

2SIL1200V2A0(C) SCALE-iFlex LT Family

Isolated Master Control (IMC) for Half-Bridge Power Modules
Optical Interface

Preliminary

Product Highlights

Highly Integrated, Compact Footprint

- Dual channel gate driver
- Optimized for parallel connected power modules
- Supports up to 4 or 6 dual-channel power modules depending on the connected Module Adapted Gate Drivers
- Optical interface
- Primary supply voltage of +15 V
- 10 W output power per channel at maximum ambient temperature
- -40 °C to 85 °C operating ambient temperature

Protection / Safety Features

- Supporting short circuit detection and advance active clamping of the Module Adapted Gate Driver
- Undervoltage lock-out (UVLO) protection for primary-side (low-voltage) and secondary-side (high-voltage)
- Applied double sided conformal coating for 2SIL1200V2A0C

Comprehensive Safety and Regulatory Compliance

- 100% production test for partial discharge and HIPOT test of transformer
- Clearance and creepage distances between primary and secondary
- sides meet requirements for reinforced isolation according to IEC61800-5-1 and EN 50124-1
- RoHS compliant

Applications

- Wind and photovoltaic power
- Industrial drives
- Traction inverter

Description

This data sheet describes the Isolated Master Control (IMC) of the SCALE-iFlex™ LT gate driver family which works conjointly with a Module Adapted Gate Driver (MAG).

The IMC is designed for the operation of power modules with a blocking voltage up to 3300 V, whereas the MAGs are available in different variants optimized for different power modules and chip technologies of different suppliers in the voltage classes up to 3300 V.

SCALE-iFlex LT enables easy paralleling of up to 4 or 6 power modules depending on the connected MAGs providing high flexibility and system scalability.

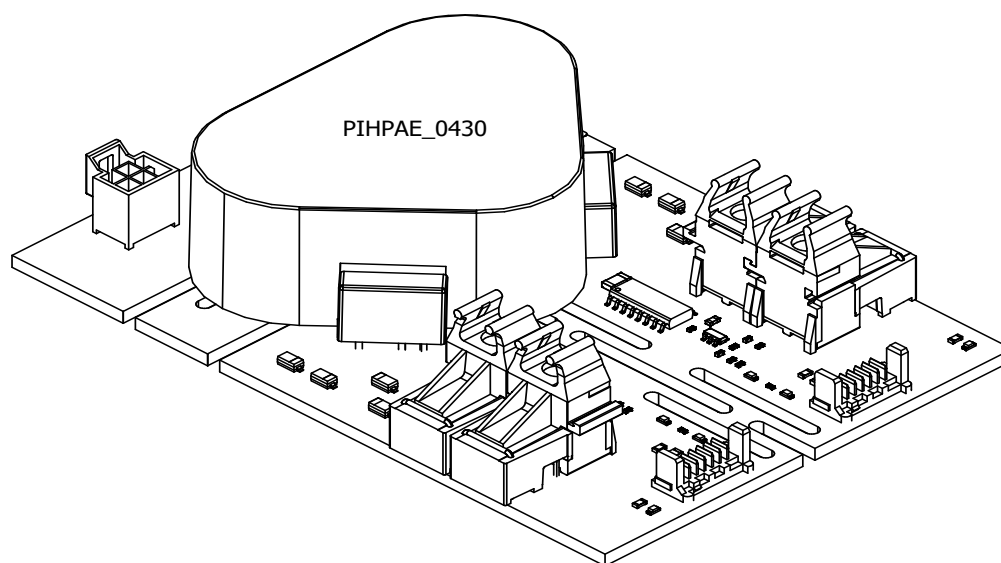


Figure 1. Board Photo of 2SIL1200V2A0(C).

