



SPPS-M0738-D

High-Voltage, Solid-State Thyristor Switch



The SPPS-M0738-D is designed for pulsed power applications where high peak current and fast recovery are required. The MOS-controlled thyristors allow for fast turn-on and quick recovery with low on-state resistance.

The switch includes an anti-parallel diode to protect the thyristors.

PRELIMINARY

OPERATIONAL RATINGS

| Parameter | | Value | Unit |
|-----------------------------------|-----------|-------|------------|
| Peak Blocking Voltage | V_{RRM} | 38 | kV |
| DC Blocking Voltage | V_R | 32 | kV |
| Peak Forward Current (1 μ s) | I_{FSM} | 7.6 | kA |
| Operating Temperature Range | T_J | 0-70 | °C |
| Leakage Current ($V_R = 32$ kV) | I_R | 400 | μ A |
| Latching Current | I_L | 250 | A |
| Holding Current | I_L | 200 | A |
| On-state Forward Resistance | r_T | 40 | m Ω |
| Reverse Recovery Time (Thyristor) | T_{RR} | 50 | μ s |
| Forward Recovery Time (Diode) | T_{RR} | 100 | ns |
| Trigger Delay | T_D | 150 | ns |
| Rise Time (2 kA) | T_R | 200 | ns |
| Capacitance | C_{AK} | 100 | pF |

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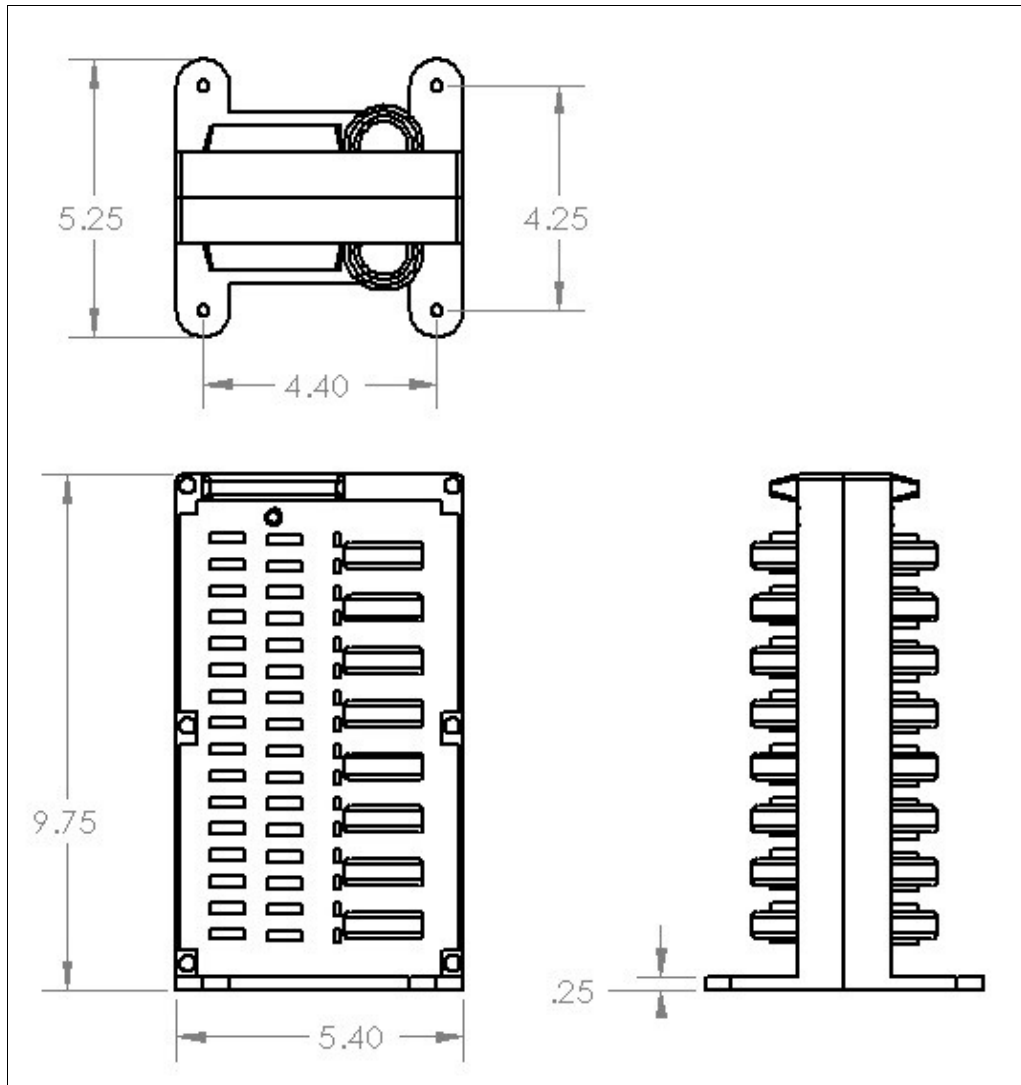


Figure 1: SPPD-1-30 Dimensions
Dimension in Inches

Trigger cable is on Cathode side of switch.

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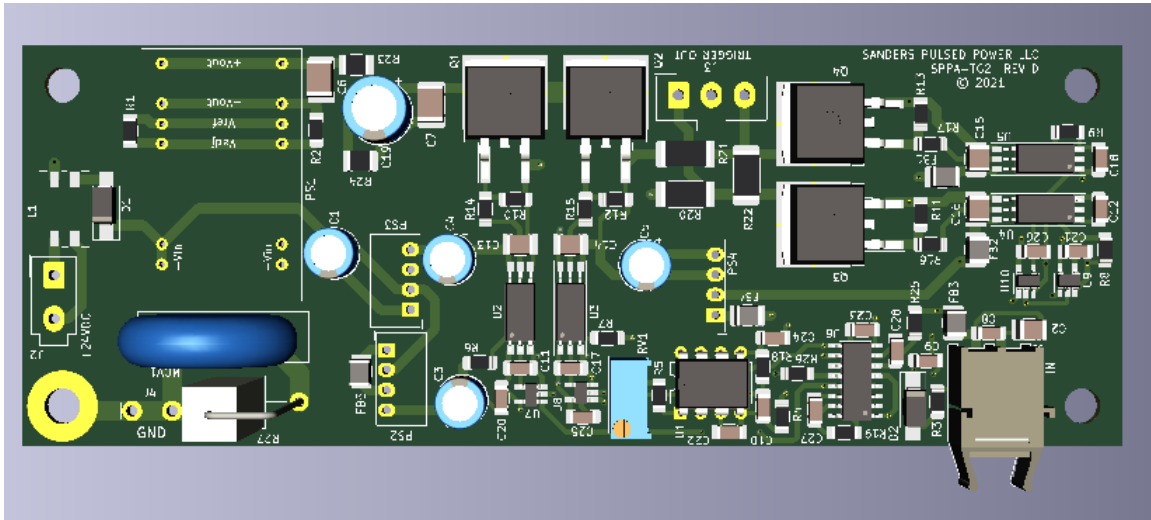


Figure 2: Trigger Board

Mounting Holes are on a 5.5" x 2.1" Pattern
Use housing 39-01-2020 and socket 39-00-0039 for Power (J2)
Pin 1 as GND and pin 2 as 24 VDC. Requires 0.6 A surge. Quiescent current draw is 0.05 A.
Ground board at J4 or lower left mounting hole to reduce EMI.
AFBR-2624 Fiber-Optic Trigger Input

Specifications subject to change.