AUIRLS3036-7P					
60	2.1		293	200						AUIRFS3006-7P					
60	2.4	2.8	270	200	91				AUIRLS3036			AUIRLB3036			
60	2.5		270	200					AUIRFS3006			AUIRFB3006			
60	3.0		210	120								AUIRFB3206	AUIRFL3206		
60	3.0		200	120					AUIRFS3206						AUIRFP3206
60	4.2		160	85					AUIRFS3306			AUIRFB3306			AUIRFP3306
60	6.8	8.3	99		33			AUIRLR3636							
60	8.4		79	46				AUIRFR1018E	AUIRF1018ES			AUIRF1018E			
60	8.5		84	58					AUIRF1010EZS			AUIRF1010EZ			
60	9.4		12	26				AUIRF7855Q							
60	12.0		57	43					AUIRFZ44VZS						
60	15.8		43	22				AUIRFR3806	AUIRFS3806			AUIRFB3806			
60	16.5		55	45								AUIRFZ44V			
60	26.0	30.0	7	10				AUIRF7478Q							
75	1.8		350	380											AUIRFP4368
75	2.6		260	160						AUIRFS3107-7P					
75	3.0		230	160					AUIRFS3107						
75	3.3		210	160								AUIRFB3077			
75	3.3		200	160											AUIRFP3077
75	3.8		160	170						AUIRF2907ZS-7P					
75	4.1		170	120					AUIRFS3207Z			AUIRFB3207Z			
75	4.5		180	180								AUIRFB3207			
75	4.5		177	410											AUIRFP2907
75	4.5		170	180								AUIRF2907Z			AUIRFP2907Z
75	5.8		120	79					AUIRFS3307Z			AUIRFB3307Z			
75	7.0		140	150								AUIRF3808			
75	7.0		105	150					AUIRF3808S						
75	9.0		80	56				AUIRFR3607	AUIRFS3607			AUIRFB3607			
75	12.6		80	89								AUIRF3007			
75	13.0		82	107								AUIRF2807			
75	16.0		53	50				AUIRFR2307Z							
75	22.0		45	34				AUIRFR2607Z							
75	26.0		42	74				AUIRFR2407							
80	28.0	30.0	39		22			AUIRLR2908							
100	2.6		290	360											AUIRFP4468
100	3.9	4.1	190		93					AUIRLS4030-7P					
100	4.0		190	150						AUIRFS4010-7P					
100	4.3	4.5	180		87				AUIRLS4030			AUIRLB4030			
100	4.5		180	150								AUIRFB4110			AUIRFP4110
100	4.7		180	143					AUIRFS4010						
100	6.0		134	120											AUIRFP4310Z
100	6.0		127	120					AUIRFS4310Z			AUIRFB4310Z			

## N Channel MOSFETs, continued

V <sub>(BR)DSS</sub> (V)	R <sub>DS(on)</sub> @10V <sub>GS</sub> max (mΩ)	R <sub>DS(on)</sub> @4.5V <sub>GS</sub> max (mΩ)	I <sub>D</sub> @ T <sub>C</sub> = 25°C (A)	Q <sub>g</sub> Typ @ 10V <sub>GS</sub> (nC)	Q <sub>g</sub> Typ @ 4.5V <sub>GS</sub> (nC)	Package										
						SOT-223	SO-8	DPak	D <sup>2</sup> Pak	D <sup>2</sup> Pak-7	IPak	TO-220	TO-262	Full Pak	TO-247	
100	7.0		140	170					AUIRFS4310					AUIRFL4310		
100	9.0		97	83					AUIRFS4410Z			AUIRFB4410Z				AUIRFP4410Z
100	10.0		96	120								AUIRFB4410				
100	14.0	16.0	63		34				AUIRLR3110Z			AUIRLU3110Z				
100	14.0		73	90					AUIRFS4610			AUIRFB4610				
100	18.0		59	82					AUIRF3710ZS			AUIRF3710Z				
100	18.0		56	69					AUIRFR3710Z							
100	26.0		55	93					AUIRL2910S							
100	26.5		36	42					AUIRF540ZS			AUIRF540Z				
100	105.0	155.0	15	23	34*				AUIRLR3410							
100	185.0	265.0	11		20*				AUIRLR120N							
100	190.0		9	7					AUIRFR120Z			AUIRFU120Z				
150	5.9		171	151												AUIRFP4568
150	11.0		104	77								AUIRFB4115				
150	11.8		105	73					AUIRFS4115-7P							
150	12.1		99	77					AUIRFS4115							
150	15.0		83	71					AUIRFS4321			AUIRFB4321				
150	42.0		43	133								AUIRF3415				
150	39.0		25	26								AUIRFB4615				
150	42.0		33	26					AUIRFR4615	AUIRFS4615						
200	9.7		130	161												AUIRFP4668
200	20.0		76	100								AUIRFB4127				
200	22.0		72	100					AUIRFS4127							
200	25.0		65	70												AUIRFP4227
200	26.0		65	70								AUIRFB4227				
200	26.0		62	70					AUIRFS4227				AUIRFL4227			
200	72.5		25	25								AUIRFB4620				
200	78.0		24	25					AUIRFR4620	AUIRFS4620						
250	17.5		93	180												AUIRFP4768
250	33.0		60	99								AUIRFB4332				