Pin Functional Description

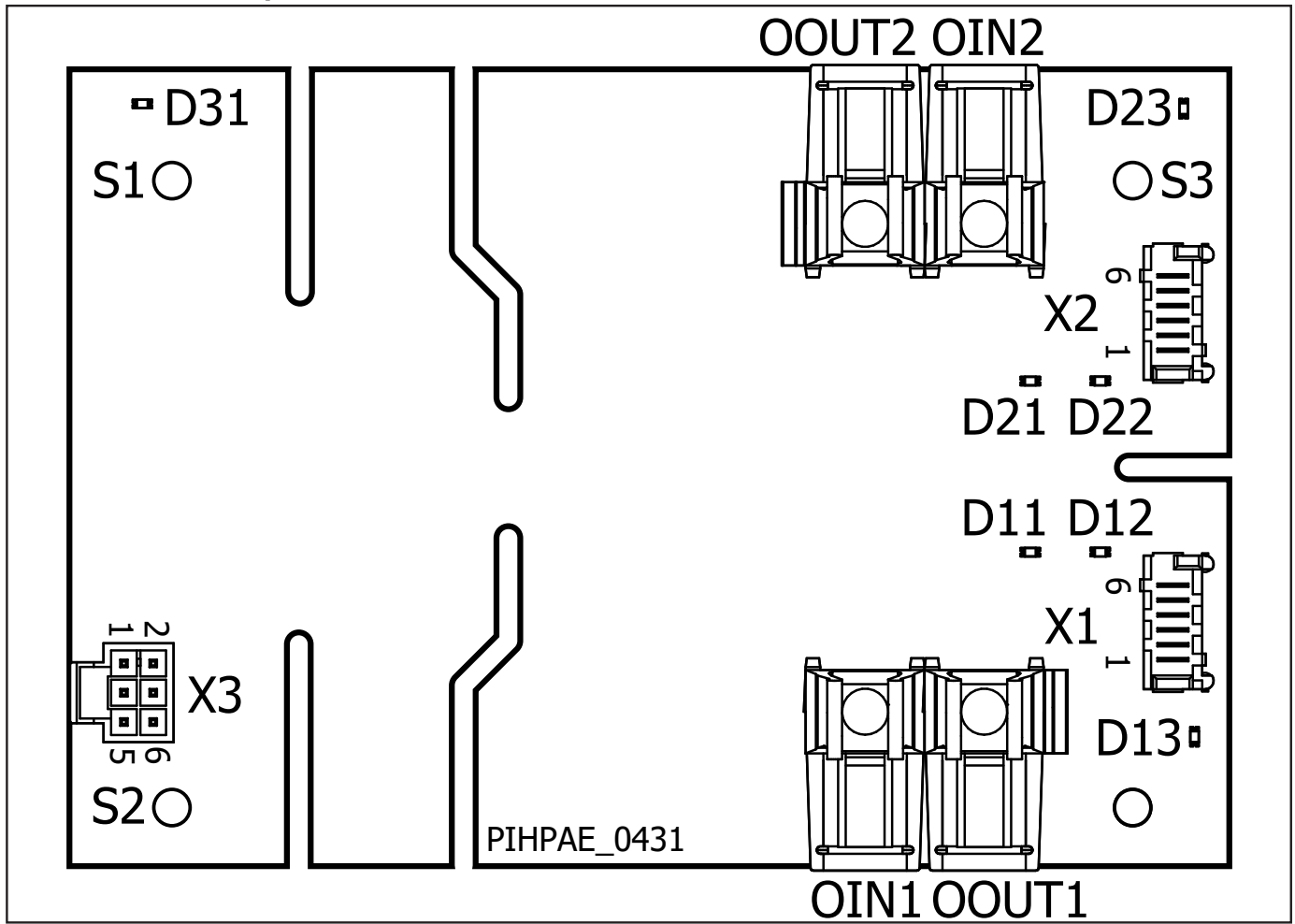


Figure 2. Pin Configuration.

Connector X3

MOLEX 105310-1106 Supply connector for external power supply.

VCC (Pin 1)

This pin is the primary-side supply voltage connection and it has to be used for supplying the SCALE-iFlex LT gate driver.

VDC (Pin 3/5)

This pin is the primary-side 15 V supply voltage connection the integrated DC/DC converter which supplies the secondary sides.

GND (Pin 2/4/6)

This pin is the connection for the primary-side ground potential.

Connection To MAG**Connector X1**

Pin-header connector to MAG for gate driver channel 1.

Connector X2

Pin-header connector to MAG for gate driver channel 2.

