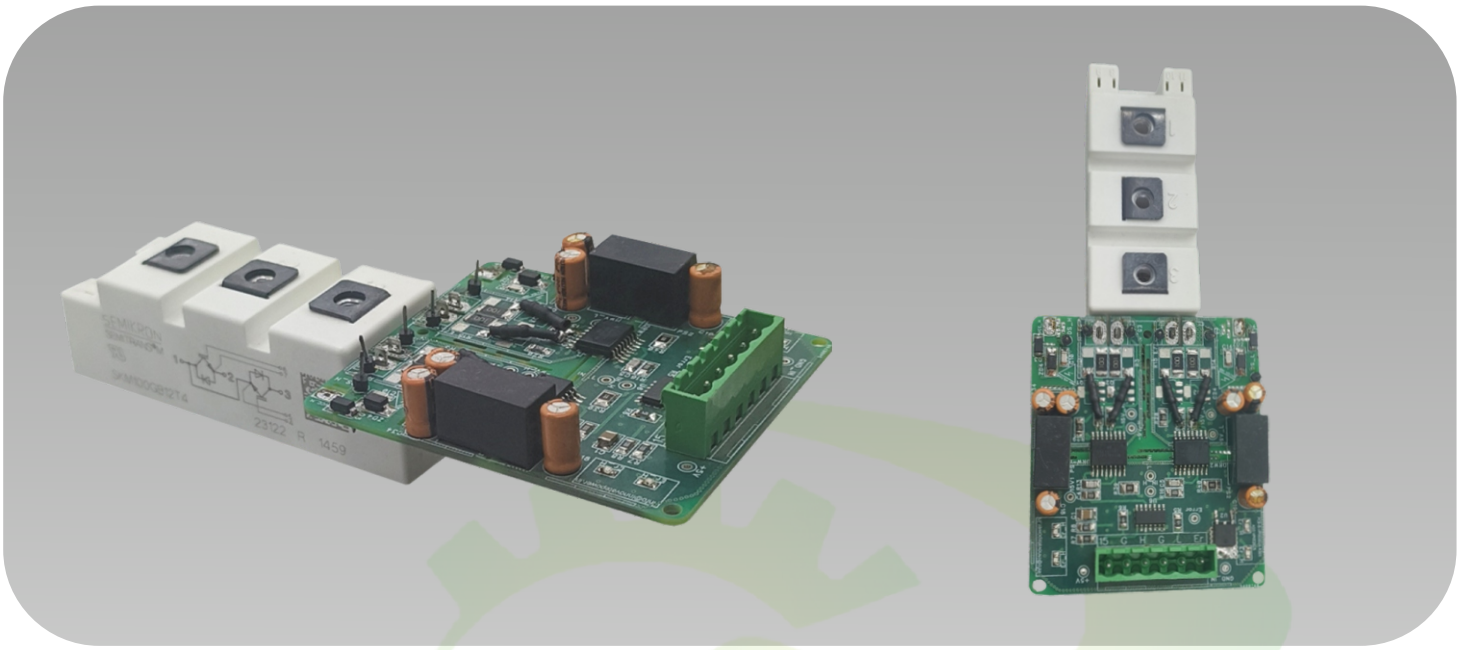
VP003025

ASS -2 CH IGBT DRV OC (15A)_R001



FEATURES

- Low Power dual channel driver 2X1 Watt Output Power
- ±2.5A source & 5A sink gate current.
- +15V/-5V Drive up to 2100V DC IGBT Module Short circuit clamping
- Active shut down
- 2A Internal Active Miller clamp function
- 400mA soft turn off when fault happen
- 5KVrms isolation
- Switching frequency up to 85 KHz
- Less than 130 ns propagation delay time
- Primary/Sec. Supply under voltage lockout
- Vce monitoring for short circuit protection
- 200 ns response time fast DESET protection
- Isolated analog sensor with PWM output for
- 1. Temperature sensing with NTC, PTC or thermal diode
- 2. High voltage DC-Link or phase voltage