\* Q<sub>g</sub> at 5V<sub>GS</sub>

\*\* Super TO-220 (TO-273AA)

† WideLead TO-262 package version

Coming in 2011

## P Channel MOSFETs

V <sub>(BR)DSS</sub> (V)	R <sub>DS(on)</sub> @ 10V <sub>GS</sub> max (mΩ)	R <sub>DS(on)</sub> @ 4.5V <sub>GS</sub> max (mΩ)	I <sub>D</sub> @ T <sub>C</sub> = 25°C (A)	Q <sub>g</sub> Typ @ 10V <sub>GS</sub> (nC)	Q <sub>g</sub> Typ @ 4.5V <sub>GS</sub> (nC)	Package										
						SO-8	DPak	D <sup>2</sup> Pak	TO-220	TO-262	Full Pak					
-20	60.0		-5	15		AUIRF207Q										
-30	20.0	35.0	-10	61		AUIRF7416Q										
-55	20.0		-74	120					AUIRF4905S	AUIRF4905	AUIRF4905L	AUIRFI4905				
-55	65.0		-28	42				AUIRFR5305								
-55	100.0		-17	23						AUIRF9Z34N						
-55	110.0		-18	21				AUIRFR5505								
-55	175.0		-11	13				AUIRFR9024N								
-100	60.0		-38	150						AUIRF5210S						
-100	117.0		-23	65							AUIRF9540N					
-100	205.0		-13	39				AUIRFR5410								
-150	150.0		-27	71						AUIRF6218S						
-150	580.0		-13	44				AUIRFR6215			AUIRF6215					

## Dual N Channel MOSFETs

V <sub>(BR)DSS</sub> (V)	R <sub>DS(on)</sub> @ 10V <sub>GS</sub> max (mΩ)	R <sub>DS(on)</sub> @ 4.5V <sub>GS</sub> max (mΩ)	I <sub>D</sub> @ T <sub>C</sub> = 25°C (A)	Q <sub>g</sub> Typ @ 10V <sub>GS</sub> (nC)	Q <sub>g</sub> Typ @ 4.5V <sub>GS</sub> (nC)	Package (SO-8)
30	50.0	80.0	5	17		AUIRF7303Q
50	130.0	200.0	3	10		AUIRF7103Q
55	50.0	65.0	5	29		AUIRF7341Q

## Dual P Channel MOSFETs

V <sub>(BR)DSS</sub> (V)	R <sub>DS(on)</sub> @ 10V <sub>GS</sub> max (mΩ)	R <sub>DS(on)</sub> @ 4.5V <sub>GS</sub> max (mΩ)	I <sub>D</sub> @ T <sub>C</sub> = 25°C (A)	Q <sub>g</sub> Typ @ 10V <sub>GS</sub> (nC)	Q <sub>g</sub> Typ @ 4.5V <sub>GS</sub> (nC)	Package (SO-8)
-20		90.0	-4		22	AUIRF7304Q
-30	58	98.0	-5	23		AUIRF7316Q
-55	105.0	170.0	-3	26		AUIRF7342Q

