

Delphi Series IPM, Non-Isolated, Integrated POL Power Modules: 3V~5.5V or 8V~14V input, 10A Output Current

The Delphi Series IPM04S and IPM12S non-isolated, fully integrated Point-of-Load (POL) power modules, are the latest offerings from a world leader in power systems technology and manufacturing — Delta Electronics, Inc. This product family provides up to 10A of output current or 40W of output power in an industry standard, compact, IC-like, molded package. It is highly integrated and does not require external components to provide the point-of-load function. A copper pad on the back of the module; in close contact with the internal heat dissipation components; provides excellent thermal performance. The assembly process of the modules is fully automated with no manual assembly involved. These converters possess outstanding electrical and thermal performance, as well as extremely high reliability under highly stressful operating conditions. These modules operate from a 3V~5.5V (IPM04S) or an 8V~14V (IPM12S) source and provide a programmable output voltage of 0.8V to 3.3V (IPM04S) or 0.8V to 5V (IPM12S). The IPM product family is available in both a SMD or SIP packages.

FEATURES

- High efficiency:93% @ 12Vin, 5V/8A out94% @ 5Vin, 3.3V/10A out
 - Small size and low profile: 17.8x15.0x7.8mm (0.70"x0.59"x0.31")
- Monotonic startup into normal and pre-biased loads
- Input UVLO, output OCP
- Output short circuit protection
- Remote ON/OFF
- Fixed frequency operation
- Copper pad to provide excellent thermal performance
- ISO 9001, TL 9000, ISO 14001, QS9000,
 OHSAS18001 certified manufacturing facility
- UL/cUL 60950 (US & Canada) Recognized, and TUV (EN60950) Certified
- CE mark meets 73/23/EEC and 93/68/EEC directives

OPTIONS

SMD or SIP package

APPLICATIONS

- Telecom/DataCom
- Wireless Networks
- Optical Network Equipment
- Server and Data Storage
- Industrial/Test Equipment



SPECIFICATIONS

GENERAL SPECIFICATIONS			OUTPUT SPECIFICATIONS		
Input Voltage	Typical	3V~5.5V, 8V~14V	Voltage Accuracy	Typical	±1.5%
Switching Frequency	Typical	300KHz (04S) / 500KHz (12S)	Line Regulation	Typical	±0.1%
Turn-on time	Typical	13mS (IPM04S) / 17mS (IPM12S)	Load Regulation	Typical	±0.3%
MTBF	Bellcore	TBD	Ripple & Noise	Typical	30mVp-p (04S) / 40mVp-p (12S)
Size (Body)	Typical	17.8x15.0x7.8mm (0.70"x0.59"x0.31")	Current Limits	Typical	200%

PART NUMBERING SYSTEM

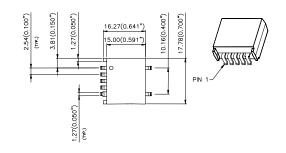
IPM	04	S	0A0	R	10	F	Α
Product	Input Voltage	Number of	Output Voltage	Package	Output		Option Code
Family		Outputs			Current		
Integrated POL	04 - 3V ~ 5.5V	S - Single	0A0 - programmable output	R - SIP	08 - 8A	F- RoHS 6/6	A - Standard
Module	12 - 8V ~ 14V			S - SMD	10 - 10A	(Lead Free)	Functions
1							

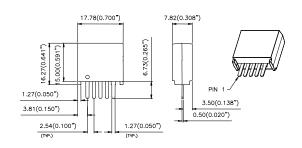
MODEL LIST

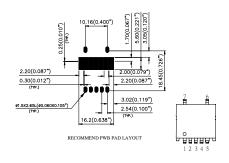
Model Name	Packaging	Input Voltage	Output Voltage	Output Current	Efficiency (Typical @ full
IPM12S0A0R08FA	SIP	8V ~ 14V	0.8V ~ 5V	8A	93%
IPM12S0A0S08FA	SMD	8V ~ 14V	0.8V ~ 5V	8A	93%
IPM04S0A0R10FA	SIP	3V ~ 5.5V	0.8V ~ 3.3V	10A	94%
IPM04S0A0S10FA	SMD	3V ~ 5.5V	0.8V ~ 3.3V	10A	94%

MECHANICAL DRAWING SMD PACKAGE

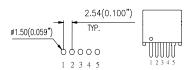
SIP PACKAGE







Pin#	Function
1	Remote on/off
2	+Vin
3	Ground
4	+Vo
5	Trim
6	Remote sense (optional)
7	No connection



Pin#	Function
1	Remote on/off
2	+Vin
3	Ground
4	+Vo
5	Trim

ALL DIMENSION ARE IN MILLIMETERS (INCHES) STANDARD DIMENSION TOLERANCE IS $\pm\,0.10(0.004")$

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WARRANTY

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