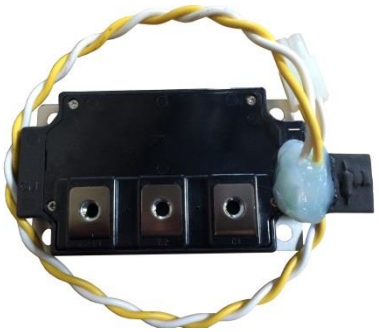
PTR BENCH TESTING

The provided information below is required when properly bench testing the PTR (IGBT) on Multiquip's DLW330X2 & DLW400ESA4 Welder/Generators. Only qualified technicians should service Multiquip products. Multiquip is not responsible for any damage to equipment or components caused by unqualified personnel.

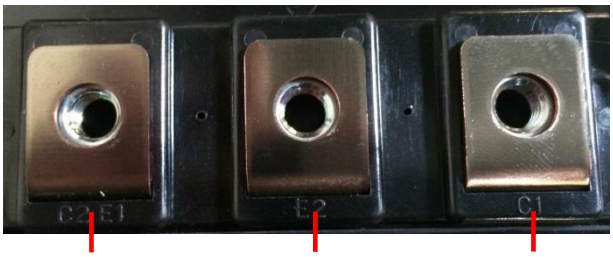
The PTR (**I**nsulated **G**ate **B**ipolar **T**ransistor) is simply a controlled check valve. The Welder's IC board provides a DC output to signal the gate in the phase circuit which provides a controlled release of current. Symptoms of a failed PTR are no, uncontrolled or high current output.

NOTE: Test probe leads must touch the outer casing and not the threaded section to obtain proper measurement readings. Digital readings confirmed using a Fluke 289 model Multi-Meter.

Meter Lead Position		Ohm Resistance	
Red Lead (+)	Black Lead (-)	Analog Readings	Digital Readings
GX (Yellow wire at connector)	C1	∞	180k Ω
	C2E1	10k Ω	10k Ω
	E2	15k Ω	∞
C1	C2E1	8 Ω	250M Ω
	E2	23 Ω	280M Ω
C2E1	E2	8 Ω	240M Ω
	GX	10k Ω	10k Ω
	C1	∞	200k Ω
E2	C1	∞	320k Ω
	C2E1	∞	150k Ω
E1 (White wire at connector)	C2E1	0 Ω	0 Ω



MQ# D4268000403 – IGBT Module Assy



When replacing the PTR, uses a thin film of heat sink compound (Sourced at locations similar to Radio Shack).If there is an insulator between the heat sink and the PTR, do not lose it during replacement.