

MGJ series DC-DC for IGBT applications



MGJ Series

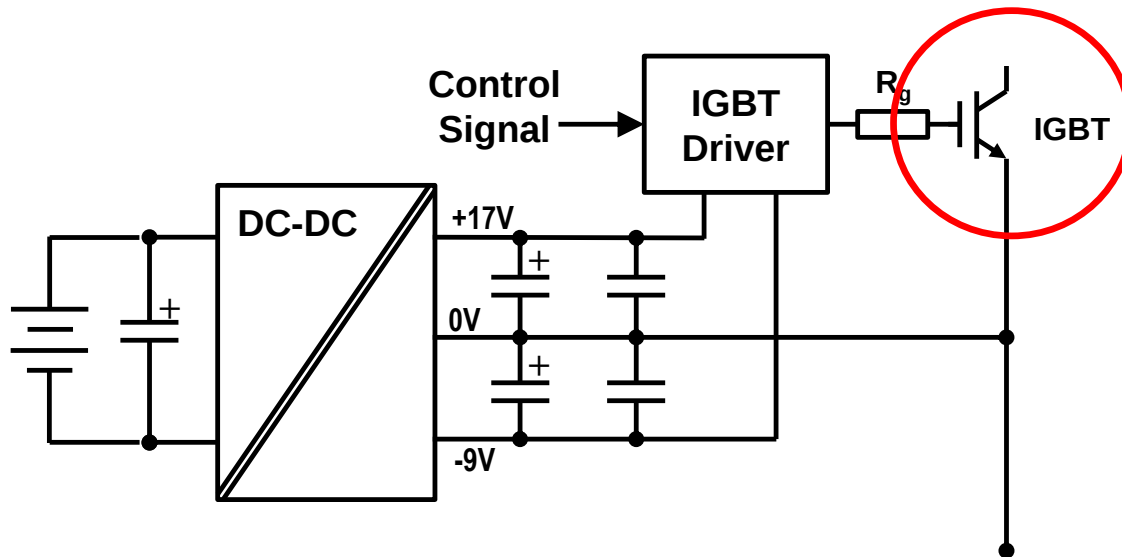
2W, 3W, 6W - 5.2kV Isolation
Dual Output DC-DC Converters
for IGBT Drivers

“Associated Selling” with Cree, Infineon, IR, ST Micro
IGBT, SiC and MOSFET Devices

MGJ series IGBT application circuit

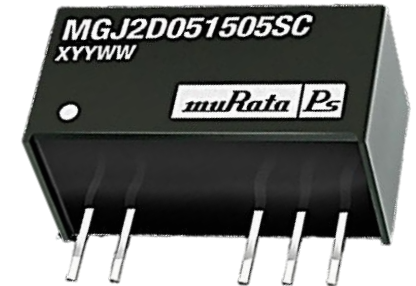
■ IGBT drive application

- Insulated Gate Bipolar Transistor
- Used in high voltage switching applications
- Low forward drop (losses) in higher voltage applications
- Simple gate drive characteristics of a MOSFET
- Asymmetric, bipolar voltages for turn-on and turn-off
- High isolation – high side emitter voltage



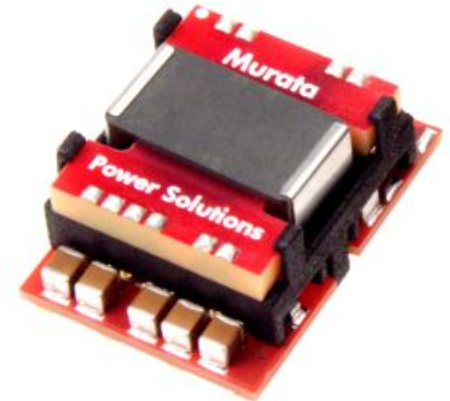
MGJ2 Features & Benefits

- Three output configurations: +15V/-5V, +20V/-5V, +15V/-8.7V
- Four input voltages of 5V, 12V, 15V, and 24V
- High isolation 5.2kV short duration, 1.5kV continuous
- UL60950 & UL60601-1 certification
- Low barrier capacitance (<4pF)
- Industry-standard SIP7 package - Supports alternate sourcing
- Full power over wide industrial temperature range of -40°C to +100°C
- Characterized dV/dt immunity



MGJ3 & MGJ6 Features & Benefits

- 3W and 6W parts
- SMD package, Unique footprint
- Triple output configuration supports +15V/-5V, +20V/-5V, +15V/-10V
- Three input voltages of 5V (4.5-9V), 12V (9-18V), and 24V (18-36V)
- High isolation tested at 5.2kV, rated for operation to 1.5kV
- UL60950 & UL60601-1 certification (pending)
- Ultra-low barrier capacitance (15pF)
- Full power over wide industrial temperature range of -40°C to +105°C
- Synchronization pin, can be employed as disable
- Characterized dV/dt immunity
- Characterized partial discharge performance
- Short circuit and overload protected
- RoHS compliant



