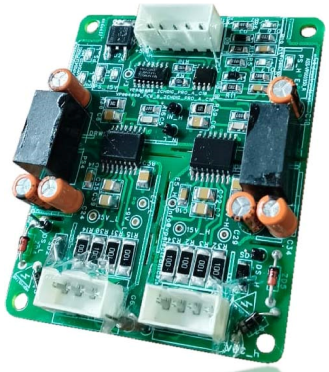
DATA SHEET DIGITALLY
VERIFIED BY DEPT. R&D

DATA SHEET





GENERAL INFORMATION GDU

- ITEM CODE: - **VP004233.**
- ITEM DESCRIPTIONAL NAME: - **2CHDIG_PRO_MLX_A_ (+-10A).**
- TYPE: - **DUAL CHANNEL ISOLATED GATE DRIVER CARD.**
- PCB COLOUR: - **GREEN.**

DEPT. R&D V P ELECTRONICS

ELECTRICAL SPECIFICATIONS GDU

- VCC INPUT: - **+15V DC +- 5%.**
- LOGIC INPUT: - **5V TO 15V TTL FROM MCU.**
- OUTPUT: - **2 CHANNEL EACH CHANNEL 2X GATE DRIVE.**
- PEAK OUTPUT CURRENT: - **10A PER CHANNEL.**
- PROTECTION: - **SHORT CIRCUIT PROTECTION.**
- SWITCHING FREQUENCY: - **10 kHz TO 50 kHz RECOMMENDED 20 KHz.**

ADVANTAGE OF GDU

- **ON BOARD ISOLATED DC-DC CONVERTER – NO NEED OF SEPERATED SMPS.**
- **INTERFACE FOR 3.3V TO 15V LOGIC LEVEL DIRECT COMPATABLE WITH ANY CONTROLLER.**
- **COMMON FAULT FEEDBACK SIGNAL TO INTERFACE WITH CONTROLLER AVOIDS EXTRA COMPONENTS.**
- **FIELD CONFIGURABLE BLOCKING TIME FLEXIBILITY IN YOUR HAND, USE ANY MAKE IGBT.**
- **USE SELECTABLE RG-ON & RG-OFF.**

A GROUP OF V P ELECTRONICS (DEPT. R&D)
info@vpelectronics.net.
www.vpelectronics.com.
+91 9313020244.

V P Electronics
Total Solution of Power Electronics

- DEAD BAND SELECTABLE.

FEATURES

- 10A SOURCE SINK GATE CURRENT.
- SOFT TURN OFF.
- 4A INTERNAL ACTIVE MILLER CLAMP FUNCTION.
- SWITCHING FREQUENCY UPTO 50 KHZ.
- INTERLOCKING WHEN BOTH PWM IS HIGH.
- 200NS RESPONSE TIME FAST DESET PROTECTION.
- Vce MONETERING FOR SHORT CIRCUIT PROTECTIONS.
- LESS THAN 130NS PROPAGATION DELAY.
- LOW POWER DUAL CHANNEL DRIVER CARD (GDU).

APPLICATIONS

- DRIVES.
- BALLAST.
- CONVERTER.
- INVERTER.
- SOLAR INVERTERS.
- MEDICAL X-RAY.

DEPT. R&D V P ELECTRONICS

RECOMMENDED POWER SUPPLY

- POWER SUPPLY MONITORING : - **MIN / MAX**
- SUPPLY VOLTAGE VCC TO GND : - **14.5 VDC TO 16.5 VDC**
- SUPPLY CURRENT Icc : - **100mA**

LOGICAL INPUTS & OUTPUTS

- INTERFACE LOGIC LEVEL : - **3.3 TO 15V**
- ERROR OUTPUT FOR DE SET AND SMPS FAILURE: - **ACTIVE HIGH (5V) FOR HEALTY CONDITION / OPEN COLLECTOR ERROR READING WHEN FAULT THE CONDITION IS (0V).**

SHORT CIRCUIT PROTECTION

- Vce-MONITERING THRESHOLD: - **9.2V INTERNALLY FIXED IN GDU CARD.**
- AVALIABLE RESPONSE TIME: - **4.4 us (USER SELECTABLE).**
- MINIMUM RESPONSE TIME :- **1.0 us**
- MAXIMUM RESPONSE TIME :- **1.0 us**