Terminals S1 to S4

Dome positions for mechanical fixation of the IMC to the MAG.

Fiber Optic Interface

IMC to external controller (Fiber optic receivers and transmitters).

OIN1 (Receiver)

This fiber optic receiver is the command input for channel 1.

Part number: HFBR-2532ETZ from Broadcom

OIN2 (Receiver)

This fiber optic receiver is the command input for channel 2.

Part number: HFBR-2532ETZ from Broadcom

OOUT1 (Transmitter)

This fiber optic transmitter is the status output for channel 1.

Part number: AFBR-1539Z from Broadcom

OOUT2 (Transmitter)

This fiber optic transmitter is the status output for channel 2.

Part number: AFBR-1539Z from Broadcom

LED

D11

TBD

D12

TBD

D13

TBD

D31

TBD

D21

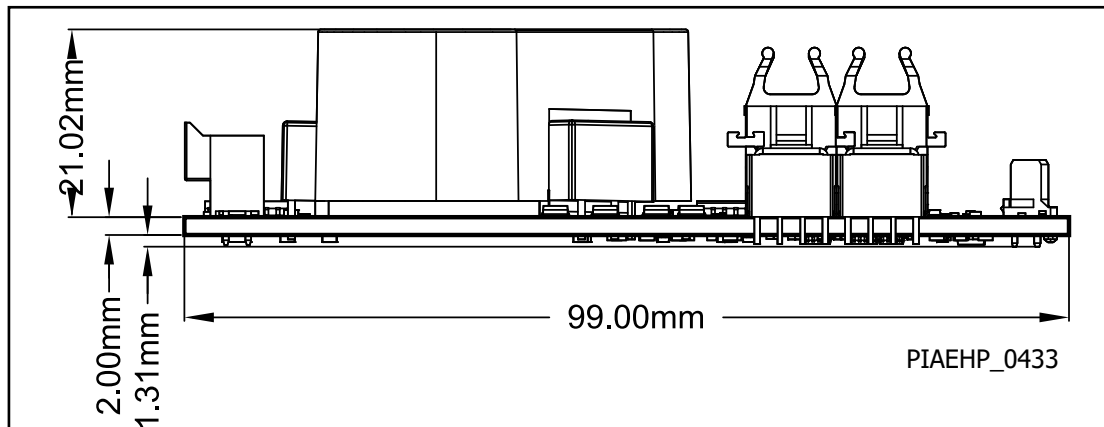
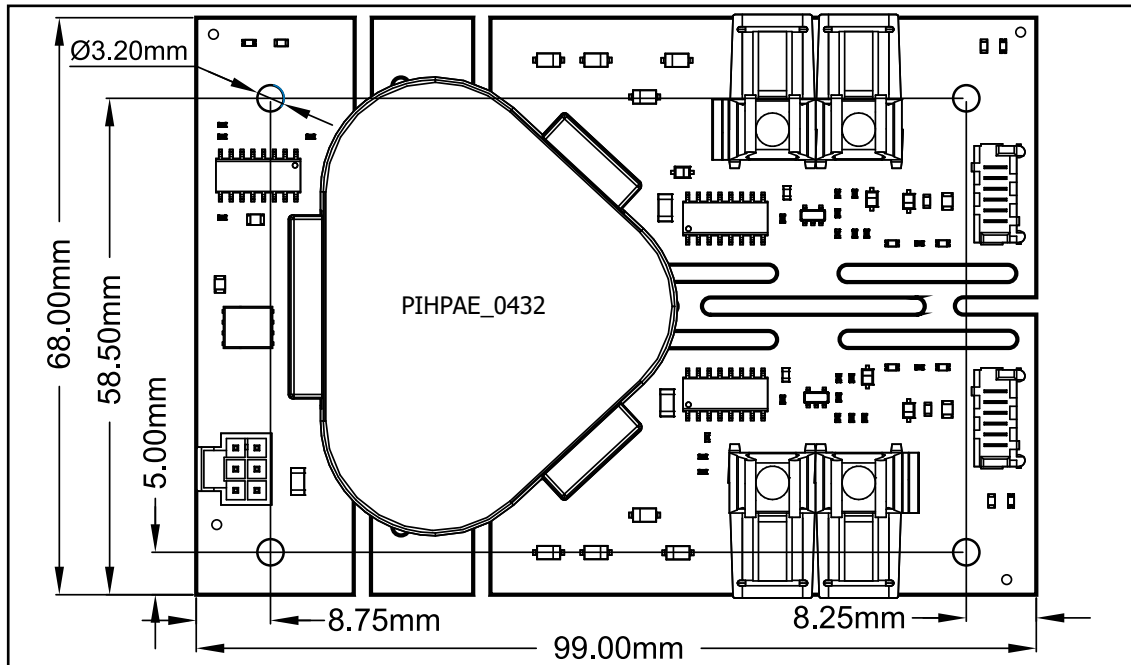
TBD

