

RAM ENTERPRISE

CARD FOR 1-PHASE HALF BRIDGE INVERTER

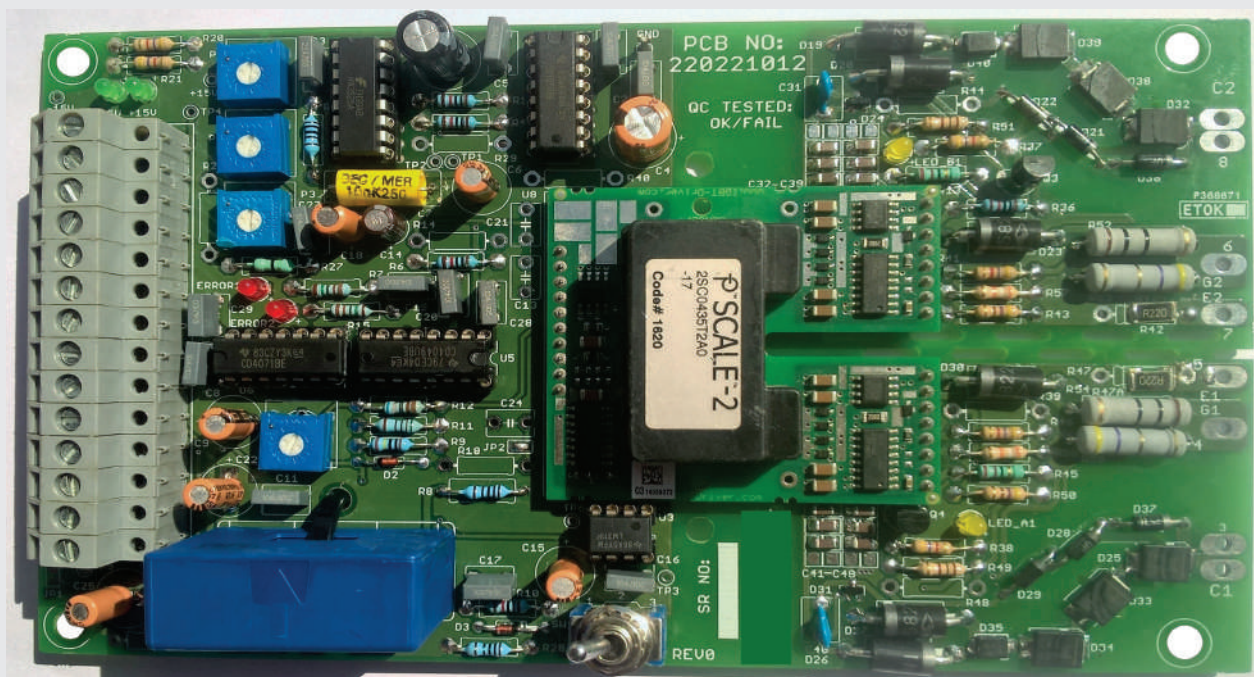
APPLICATIONS

- 1- Phase Corona Treater
- Medical X-Ray machine
- Bottle Cap Sealing equipments
- High Frequency Welding Inverter
- < 7.5 Kw 1- Phase Induction Heating
- < 7.5 Kw 1- Phase Induction Melting

PART CODE: 220221012

Up to 100 KHz / 1700V

FIELD PROVEN TECHNOLOGY !!



Features

- On board Pulse generator.
- Duty cycle and Frequency set(50Hz to 100KHz) through trim pot.
- On board High Frequency Current sensing, DC short protection and over load detection.
- Advance active clamping for IGBT over voltage protection.
- Vce monitoring for IGBT short circuit current.
- Driver Fault, DC short and overload "LED" indication for easy fault detection.
- Drive up to 1700V class IGBT (any make), Up to 1300V DC bus.
- Extremely reliable & rugged design.

Recommended Operating condition

| Power Supply & Monitoring | MIN | TYP | MAX |
|--------------------------------------|---------|------------------|--------|
| 1. Supply Voltage Vcc | : 14.5 | 15 | 16 V |
| 2. Supply Current Icc (Without Load) | : 150mA | (@28KHz PWM I/P) | |
| 3. Under Voltage Primary, Set Fault | : 11.3 | 12.1 | 12.7 V |
| Clear Fault | : 11.9 | 12.8 | 13.3 V |
| Secondary, Set Fault | : 11.5 | 12.0 | 12.5 V |
| Clear Fault | : 12.1 | 12.8 | 13.1 V |

Protection Available on control board

1. Primary/Secondary Under voltage monitoring & error feedback.
2. Current monitoring for Overload.
3. Soft Shut down, For IGBT Over Voltage.
4. Vce monitoring for short circuit current.
5. Schmitt trigger at the Input stage, highly susceptible to noise.
6. IGBT Gate clamping.