APPLICATION OF USES

- Drives
- Ballast
- Converter – Inverter
- UPS
- Solar Inverter
- Medical X-Ray

ADVANTAGES

- On board isolated DC-DC converter - No need of separate SMPS.
- Interface for 3.3V...15 V logic level - Direct compatible with any Controller.
- Common fault feedback signal to interface with controller - Avoid Extra component.
- Field configurable blocking time - Flexibility in your hand, use any make IGBT.
- 5700V Safe isolation
- User Selectable Rg-on & off

Recommended Power Supply

Power Supply & Monitoring MIN TYP MAX
Supply Voltage Vcc to GND : 14.5 15 15.5 V
Supply Current Icc (Without Load) : 100mA

Mechanical Dimension (Option 1)

PCB : 85 X 65 mm
Mounting Hole : vertical mounting - PCB mounted
Enclosure : Open Frame
Weight : 0.3 Kg

Logical Inputs & Outputs

Input Bias Current : 90 µA (Max)
Interface Logic level : 3.3 to 5.0 V
(15V logic level R3-R4=10K)
Turn-on threshold : 2.6V
Turn off threshold : 1.67 V
Error output , failure Condition : 0.7 V Max.,
I (Er) <20mAtotal
Isolated analog output :0.5 to 4.5V

Output Voltage / Current / Power

Turn-on voltage, V : 14.5- 15.5V, any load condition
Turn-off voltage, V : -4.5 TO 5.5 V, No load
Gate Peak Current Iout : ±10Amp
Internal Gate resistance : 0.0Ω
External Gate resistance : 1.5Ω-4.9Ω, Minimum
Switching frequency F : 100 Khz
Output Power : t.b.d, Tamb <85 °C
: 1W, Tamb <70°C

Mechanical Dimension (Option 2)

PCB : 85 X 65 mm
Mounting Hole : 53.5 X 28.5 X 2 mm
Panel Mounted : Direct IGBT module mounting
Enclosure : Open Frame
Weight : 0.3 Kg

Protection Available on Driver Board

Primary/Secondary Under voltage monitoring.
Power supply short circuit & reverse polarity protection.
Soft Shut down for Over Voltage protection.
Vce monitoring for short circuit protection.
Schmitt trigger at the Input stage, highly susceptible to noise.

Short-Circuit Protection

Vce-monitoring threshold : 9V (Internally fix)
Available response time : 4.4 µSec (User selectable)
Minimum response time : 1.0 µSec
Minimum blocking time : 1.0 µSec

Interfacing with Control Circuit

ERROR : High to Low (FLT)
Two isolated analog output for DC voltage sensing or temperature sensing APWM_H, APWM_L
Power supply monitoring Low to High. (Rdy)

Electrical Isolation

Test voltage (50 Hz/60 sec)
Primary to secondary side : 5.7 KV
Secondary to secondary side : 5.7 KV

LED Indication

Power ON: Green (Normally OFF, ON during Power supply fault)
ERROR : RED (ON during Under Voltage / DESAT/ IGBT Fault)

Timing Characteristic

Turn-on delay t : 185 ns
Turn-off delay t : 185 ns
Output rise time t : 33 ns
Output fall time t : 27 ns
Transmission delay of fault state :500ns

Environmental

Working temperature : -40 to 105 ºC
Storage temperature : -40 to 90 ºC

Driving Capability : Any Make

All usual SIC-MOSFET up to 300A /1700V . Driving power depends on switching frequency so in case of any doubt during selection process pl. contact us.

Interfacing with Control Circuit

14- Pin input FRC Pin Details:

1,5,6,13	N.C.	2	PWM_H
4	PWM_L	3	ERROR
7	APW_H	8,9	+15V
10,11,12	GND	14	APW_L

CON2-7 Pin Connector

1	Error
2	PWML
3	G(-ground)
4	PWMH
5	G(-ground) Common ground
6	+15V DC

MODULE LAYOUT