“Associated Selling” IGBT/SiC/MOSFET Devices

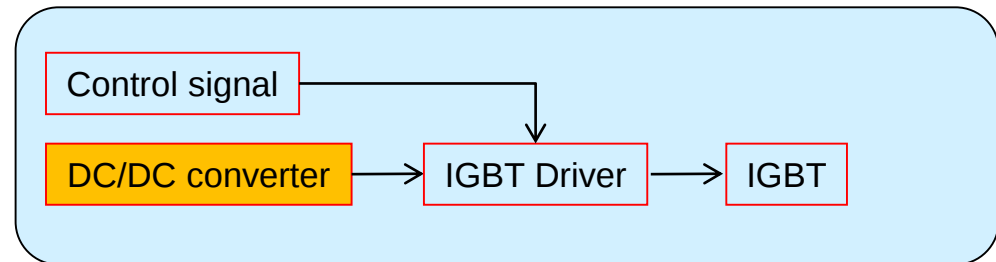
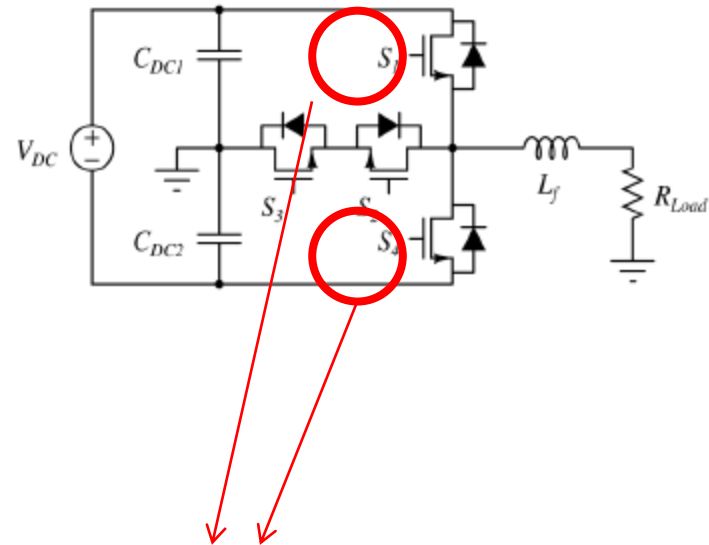
- X-Reference Worksheet -suggested MGJ Series DC/DC converters from Murata for powering devices from Cree, Infineon, SGB, IR, ST Micro



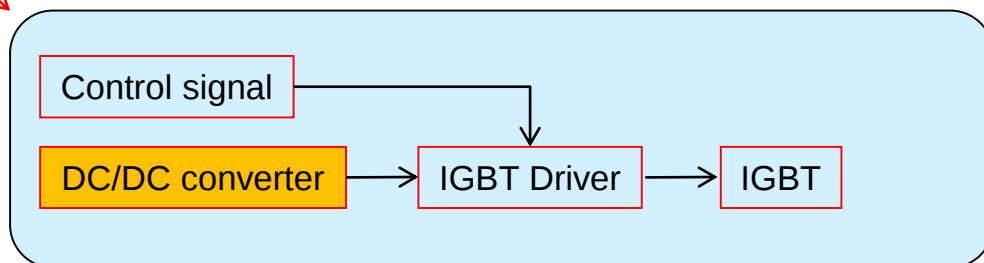
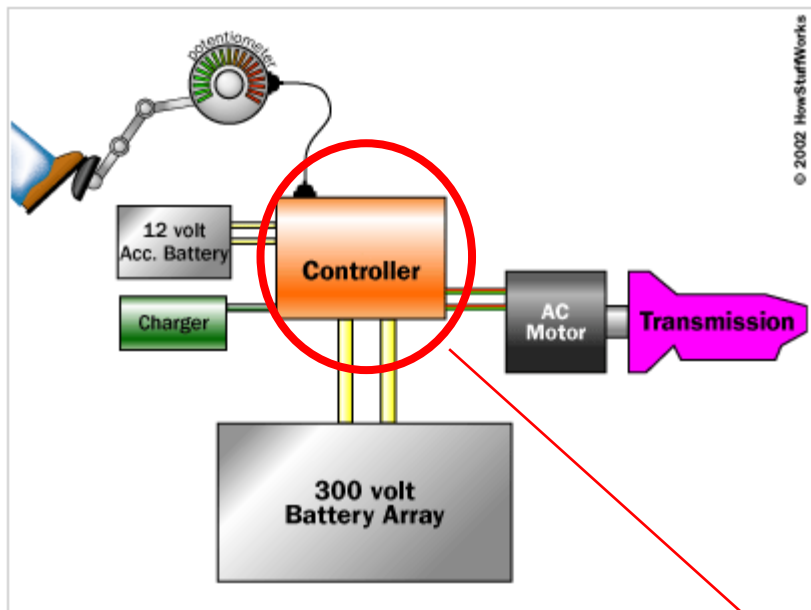
MGJ - IGBT X-Ref
Worksheet

