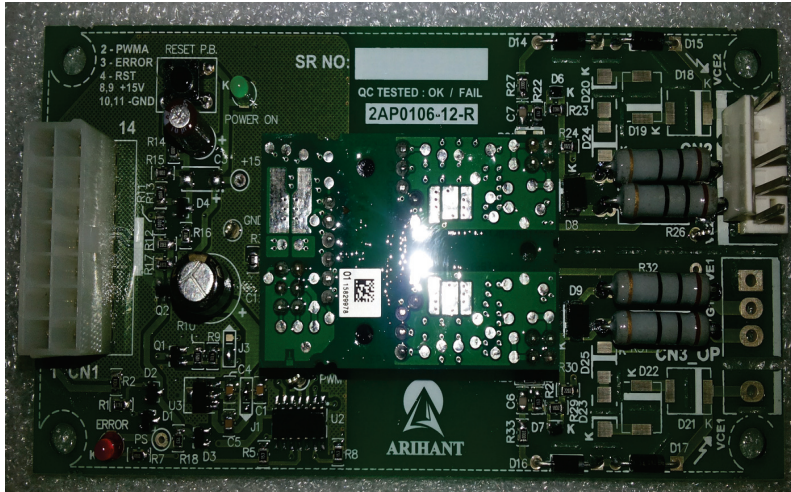


2AP0106-12-R



DUAL CHANNEL
CHOPPER IGBT DRIVER
Ready to use!!!

Features

- Dual Channel Driver
- 2X0.35 Watt Output power (at 105 °C)
- 2X1 Watt Output Power (at 85 °C)
- ±6A gate current, +15V/-10V
- Drive up to 1200V IGBT Module
- Compact Plug & Play solution
- Advance active Clamping (optional)
- Reliable & rugged design
- SOFT Shut down Function
- Gate clamping
- Switching frequency up to 50 Khz
- Vce monitoring for short circuit protection
- Long service life
- Primary/Sec. Supply under voltage lockout
- ASIC based driver solution
- Superior EMC

Benefits

- On board isolated DC-DC converter (4.0KV Isolation)
- Interface for 3.3V...15 V logic level
- Common fault feedback signal to interface with controller
- Field configurable blocking time
- User Selectable Rg

Application

- Uninterrupted Power supply
- solar converters
- Industrial drives
- Power Supply for Railway
- Servo Stabilizer

2AP0106-12-R

Technical Specification

Recommended Operating condition

Power Supply & Monitoring	MIN	TYP	MAX
1. Supply Voltage Vcc to GND	: 14.5	15	15.5 V
2. Supply Current Icc (Without Load)	: 35 mA		
3. Under Voltage Monitor, Set Fault	: 11.3	12.0	12.7 V

Logical Inputs & Outputs

1. Input Bias Current	: 190 μ A
2. Interface Logic level	: 12 V..... 15.0 V logic level
3. Turn-on threshold	: 12 V
4. Turn off threshold	: 10.7 V
5. SOx output, failure Condition	: 0.7 V Max., I(SOx) < 20 mA total

Short-Circuit Protection

1. Vce-monitoring threshold	: 9.3 V (Internally Fix)
2. Available response time	: 4.5 μ Sec (User selectable R18, R19)
3. Minimum response time	: 4.5 μ Sec
4. Available blocking time	: 49 mSec (User Selectable R7)
5. Minimum blocking time	: 9 μ Sec

Timing Characteristic (Input to Output of Driver board)

1. Turn-on delay $t_{d(on)}$: 1.2 μ S
2. Turn-off delay $t_{d(off)}$: 1.1 μ S

For detail timing information of driver core, refer part specific datasheet.

Protection Available on driver board

1. Primary/Secondary Under voltage monitoring.
2. Power supply reverse polarity protection.
3. Soft Shut down, For Over Voltage protection.
4. Vce monitoring for short circuit protection.
5. Schmitt trigger at the Input stage, highly susceptible to noise.
6. Gate clamping & Safe Torque operation.

Electrical Isolation

Test voltage (50 Hz/1 sec)

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

This gate driver is suited for HiPot testing. Nevertheless, it is strongly recommended to limit the testing time to 1s slots. Excessive HiPot testing at voltages much higher than 850V_{AC(eff)} may lead to insulation degradation. No degradation has been observed over 1 min. testing at 4000V_{AC(eff)}. Each driver core production sample shipped has undergone 100% testing at the given value or higher for 1s.

Output Voltage / Current / Power

1. Turn-on voltage, V _{GHx}	: 15.0 V, any load condition
2. Turn-off voltage, V _{GLx}	: -9.9 V, No load
3. Turn-off voltage, V _{GLx}	: -8.0 V @ 1 W
4. Gate Peak Current I _{out}	: \pm 6 Amp
5. Internal Gate resistance	: 0.5 Ω
6. External Gate resistance	: 2.5 Ω , Minimum
7. Switching frequency F	: 50 KHz
8. Output Power	: 0.35 W, T _{amb} < 105 °C
	: 1.0 W, T _{amb} < 85 °C
	: 1.2 W, T _{amb} < 70 °C

Interfacing with Control Circuit

1. Electrical, Output to interface with Controller.
- ERROR : Low to High / High to Low (Site selectable)

LED Indication

Power ON: Green (Normally ON, Off during fault)
 ERROR : RED (ON during Fault)

Environmental

Operating temperature	: -20 to 105 °C
Storage temperature	: -40 to 105 °C

Mechanical Dimension

PCB	: 124 X 66
Mounting Hole	: 115 X 57
Enclosure	: Open Frame
Weight	: 0.3 Kg

Driving Capability

The 2SC0106T drives all usual IGBT modules up to 450 A /1200 V or 600A/600V. Driving power depends on switching frequency so in case of any doubt during selection process please refer page No. 3 for more details. For any further details, pl. contact our sales / technical representative.

ORDERING CODE

Model	IGBT up to		I/P connector	Specify X from Table
2 A P 01 06 -	X		X	
	07	650 V	R	14-Pin MOLEX
	12	1200 V		

6A Peak Current
 Power : 1 W
 Plug & Play Driver Board
 Arihant Electricals made
 No. of Channels

Driver will be supplied with 10E Rg. (gate resistor)
 For special requirement pl. specify during ordering.