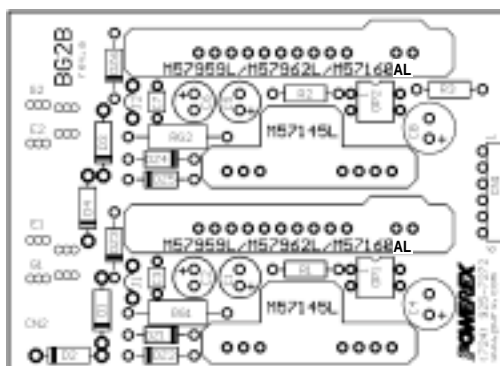


BG2B-Universal Dual IGBT Module Gate Driver Board

Free Sample Board with purchase of Gate Driver and DC-DC Converter



Description

BG2B is a fully isolated gate drive circuit board designed for use with dual IGBT modules. When the board is populated, gate drive is supplied by M57159L, M57959L, M57962L or M57160AL hybrid gate drivers to provide efficient switching of modules rated up to 400A. The hybrid gate drivers also provide protection against unexpected short circuit conditions. Isolated control power for the driver is supplied by a pair of onboard M57145L-01 regulated DC/DC converters. The fault feedback signals are also optically isolated. See application note "Hybrid Circuits Simplify IGBT Module Gate Drive" at our web site www.pwr.com.

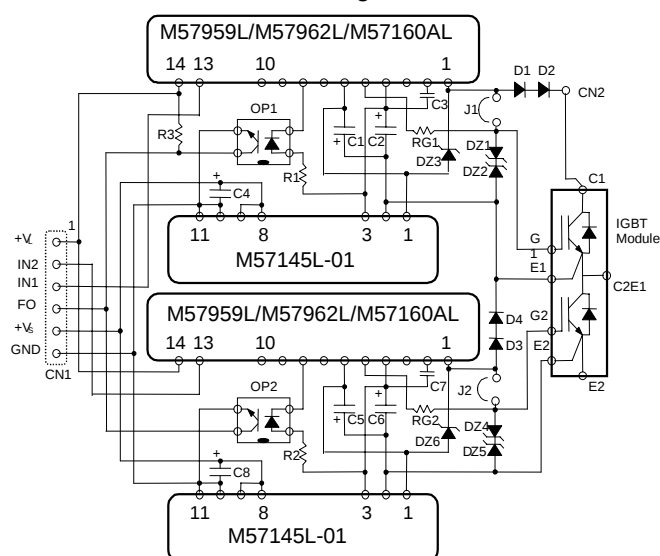
Features

- Up to 5A Output Current
- 2500VRMS Isolation
- Direct Mounting to IGBT
- +15V to -8.5V Output Voltage Swing
- Wide Input Voltage Range +12V to +18V

Applications Designed for use with the following Powerex Dual IGBT Modules

- CM75/100/150/200/300/400DU-12H/F
- CM50/75/100/150/200/300DU-24H/F

Schematic Diagram



Rapid Design - Component List

Designation	Description	Value	Example Type
C1, C2, C5, C6	Power supply decoupling capacitors. Low impedance long life type.	82μF 35V	Panasonic FC EEUFC1V820
C4, C8	DC to DC converter input decoupling capacitor. Low impedance long life type	150μF 35V	Panasonic FC EEUFC1V151
C3, C7	Optional - For adjustment of short circuit protection trip time.	0 to 10nF 50V	muRata RPE Series
R1, R2	Current limit for fault opto	4.7K .25W	
R3	Pull up for fault output	4.7K .25W	
RG1, RG2	Series gate resistor - See Powerex IGBT application notes	3Ω to 100Ω 0.5W to 1W	
D1, D2, D3, D4	Collector voltage detection diodes. Vrrm greater than IGBT Vces rating.	1A, 1000V tr<100ns	Motorola MUR1100E
DZ1, DZ2, DZ4, DZ5	Gate protection zeners	17V, 0.5W	1N5247
DZ3, DZ6	Detect pin protection zener	30V, 0.5W	1N5256
OP1, OP2	Opto for fault signal isolation		NEC PS2501
CN1	MTA100 6 position right angle header with locking ramp		AMP 640457-6
CN2	1/4" Ring Lug on 2" Wire		AMP 34151
J1, J2	Insert when using M57160AL with F-Series IGBT modules and omit D1-D4, DZ1- DZ6		

Typical Interface Circuit