## N+P Channel Paired MOSFETs

V <sub>(BR)DSS</sub> (V)	R <sub>DS(on)</sub> @ 10V <sub>GS</sub> max (mΩ)	R <sub>DS(on)</sub> @ 4.5V <sub>GS</sub> max (mΩ)	I <sub>D</sub> @ T <sub>C</sub> = 25°C (A)	Q <sub>g</sub> Typ @ 10V <sub>GS</sub> (nC)	Q <sub>g</sub> Typ @ 4.5V <sub>GS</sub> (nC)	Package (SO-8)
30	29 / 58	46 / 98	5.8 / -4.9	22 / 23		AUIRF7319Q
30	45 / 90	75 / 180	5.8 / -4.3	25 / 25		AUIRF7379Q
30	50 / 100	80 / 160	4.7 / -3.5		25 / 25	AUIRF7309Q
30	100 / 250	150 / 400	3.5 / -2.3	6.9 / 6.1		AUIRF9952Q
55	50 / 105	65 / 170	4.7 / -3.4	24 / 26		AUIRF7343Q

Coming in 2011

Product Line	Applications	Key Products
 <p><b>Energy Saving Products</b></p> <p>Integrated design platforms that enable customers to add energy-conserving features that achieve lower operating energy costs and manufacturing Bill of Material (BOM) costs.</p>	<ul style="list-style-type: none"> <li>• Appliances</li> <li>• Audio</li> <li>• Display</li> <li>• Industrial</li> <li>• Lighting</li> <li>• SMPS</li> </ul>	<ul style="list-style-type: none"> <li>• Digital Control ICs</li> <li>• High-Voltage ICs</li> <li>• IGBTs</li> <li>• IRAM Integrated Power Modules</li> <li>• Intelligent Power Switches</li> <li>• MERs</li> </ul>
 <p><b>Enterprise Power</b></p> <p>Optimized power management system solutions that deliver benchmark power density, efficiency and performance in enterprise power.</p>	<ul style="list-style-type: none"> <li>• Servers</li> <li>• Storage Networks</li> <li>• Switchers &amp; Routers</li> <li>• Workstations</li> <li>• Notebooks</li> <li>• Game Stations</li> <li>• Set-Top Box</li> </ul>	<ul style="list-style-type: none"> <li>• DirectFET®</li> <li>• Low-Voltage ICs</li> <li>• Sup/BBuck™</li> <li>• XPhase®</li> <li>• Power Monitor IC</li> <li>• IPOWIR®</li> </ul>
 <p><b>Automotive</b></p> <p>Automotive grade power management solutions qualified to meet the needs of 12V, 24V and HEV/EV applications with a zero defect goal.</p>	<ul style="list-style-type: none"> <li>• AC and DC Motor Drives</li> <li>• Powertrain / Engine control</li> <li>• Body Electronics</li> <li>• Lighting</li> <li>• Class D Audio</li> <li>• Heavy Loads and Actuators</li> </ul>	<p>Automotive Qualified:</p> <ul style="list-style-type: none"> <li>• HEXFET® Power MOSFETs</li> <li>• Intelligent Power Switches</li> <li>• Driver ICs (Low-, Mid- and High-Voltage)</li> <li>• IGBTs for Motor Drives, Various Loads</li> <li>• DirectFET®<b>2</b></li> </ul>
 <p><b>Benchmark MOSFETs</b></p> <p>IR continues to lead the industry by offering power MOSFETs with the lowest <math>R_{DS(on)}</math> and widest range of packages up to 250V for a diverse range of applications.</p>	<ul style="list-style-type: none"> <li>• Audio</li> <li>• Computing</li> <li>• Communications</li> <li>• Motor Control</li> <li>• Power Supply</li> <li>• Synchronous Rectification</li> </ul>	<ul style="list-style-type: none"> <li>• Discrete HEXFET® MOSFETs</li> <li>• Dual HEXFET® MOSFETs</li> <li>• FETKY®</li> </ul>
 <p><b>HiRel</b></p> <p>Our discrete components, complex hybrid power module assemblies and rugged DC-DC converters utilize leading-edge power technology which, together with demanding environmental specifications help engineers to meet their toughest design challenges.</p>	<ul style="list-style-type: none"> <li>• Space</li> <li>• Military</li> <li>• Commercial Aviation</li> <li>• Rugged Industrial</li> <li>• Medical</li> </ul>	<ul style="list-style-type: none"> <li>• RAD-Hard MOSFETs</li> <li>• Power Modules/Hybrid Solutions</li> <li>• Motor Control Solutions</li> <li>• DC-DC Converters</li> </ul>