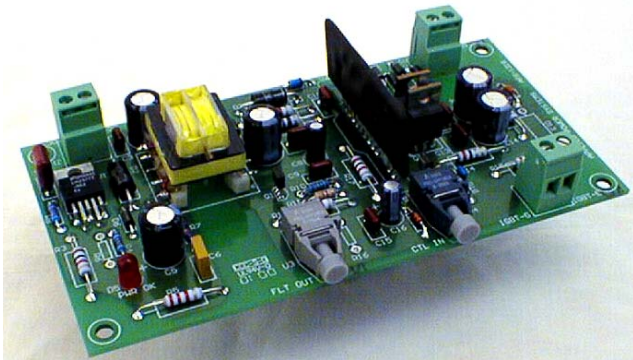


## BAP1318 HIGH VOLTAGE ISOLATED IGBT DRIVER BOARD



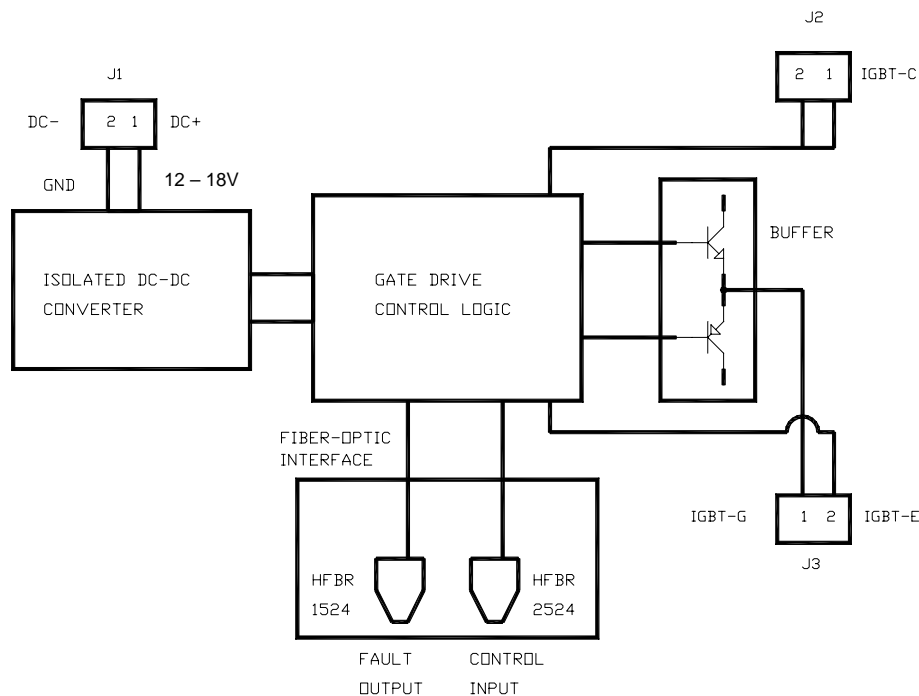
The BAP1318 provides a complete, tested, fast time-to-market solution for companies that need to control and interface to **High Voltage IGBT** modules.

A transformer coupled DC-DC converter provides 5000V isolation while developing only 10pf leakage capacitance between primary and secondary.

Standard *Hewlett-Packard* fiber-optic couplers provide an intrinsically safe interface and virtually infinite dv/dt between the module and the customers' control electronics. Euro-style terminal blocks provide a universal connection arrangement to any IGBT.

Short circuit protection is provided by a built-in desaturation detector. A fault signal output is provided if the short circuit protection is activated.

### BLOCK DIAGRAM



## ELECTRICAL SPECIFICATIONS

### Absolute Maximum Ratings, Ta = 25°C unless otherwise specified

Parameter	Typical	Max	Min
V <sub>SS</sub> - Supply Voltage (Volts DC)	-	18	-
T <sub>OP</sub> - Operating Temperature (°C)	-	70	-10
T <sub>OS</sub> - Storage Temperature (°C)	-	85	-20
V <sub>ISO</sub> - Electrical Isolation (VRMS for 1 min.)	-	5000	-
I <sub>OH</sub> - Output Current (Amperes for 4 μS pulse)	-	15	-

### Electrical/Optical Characteristics, Ta = 25°C unless otherwise specified

Parameter	Typical	Max	Min
V <sub>SS</sub> - Supply Voltage (Volts DC)	15	18	12
I <sub>SS</sub> - Supply Current (mA)			
t <sub>PLH</sub> - Propagation Time (μS)	0.5	1.2	
t <sub>PHL</sub> - Propagation Time (μS)	0.5	1.2	
t <sub>R</sub> - Rise Time (μS)	0.3	0.6	
t <sub>F</sub> - Fall Time (μS)	0.3	0.6	
t <sub>RESET</sub> - Reset Time of Protection (mS)	1.25	2.0	1.0
P <sub>T</sub> Transmitter Output Optical Power (dBm)		-5.1	-15.5
P <sub>R(L)</sub> Receiver Optical Input Power Level Logic 0 (dBm)			-20
P <sub>R(H)</sub> Receiver Optical Input Power Level Logic 1 (dBm)		-43	
λ <sub>PK</sub> Peak Emission Wavelength (nm)	660		
D <sub>T</sub> Effective Diameter (mm)	1		

### Control Interface Definitions

Conn No.	Signal Name	Function
U4	IGBT CTL IN	Fiber-Optic IGBT On/Off Control Input (LED On = IGBT On)
U3	IGBT FAULT OUT	Fiber-Optic IGBT Fault Output (Fault = Transmitter On)
J1-1	DC +	Supply Voltage (12 – 18 VDC)
J1-2	DC -	Supply Voltage Return (Ground)
J2-1	IGBT COLLECTOR	IGBT Collector
J2-2	IGBT COLLECTOR	IGBT Collector
J3-1	IGBT GATE	IGBT Gate
J3-2	IGBT EMITTER	IGBT Emitter

### MECHANICAL OUTLINE

#### Maximum Board Height

1.10"

#### Mating Latching Connector

HFBR-4532

#### Fiber-Optic Cable:

1mm POF

#### Mating Couplers:

Transmitter: HFBR-2524

Receiver: HFBR-1524

