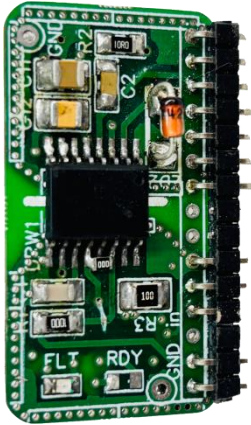


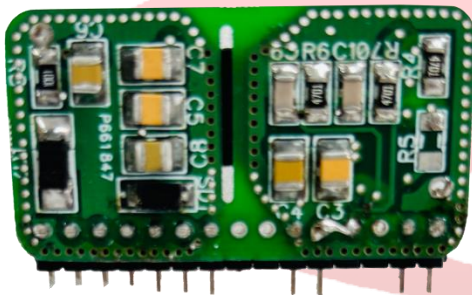
SINGLE CHANNEL IGBT DRIVER

FEATURES



SINGLE CHANNEL IGBT DRIVER (10A)

- Interface for 3.3V...5V 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 SIC.
- User Selectable Rg-on & off
- Low Power Single channel driver 2.4 Watt Output Power.
- 10A source & sink gate current.
- +15V/-8V Drive up to 2100V DC IGBT Module
- Short circuit clamping
- Active shut down
- 4A Internal Active Miller clamp function
- 2.25-V to 5.5-V Input Supply Voltage
- 5.7 KVRms isolation.
- Switching frequency up to 50KHz
- 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



SINGLE CHANNEL IGBT DRIVER

APPLICATIONS

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

LOGICAL INPUTS & OUTPUTS

Interface Logic level	3.3 to 5.0 V
Fault output for Deset and Power supply failure	Active Low (0V) and Normal Condition High(5V)

SHORT CIRCUIT PROTECTION

VCE MONITORING THRESHOLD	9.2 V (Internally fix)
AVAILABLE RESPONSE TIME	1 μ Sec (User selectable)
MINIMUM RESPONSE TIME	1.0 μ Sec
MINIMUM BLOCKING TIME	1.0 μ Sec

TIMING CHARACTERISTIC

TURN ON DELAY-T	185 ns
TURN OFF DELAY-T	185 ns
OUTPUT RISE TIME T	35 ns MAX
OUTPUT FALL TIME T	35 ns MAX
TRANSMISSION DELAY OF FAULT STATE	330 ns

PROTECTION AVAILABLE ON DRIVER MODE

- Primary/Secondary Under voltage monitoring.
- Vce monitoring for circuit protection
- Soft Shut down for Over Voltage Protection

OUTPUT VOLTAGE / CURRENT / POWER

TURN ON VOLTAGE , V	14.5 - 15.5 V, any load condition
TURN OFF VOLTAGE , V	-8 to -9 V, No load
GATE PEAK CURRENT I _{out}	+10 A source & sink
INTERNAL GATE RESISTANCE	0.0 Ω
EXTERNAL GATE RESISTANCE	1.5 Ω -10 Ω
SWITCHING FREQUENCY , F	50 KHz
OUTPUT POWER	2.4 W Tamb105°C

ELECTRICAL ISOLATION

Test Voltage (50HZ/60SEC)

Primary to Secondary side	5.7 KV
Secondary to Secondary side	5.7 KV

MECHANICAL DIMENSION (OPTION 2)

PCB	85 X 65 mm
Mounting Hole	53.5 X 28.5 X 2 mm
Panel Mounted	Direct SIC module mounting
Enclosure	Open Frame
Weight	0.3 Kg
Layer	4 Layer

ENVIRONMENTAL TEMPERATURE

Working temperature	-40 to 105 °C
Storage temperature	-40 to 90 °C

DRIVING CAPABILITY

All usual IGBT up to 600A /1700V.

Driving power depends on switching frequency & gate charge of IGBT in case of any doubt during selection process pl. contact us.

INTERFACING WITH CONTROL UNIT

1. FAULT: High to Low (FLT)

2. Power supply monitoring High to Low. (Rdy)

LED INDICATION

FAULT/POWER SUPPLY FAIL: RED_LED ON (Normal LED Off)

Sr.no	Comparison Between TLP5214 & UCC21750 Driver	
	UCC21750	TLP5214
1	Pcb pin to pin compatible	Pcb pin to pin compatible
2	±10A	±4
3	Power supply failure all driver shut down to protect IGBT failure to false trigger and have addition pin to shut down all pwm	In this driver not shut down all pwm resultant IGBT fail, and no addition pin to shut down pwm
4	Sort Circuit protection at 9.2 V dset	Sort Circuit protection at 6.5 V dset
5	Led indication of short circuit & power supply failure	not clarify in both condition
7	Mirror Clamp up to 4A	No mirror Clamp
8	Soft turn off When Fault Happen	No Soft turn off
9	4 Layer PCB high Noise Immunity	2 Layer pcb low noise immunity

SAFETY NOTICE!

ATTENTION PLEASE! THIS DEVICE IS ESD SENSITIVE AND NEEDS TO BE HANDLED WITH CARE. HIGH VOLTAGE CONDITION MAY OCCUR DURING OPERATION OF THE DEVICE, AND HENCE USER IS SOLELY RESPONSIBLE OF EQUIPMENT AND PERSONNEL SAFETY. VP ELECTRONICS SHALL NOT BE HOLD LIABLE FOR ANY DAMAGE TO PERSONNEL AND/OR PROPERTIES AS A RESULT OF USING THIS DEVICE. USER MUST TAKE ADEQUATE STEPS TO ENSURE ELECTRICAL AND MECHANICAL SAFETY OF THE DEVICE IN USE.

For Further information or purchasing, please go to our web site:

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www.vpelectronics.net

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