International IR Rectifier

THE POWER MANAGEMENT LEADER

MOTION™
Integrated Design Platform

IR's *iMOTION* Integrated Design Platform delivers everything you need to design a complete variable speed motor control subsystem. From the front panel and power entry to the motor terminals, *iMOTION* brings powerful digital, analog and power silicon together with algorithms, development software and design tools.
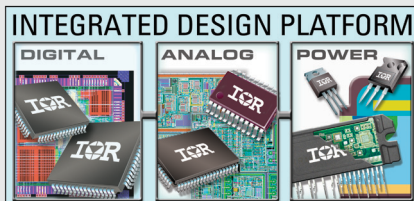
Advantages

With *iMOTION* you can design a system that:

- Turns a motor for evaluation in days instead of weeks
- Performs more efficiency without added system cost
- Helps you meet if not beat aggressive design schedules

Ready for diverse applications:

- Asynchronous Motors
- Permanent-magnet Motors
- Fans
- Pumps
- Industrial Motors
- Compressors
- Washers
- Air Conditioners
- Power Tools

INTEGRATED DESIGN PLATFORM

DIGITAL   ANALOG   POWER

* IR's iMOTION™ (ai mo shan), representing the intelligent motion control, is a trademark of International Rectifier Corp.

Digital Control ICs

Part Number	Package	Motor Control	Analog	I/O	Communication
IRMCF312 / IRMCK312	QFP100	• 2 Motors • 1 PFC • Extra I/O and analog for system functions	• 12 bit A/D • 11 channels • POR • UVLO • Analog watchdog	• 36 dig I/O • 1 Capture • 4 Timers	• RS232 x 2 • I2C/SPI
IRMCF311 / IRMCK311	QFP64	• 2 Motors • 1 PFC • Minimum set of pins for motor control	• 12 bit A/D • 6 channels • POR • UVLO • Analog watchdog	• 14 dig I/O • 1 Capture • 4 Timers	• RS232 x 2 • I2C/SPI
IRMCF343 / IRMCK343	QFP64	• 1 Motor • 1 PFC • Extra I/O and analog for system functions	• 12 bit A/D • 5 channels • POR • UVLO • Analog watchdog	• 23 dig I/O • 1 Capture • 4 Timers	• RS232 • 12C/SPI
IRMCF341 / IRMCK341	QFP64	• 1 Motor • Extra I/O and analog for system functions	• 12 bit A/D • 8 channels • POR • UVLO • Analog watchdog	• 24 dig I/O • 1 Capture • 4 Timers	• RS232 • 12C/SPI
IRMCF371 / IRMCF371	QFP48	• 1 Motor • Minimum set of pins for motor control	• 12 bit A/D • 4 channels • POR • UVLO • Analog watchdog	• 13 dig I/O • 1 Capture • 4 Timers	• RS232 • 12C/SPI
IRMCK171 / IRMCF171	QFP48	• 1 Motor, single or leg shunt	• 12 bit A/D • 6 channels • POR • UVLO • Analog watchdog • Internal 1.8V Power Supply	• 10 dig I/O • 1 Capture • 4 Timers	• RS232 • 12C/SPI
IRMCK143 / IRMCF143	QFP64	• 1 Motor, single shunt plus PFC	• 12 bit A/D • 7 channels • POR • UVLO • Analog watchdog • Internal 1.8V Power Supply	• 24 dig I/O • 1 Capture • 4 Timers	• RS232 • 12C/SPI

Intelligent Power Modules

Part Number	Voltage	Typical Load (W)	Io @ TC = 100°C (A RMS)	Package	Configuration
IRAMS06UP60A	600V Open Emitter	400W	3	SIP-1	3-phase, 600V
IRAMS06UP60B	600V Integr. Shunt				
IRAM136-1061A	600V Open Emitter	750W	5	SIP-1A	
IRAMS10UP60A	600V Open Emitter	750W	5	SIP-1	
IRAMS10UP60B	600V Integr. Shunt				
IRAMX16UP60A	600V Open Emitter	1500W	8	SIP-2	
IRAMX16UP60B	600V Integr. Shunt				
IRAMX20UP60A	600V Open Emitter	2500W	10		
IRAMY20UP60B	600V Integr. Shunt			SIP-3	
IRAM136-3063B	600V Integr. Shunt	3000W	15		
IRAM136-3023B	150V Integr. Shunt	750W	15		3-phase, 150V

*i*MOTION™ Reference Designs

IRMCS1271	IRMCS1671	IRMCS1043
• Complete PM motor design platform • Featuring IRMCF171 Digital Control IC • 230V input • Up to 1100W depending on module • Features SIP1A module • Single or Leg Shunt • MCE Wizard • MCE Designer • Software support files including 8051 sample code	• Complete PM motor design platform • Featuring IRMCF171 Digital Control IC • 230V input • Up to 100W depending on module • Features 12x12mm µIPM surface mount module • Leg Shunt • MCE Wizard • MCE Designer • Software support files including 8051 sample code	• Complete PM motor design platform with input PFC control • Featuring IRMCF143 Digital Control IC • 230V input • 1500W • Features SIP1A module • Single Shunt • MCE Wizard • MCE Designer • Software support files including 8051 sample code

For additional reference designs, please contact your sales representative.