Markets and Applications for IGBT Drivers

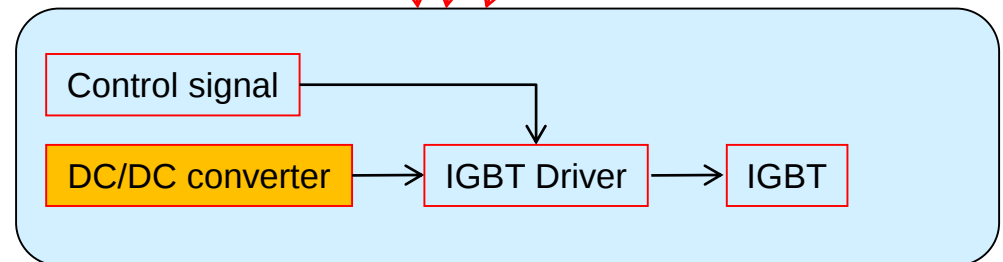
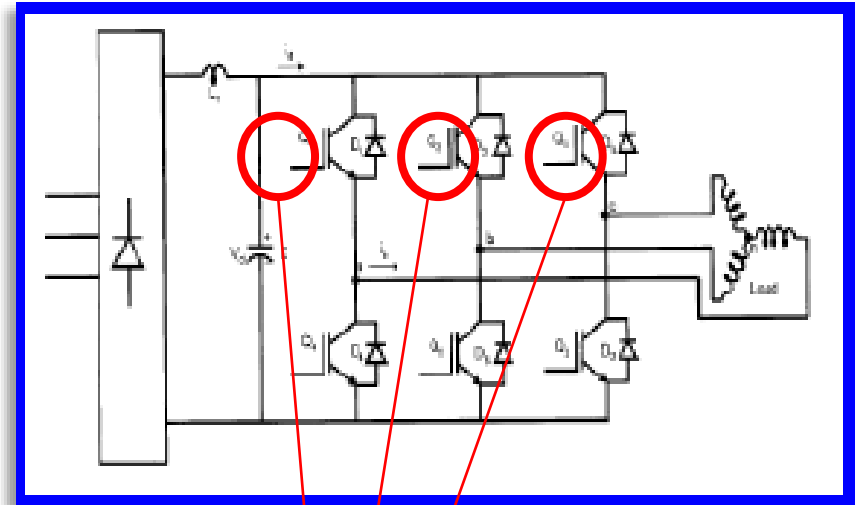
Uninterruptible Power Systems (UPS)



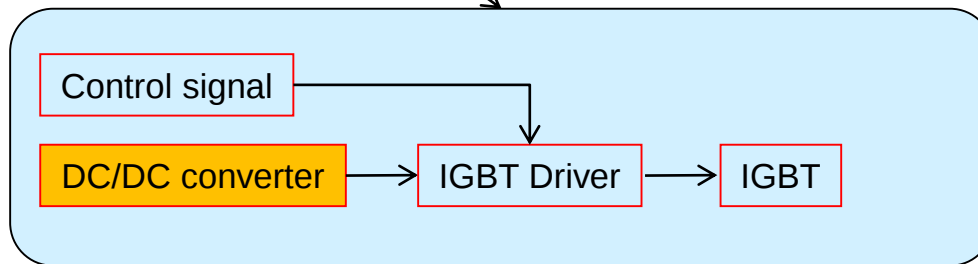
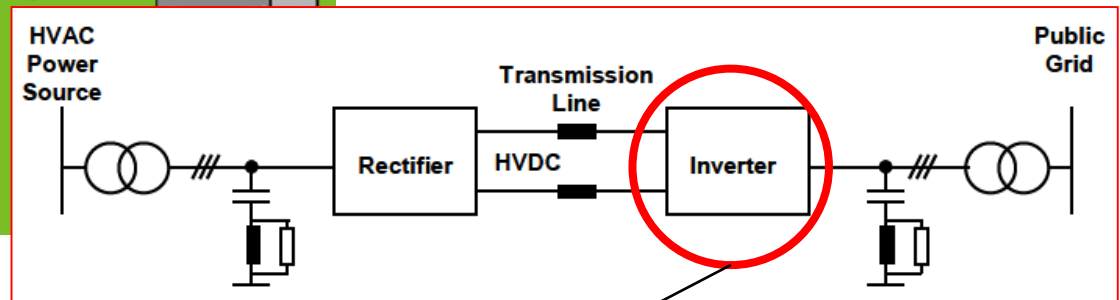
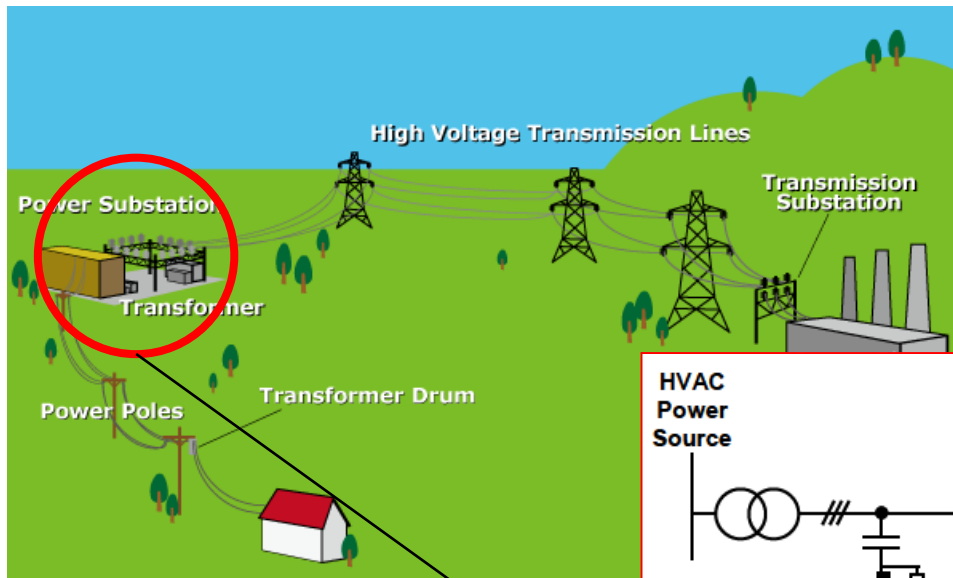
Hybrid Electric/Electric Vehicles (HEV/EV)