TIMING CHARACTERISTIC

- TURN ON DELAY TIME: - **185 ns.**
- TURN OFF DELAY TIME: - **185 ns.**
- OUTPUT RISE TIME: - **35ns MAX.**
- OUTPUT FALL TIME: - **37ns MAX.**
- TRANSMISSION DELAY OF FAULT STATE: - **35ns MAX.**

IGBT GATE DRIVER CURRENT CALCULATIONS

- I PEAK: - **V/(RG+Rgint).**
- Iavg :- **Qg*fsw.**

DEPT. R&D V P ELECTRONICS

LED INDICATIONS

- GREEN LED POWER ON: - **GREEN LED IN BOTH SIDES IS GOING TO GLOW WHEN ON THE POWER OF GDU CARD.**
- ERROR CONDITION: - **GREEN LED IS GLOW PERMANETELLY WHEN YOUR SMPS IS IN FAILED CONDITION.**
- RED LED :- **(DE SET / IGBT FAILED OVER CURRENT).**

TEMPERATURE

- WORKING TEMPERATURE: - **-40 DEGREE TO 105 DEGREE.**
- STORAGE TEMPERATURE: - **-40 DEGREE TO 90 DEGREE.**

MECHANICAL DIMENSION

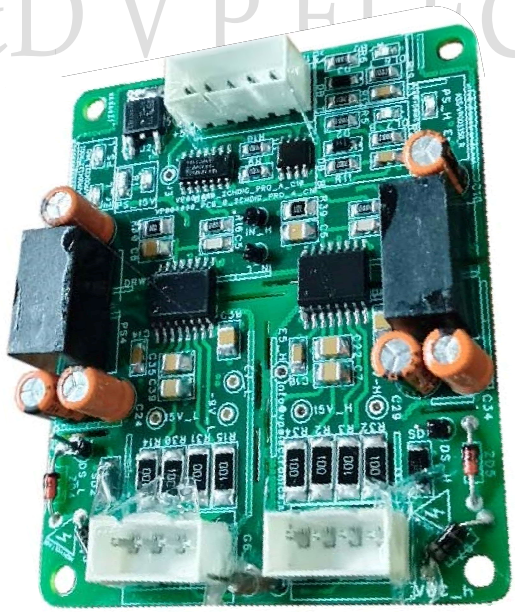
- PCB: - **87X67MM.**
- MOUNTING HOLE: - **57X47X4.2MM.**

- PANEL MOUNTED: - **DIRECT IGBT MODULE MOUNTING.**
- ENCLOUSER: - **OPEN FRAME.**
- WEIGHT: - **0.3 KG.**

WIRING / CONNECTOR CONFIGURATIONS WITH ZICK FIXTURE

- X3 INPUT CONNECTION (ER):- **NORMALLY ACTIVE HIGH WHEN ERROR IS PRESENT THAN ER PIN IS 0V (OPEN COLLECTOR).**
- X3 INPUT CONNECTIONS (G):- **COMMON GROUND USE FOR SMPS / PWM.**
- X3 INPUT CONNECTIONS (T):- **TOP SWITCH PWM INPUT.**
- X3 INPUT CONNECTIONS (L):- **LOWER SWITCH PWM INPUT.**
- X3 INPUT CONNECTIONS (+15V):- **+15V DC FROM SMPS SUPPLY.**
- X1 OUTPUT CONNECTION (L PWM OUTPUT):- **LOW SWITCH PWM OUTPUT.**
- X2 OUTPUT CONNECTION (H PWM OUTPUT):- **HIGH SWITCH PWM OUTPUT.**