D22

TBD

D23

TBD

Product Dimensions**Product Details**

Part Number	Voltage Class	Coating
2SIL1200V2A0-33	3300 V	Uncoated
2SIL1200V2A0C-33	3300 V	Coated

Transportation and Storage Conditions

For transportation and storage conditions refer to Power Integrations' Application Note AN-1501.

RoHS Statement

We hereby confirm that the product supplied does not contain any of the restricted substances according to Article 4 of the RoHS Directive 2011/65/EU in excess of the maximum concentration values tolerated by weight in any of their homogeneous materials.

Additionally, the product complies with RoHS Directive 2015/863/EU (known as RoHS 3) from 31 March 2015, which amends Annex II of Directive 2011/65/EU.

Revision	Notes	Date
A	Flyer Datasheet.	10/24

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Power Integrations Worldwide Sales Support Locations

World Headquarters

5245 Hellyer Avenue
San Jose, CA 95138, USA
Main: +1-408-414-9200
Customer Service:
Worldwide: +1-65-635-64480
Americas: +1-408-414-9621
e-mail: usasales@power.com

China (Shanghai)

Rm 2410, Charity Plaza, No. 88
North Caoxi Road
Shanghai, PRC 200030
Phone: +86-21-6354-6323
e-mail: chinasales@power.com

China (Shenzhen)

17/F, Hivac Building, No. 2, Keji Nan
8th Road, Nanshan District,
Shenzhen, China, 518057
Phone: +86-755-8672-8689
e-mail: chinasales@power.com

Germany

(AC-DC/LED/Motor Control Sales)
Einsteinring 24
85609 Dornach/Aschheim
Germany
Tel: +49-89-5527-39100
e-mail: eurosales@power.com

Germany (Gate Driver Sales)

HellwegForum 3
59469 Ense
Germany
Tel: +49-2938-64-39990
e-mail: igbt-driver.sales@power.com

India

#1, 14th Main Road
Vasanthanagar
Bangalore-560052 India
Phone: +91-80-4113-8020
e-mail: indiasales@power.com

Italy

Via Milanese 20, 3rd. Fl.
20099 Sesto San Giovanni (MI) Italy
Phone: +39-024-550-8701
e-mail: eurosales@power.com

Japan

Yusen Shin-Yokohama 1-chome Bldg.
1-7-9, Shin-Yokohama, Kohoku-ku
Yokohama-shi,
Kanagawa 222-0033 Japan
Phone: +81-45-471-1021
e-mail: japansales@power.com

Korea

RM 602, 6FL
Korea City Air Terminal B/D, 159-6
Samsung-Dong, Kangnam-Gu,
Seoul, 135-728, Korea
Phone: +82-2-2016-6610
e-mail: koreasales@power.com

Singapore

51 Newton Road
#19-01/05 Goldhill Plaza
Singapore, 308900
Phone: +65-6358-2160
e-mail: singaporesales@power.com

Taiwan

5F, No. 318, Nei Hu Rd., Sec. 1
Nei Hu Dist.
Taipei 11493, Taiwan R.O.C.
Phone: +886-2-2659-4570
e-mail: taiwansales@power.com

UK

Building 5, Suite 21
The Westbrook Centre
Milton Road
Cambridge
CB4 1YG
Phone: +44 (0) 7823-557484
e-mail: eurosales@power.com