



PerihelionDesign.com



Eric M. Jones
113 Brentwood Drive
Southbridge MA 01550-2705
508-764-2072
emjones@charter.net

Power-Deuce-Schottky™ Auto-Power Selector Diode Assembly

“Heck, there’s nothin’ wrong with using conventional p/n junction diodes if your airplane runs on 100 Volts!”

Schottky diodes were developed for lower voltages common to battery applications. They have much lower forward voltage drop. This means lower rectification losses, greater efficiency, less heat and smaller (or no) heat sinks required. Your cell phone doesn’t use p/n diodes, why put them into your airplane?

Compatible with AE-Z19 and other schematics

Basic Specifications:

Dimensions: 2.50" X 2.50" X 1.0" (heat sink)

2.5 ounces (70 g)

Connectors: M4 Screws

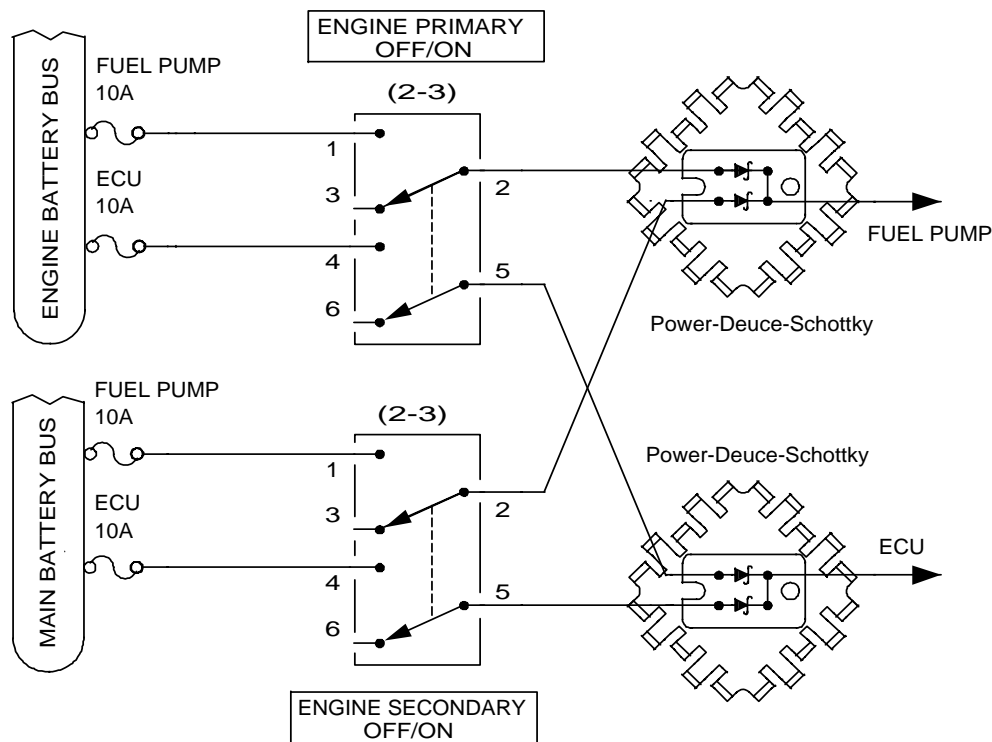
Max Reverse Voltage =45 VDC

Maximum each diode Continuous Current=30A

US\$59.99 each US\$99.99 for 2 sets
(Z-19/RB requires 2sets).

Free Shipping to US-Mex-Can

**FOR USE IN EXPERIMENTAL
AIRCRAFT ONLY.**



Specifying exactly how to mount this PowerSchottky is different in each case due to the differences in construction that each homebuilder uses. However, the following can be used as a general guide.

How much current can you run through this PowerSchottky? Probably more than you can generate in your aircraft; and yes, they can be paralleled for even more current (but not lower forward voltage). Heatsinking temperature design review is suggested at higher currents.

Watts (heat dissipated) = Average Current X Forward Voltage

Average Current	Fwd Volts
10A	0.44
15A	0.46
20A	0.48
30A	0.50
See IXYS DSSX61-0045A Spec Sheet for complete data	

So at 15 amps (on each leg of) this *Power-Deuce-Schottky* will dissipate less than 7 Watts—While using a standard P/N diode would dissipate about 16 Watts and thus require a substantially larger and more expensive heat sink.

The watts dissipation is power that is made and wasted for no purpose. The forward voltage (voltage drop) is subtracted from voltage you start with, so it is in your best interest to keep this small. The *Power-Deuce-Schottky* is the ideal part for aircraft and portable power uses.

Installation: The installation details vary with each installation. Locate clean heat-conductive flat metal power bus, mark and drill attachment screw holes . Attach to prepared location; fasten with screws or rivets. Attach electrical leads in proper orientation. Test.

Preliminary Data Updated 30MAY08