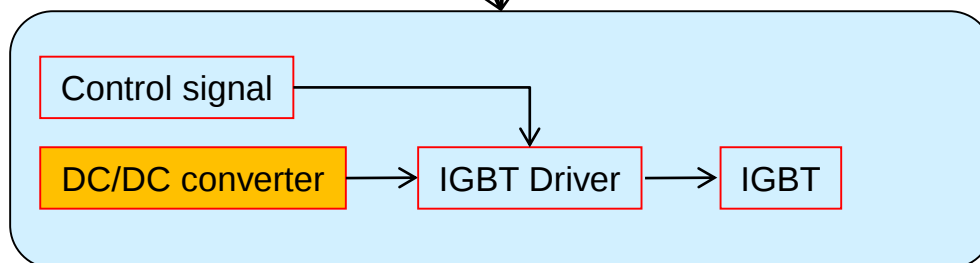
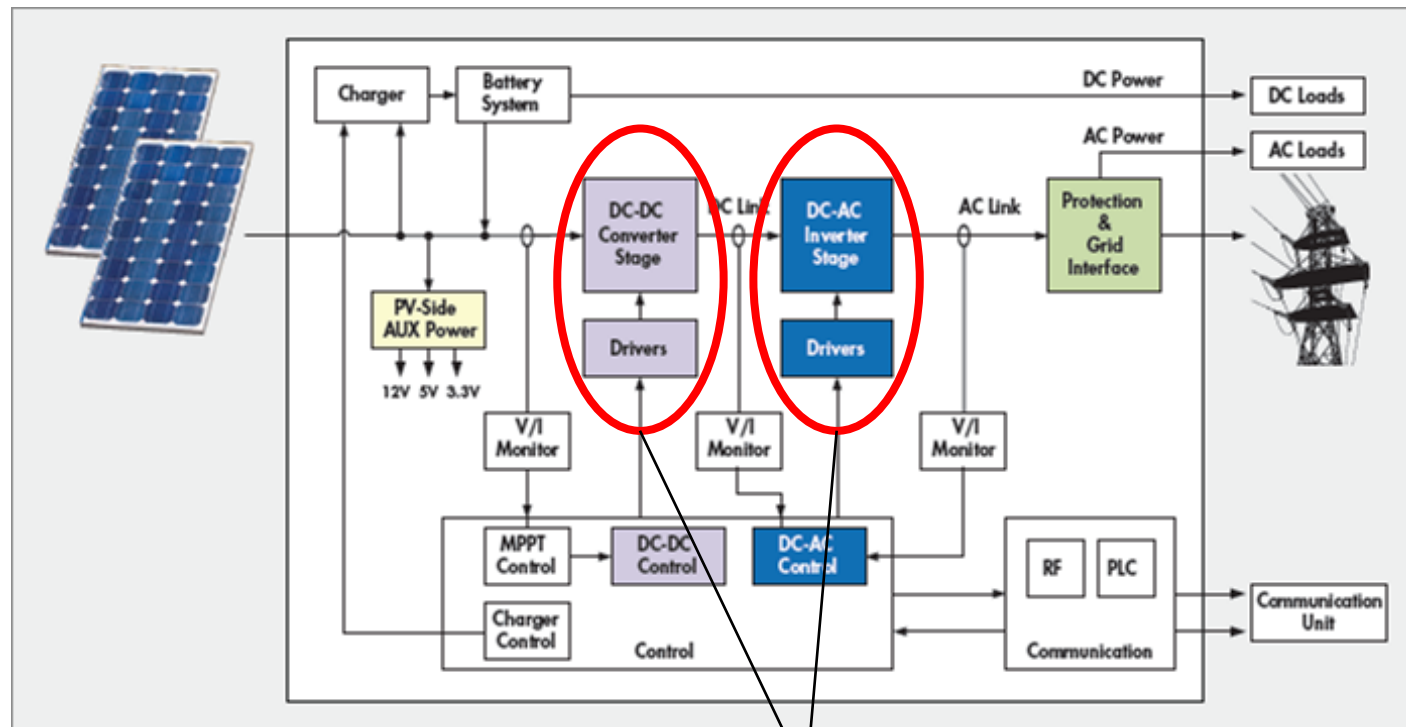
Motor/motion control



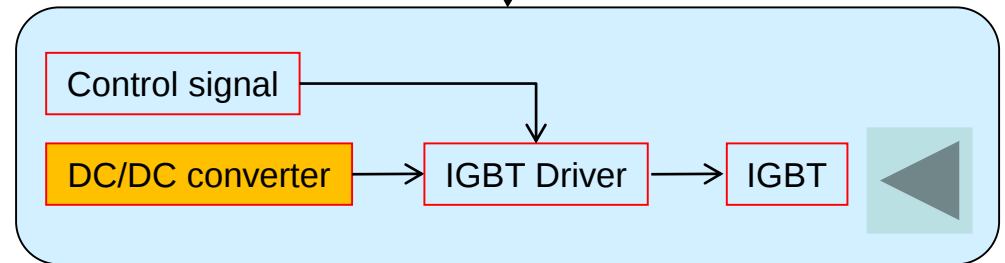
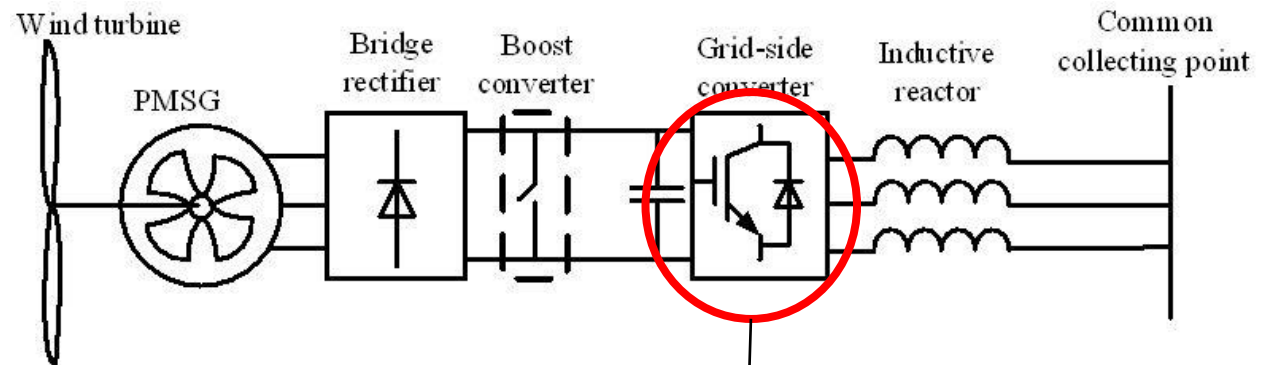
Power Grid-1 (Power Substation)



