

RAM ENTERPRISE

CARD FOR 1-PHASE HALF BRIDGE INVERTER

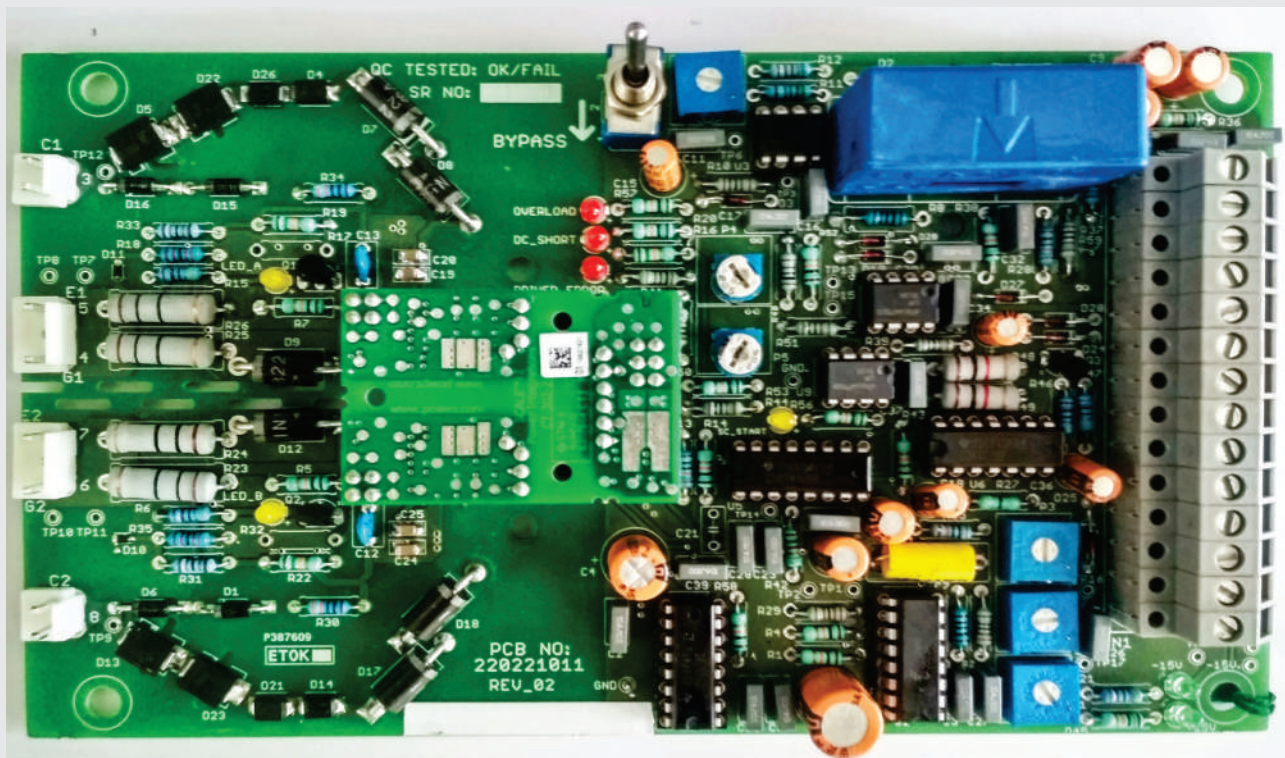
APPLICATIONS

- 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: 220221011

Up to 50 KHz / 1200V

FIELD PROVEN TECHNOLOGY !!



Features

- On board Pulse generator.
- Duty cycle and Frequency set(50Hz to 50KHz) through trim pot.
- On board High Frequency Current sensing, DC short protection and over load detection.
- Basic 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 1200V class IGBT (any make), Up to 800V 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)	: 140mA	(@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.
7. Short circuit monitoring and protection.