Electrical Isolation Test voltage (50 Hz/1 sec)

1. Primary to secondary side : 5.0 KV
2. Secondary to secondary side : 4.0 KV

Output Voltage / Current / Power

1. Turn-on voltage, V : 15.0 V, any load condition
2. Turn-off voltage, V : -10.1 V, No load
3. Turn-off voltage, V : -9.5 V @ 4 W
4. Turn-off voltage, V : -9.3 V @ 6 W
5. Gate Peak Current I : ± 35 Amp
6. External Gate resistance : Minimum 1 Ω , <25kHz
7. Switching frequency F : 100 KHz
8. Output Power : 4.0 W, T <85 °C
: 6.0 W, T <70 °C
: For higher ambient temperature derating applied.

Environmental

- Working temperature : -40 to 85 °C
Storage temperature : -40 to 90 °C

Driving Capability : ANY MAKE

All usual IGBT modules up to 1700 V.
For more detail mail us @: info@ramenterprise.co.in

Interfacing with Control Circuit

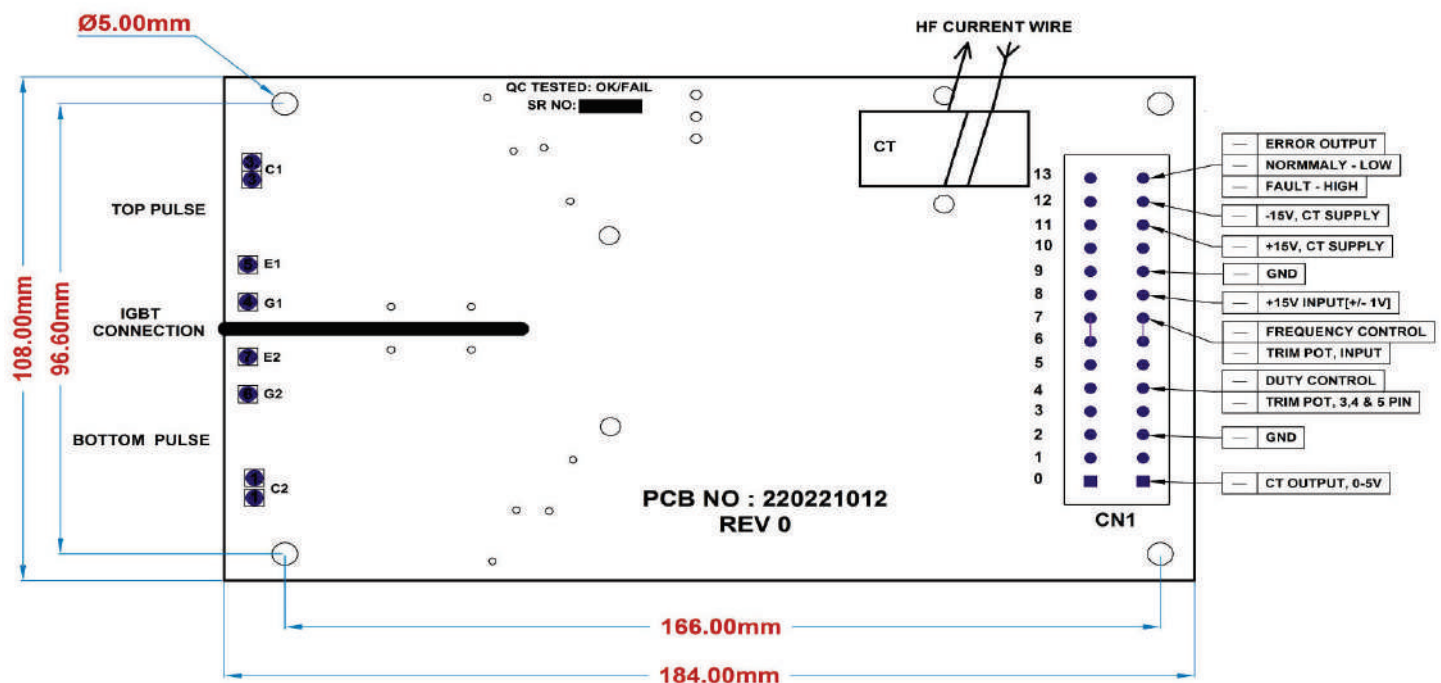
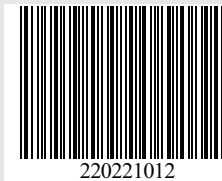
Refer Fig 1. for details.

LED Indication

- Power ON : Green +15V, -15V
(Normally ON, Off during Power supply fault)
DRIVER_ERROR : RED (ON during Under Voltage / DESAT and IGBT Fault)
PULSE OUTPUT : LED_A1: PULSE TOP, LED_B1: PULSE BOTTOM

Part used on Plug & play driver : 2SC0435T2H0-17 from Power Integration

ORDERING CODE - 220221012



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sales@ramenterprise.co.in

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