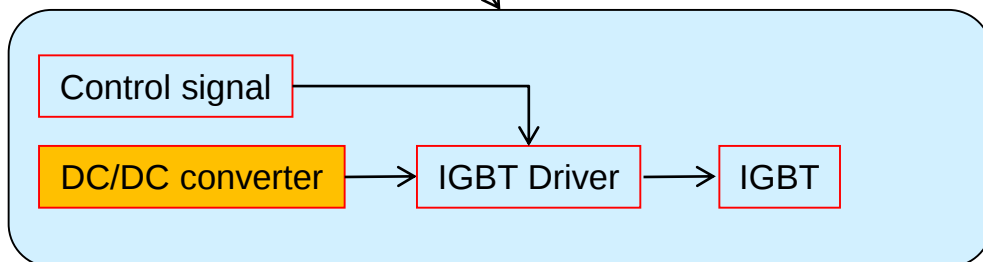
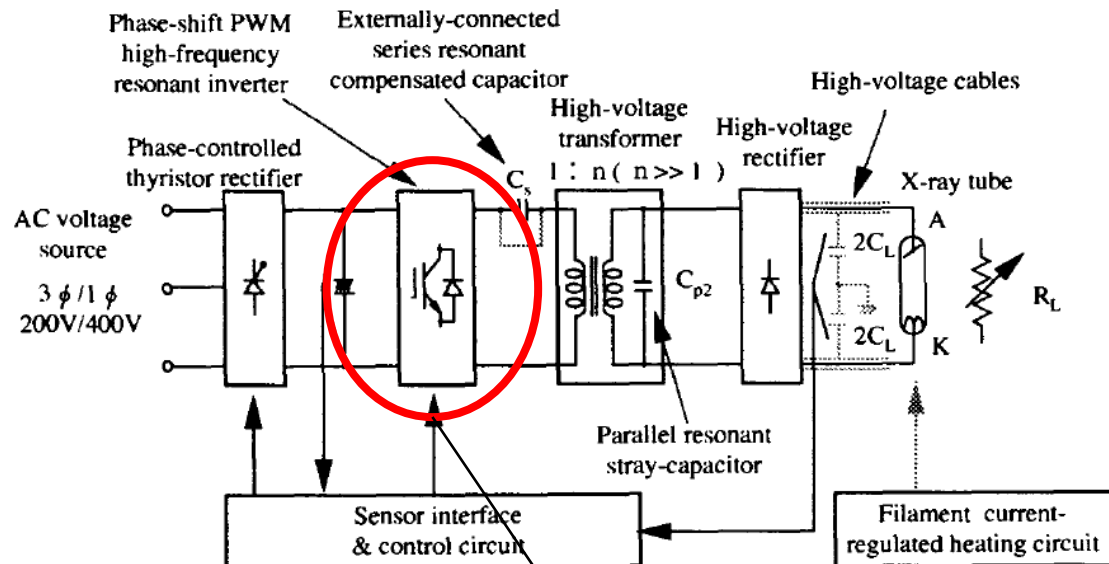
Power Grid-2 (Solar Power)



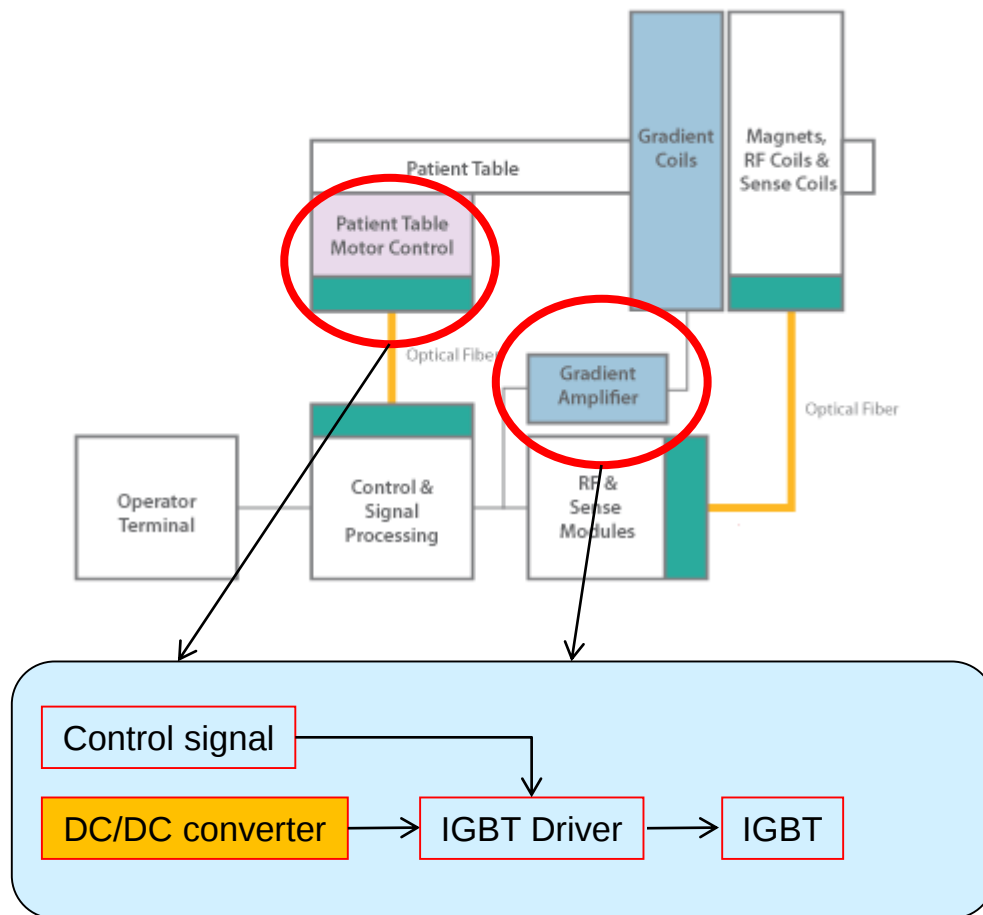
Power Grid-3 (Wind power)