Electrical Isolation Test voltage (50 Hz/1 sec)

1. Primary to secondary side : 4.0 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 : -9.9 V, No load
3. Turn-off voltage, V : -8.0 V @ 1 W
4. Gate Peak Current I : ± 6 Amp
5. External Gate resistance : Minimum 2.5 Ω , <25kHz
: Minimum 5 Ω , >25kHz
6. Switching frequency F : 50 KHz
7. Output Power : 1.0 W, T <85 °C
: 1.2 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 600 A /1200 V or 600A/600V.
For more detail mail us @: info@ramenterprise.co.in

Interfacing with Control Circuit

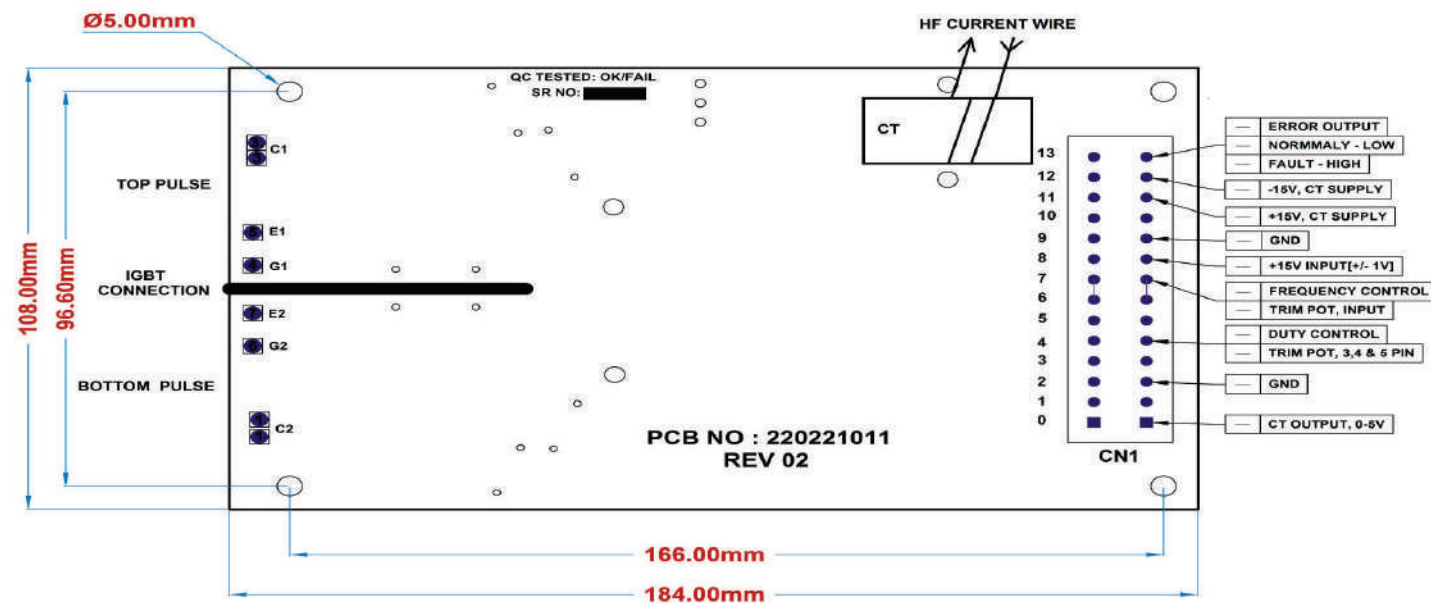
Refer Fig 1. for details.

LED Indication

Power ON	: Green +15V, -15V (Normally ON, Off during Power supply fault)
SC_START	: YELLOW (ON during when machine normally run)
OVERLOAD	: RED (ON during when current cross set value)
DC_SHORT	: RED (ON during DC Short circuit detect)
DRIVER_ERROR	: RED (ON during Under Voltage / DESAT and IGBT Fault)
PULSE OUTPUT	: LED_A: PULSE TOP, LED_B: PULSE BOTTOM

Part used on Plug & play driver : 2SC0106T2A1-12 from Power Integration

ORDERING CODE - 220221011



NOTE: All product names, logos, and brands are property of their respective owners.

Rev 0.