DEPT. R&D V P ELECTRONICS



DATA SHEET DIGITALLY
VERIFIED BY DEPT. R&D

TOP SWITCH PWM OUTPUT

COMMON GND

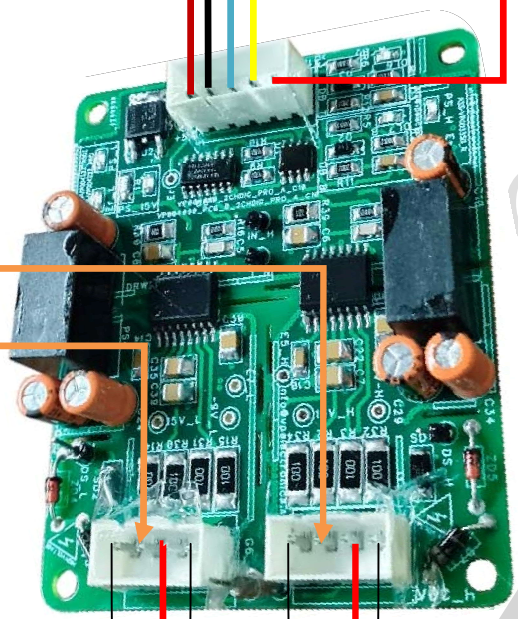
LOWER SWITCH PWM INPUT

ER

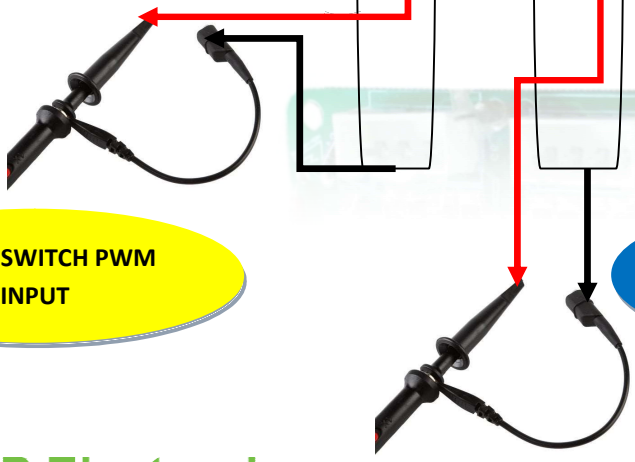
+15V DC

DEPT. R& CTRONICS

NOT USE PIN



WHEN WE TEST IN WITH THE ZICK FIXTURE WE SHORT LIKE THIS FOR DE-SET GROUN DING



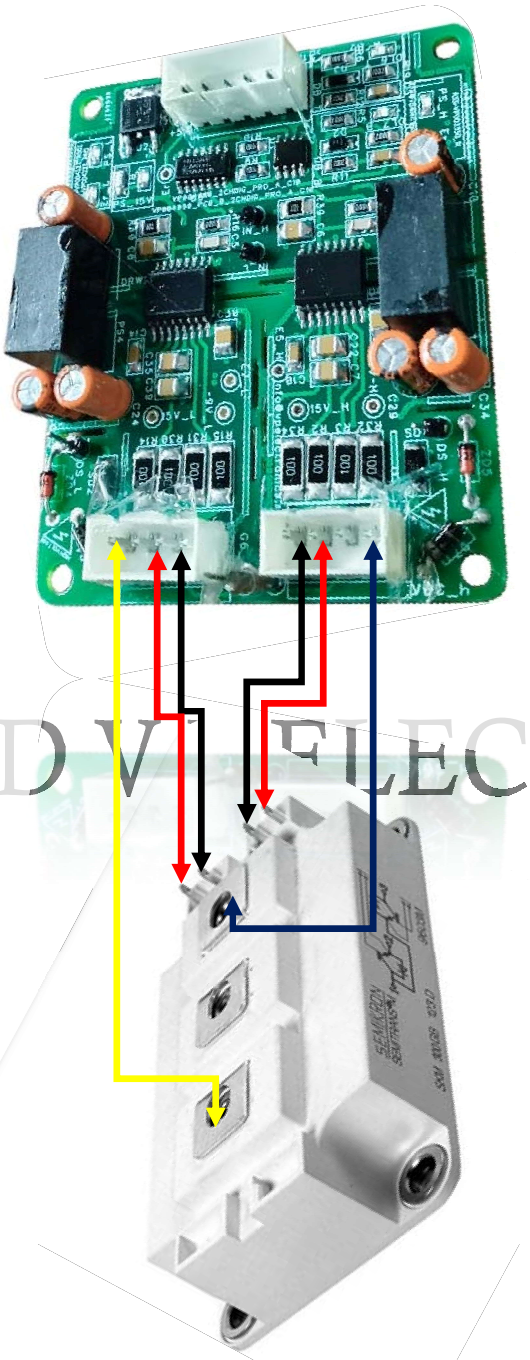
LOWER SWITCH PWM INPUT

TOP SWITCH PWM OUTPUT

A GROUP OF V P ELECTRONICS (DEPT. R&D)
info@vpelectronics.net.
www.vpelectronics.com.
+91 9313020244.

V P Electronics
Total Solution of Power Electronics

DATA SHEET DIGITALLY
VERIFIED BY DEPT. R&D



DEPT. R&D V P ELECTRONICS

A GROUP OF V P ELECTRONICS (DEPT. R&D)
info@vpelectronics.net.
www.vpelectronics.com.
+91 9313020244.

V P Electronics
Total Solution of Power Electronics