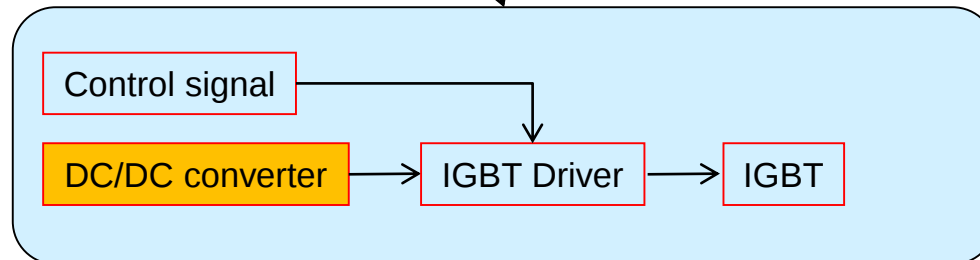
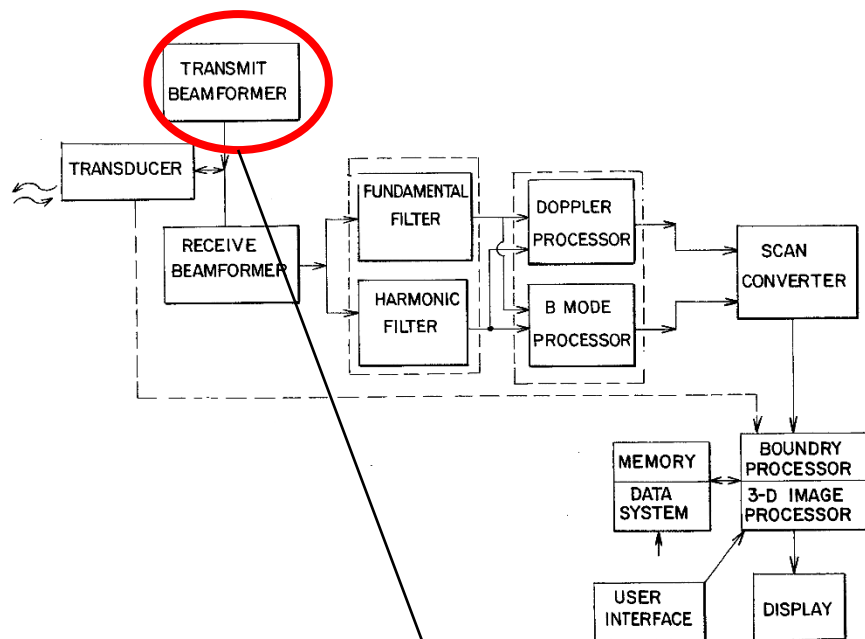
Medical-1 (X-Ray Machines)



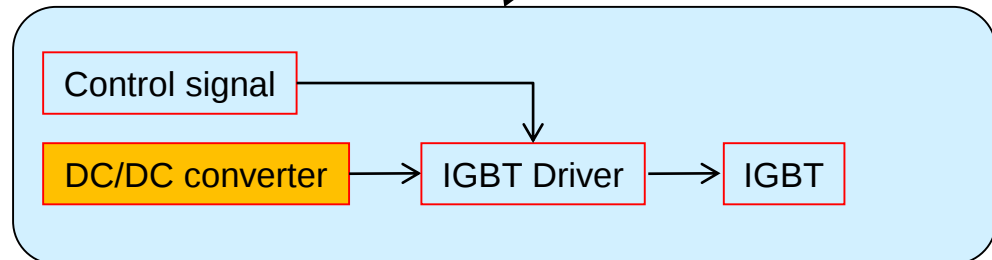
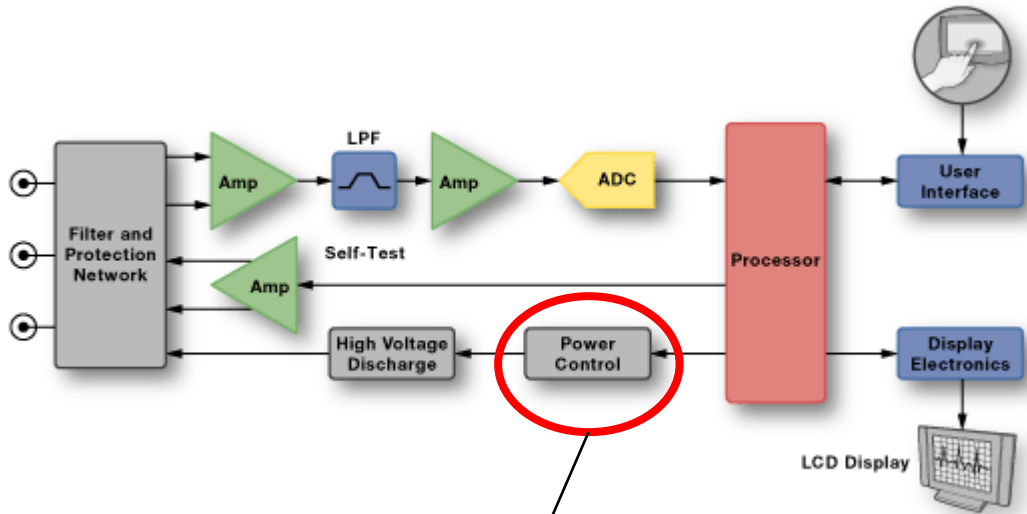
Medical-2 (CT and MRI)



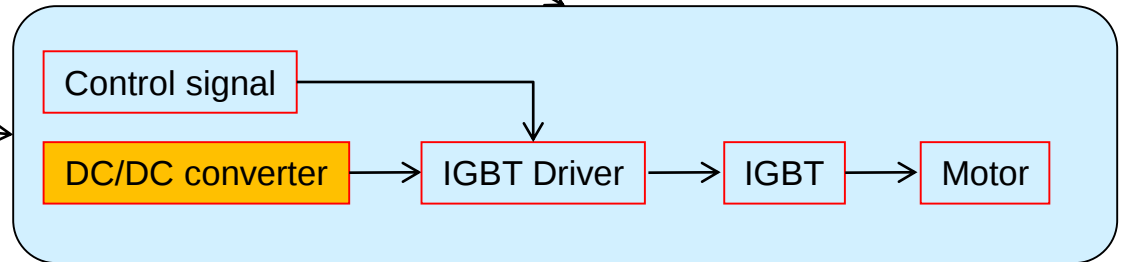
Medical-3 (Ultrasound Machines)



Medical-4 (Defibrillators)



Railway

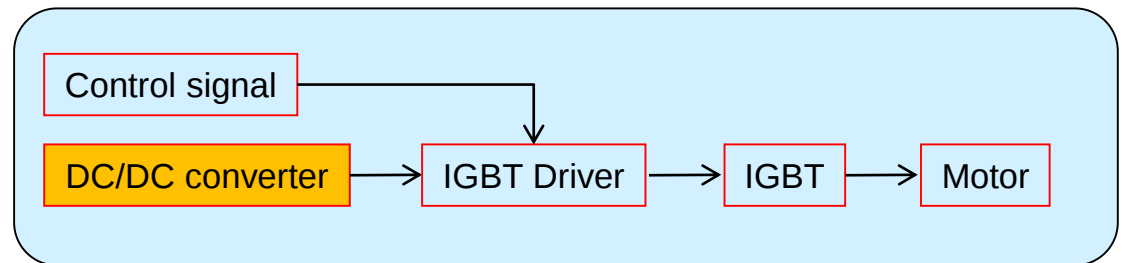


Don't touch engine & breaking system

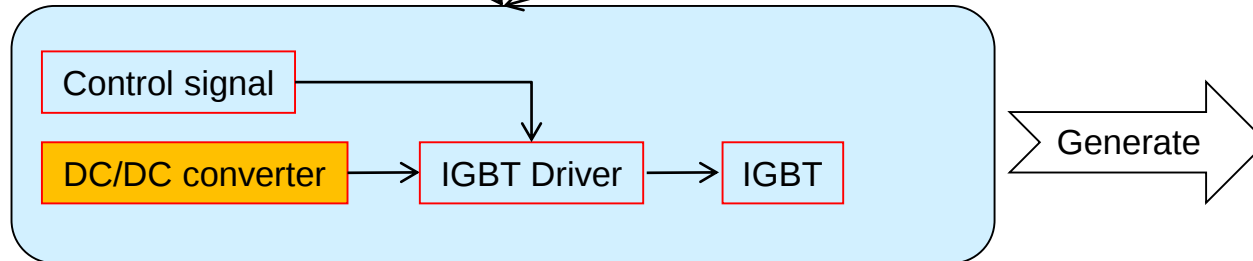
Industry-1 (Textile and Rolling Mills)



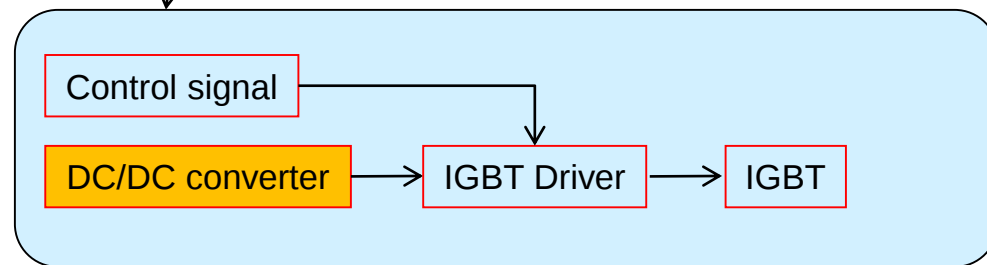
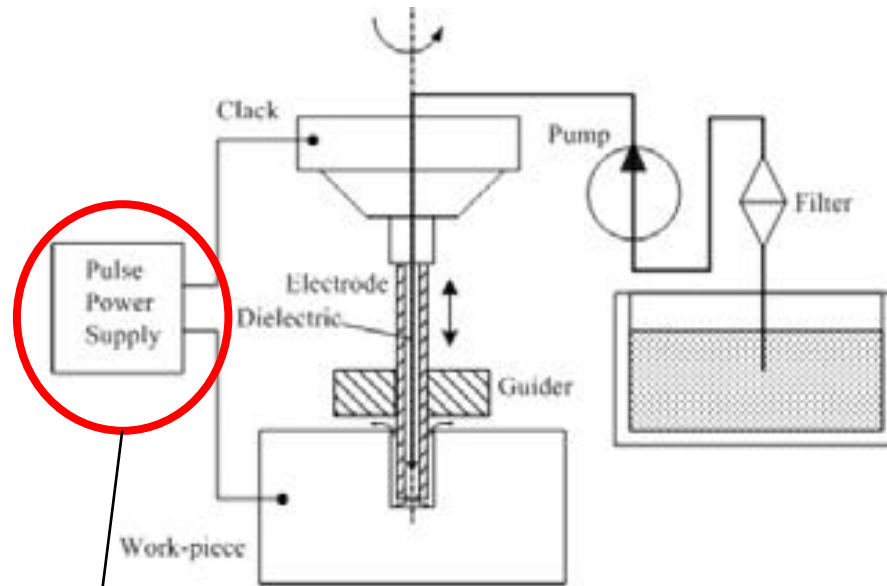
Need be driven by industry motor



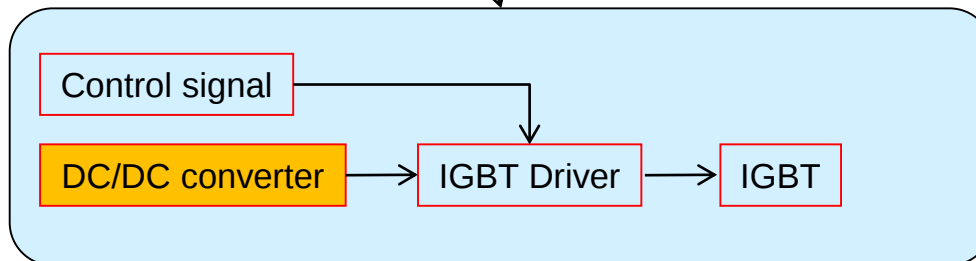
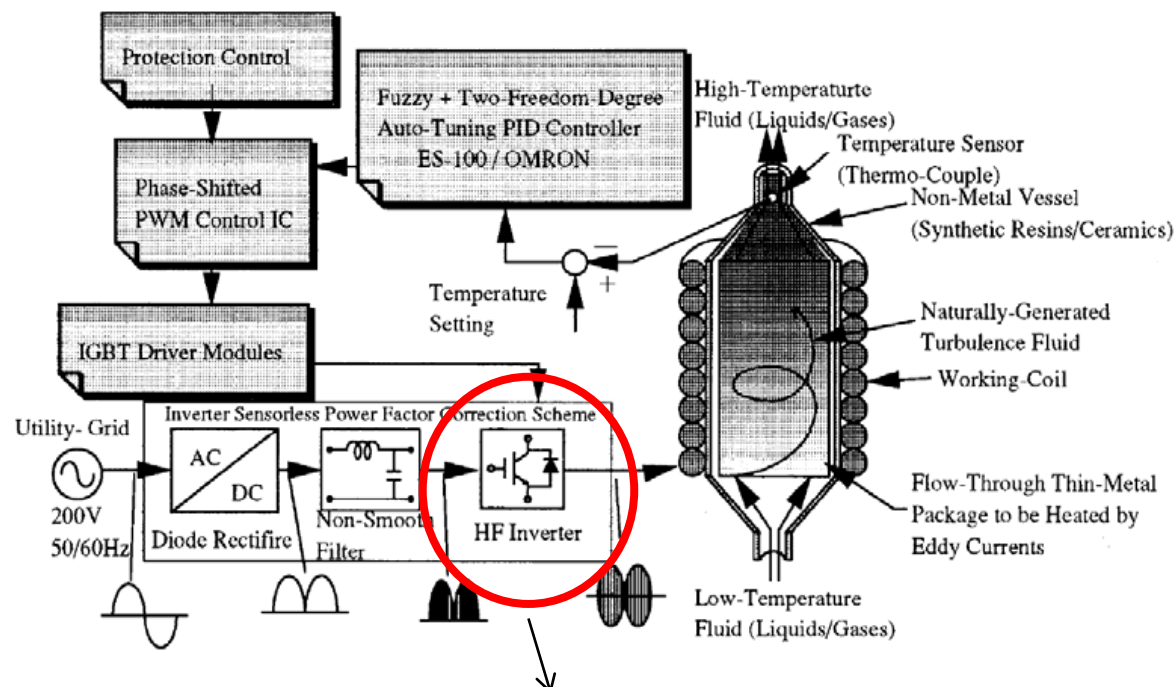
Industry-2 (Arc and Tube welding)



Industry-3 (Drilling and Milling)



Industry-4 (Industrial Boilers and Dryers)



Industry-5 (Robot)

