



Applied Pulsed Power™

A Division of Silicon Power Corporation

280 Great Valley Parkway
Malvern, PA 19355-1308

Phone: 610-407-4700
www.appliedpulsedpower.com

Model S70-2-8 12kV Fast Thyristor Switch

Preliminary – March 2017

Features:

- Fast turn-on, >100 kA/μs
- Reverse conducting, no need for anti-parallel diode in most circuits
- 12 kV Peak Blocking Voltage



This switch is designed to provide fast turn-on for applications needing high di/dt with very little transition time between the off state and the on-state. The fast turn-on and high voltage is achieved using parallel/series combination of Silicon Power Corporations Solidtron® thyristor technology. The switch is provided with a high speed, low jitter trigger circuit, our EA0046-200.

Operational Ratings

(T_j=80°C, unless otherwise specified)

	SYMBOL	VALUE	UNITS
DC Forward Off-State Voltage	V _{DRM}	10	kV
Peak Forward Off-State Voltage (10 msec)	V _{FM}	12	kV
Peak Forward Current (1 μsec half sine)	I _{PP}	5	kA
Repetitive Forward Current (1 μsec half sine, PRR = 180 Hz)	I _{PR}	3	kA
Rate of Current Rise (I _G = 5A, measured 100 ns after turn-on)	dI/dt	100	kA/μs
Maximum RMS Current	I _{RMS}	60	A
Gate Current for Turn-On	I _G	25	mA
Maximum Gate Current (10 μsec)	I _G	50	A
Turn On Jitter (I _G = 3A, 30ns rise time)	t _{jitter}	2	ns
Maximum Turn On Delay Time (I _G = 3A, 30ns rise time)	t _{d(ON)}	100	ns
Maximum Recovery Time	t _q	400	μs
Maximum Rate of Change of Off-State Voltage	dV/dt	1200	V/ms
Maximum Pulse Repetition Rate	PRR	180	Hz
Maximum Leakage Current (V _{DRM})	I _{DRM}	150	μA
Operating Temperature Range	T _C	0-70	°C
Recommended Maximum Operating Temperature	T _C	50	°C



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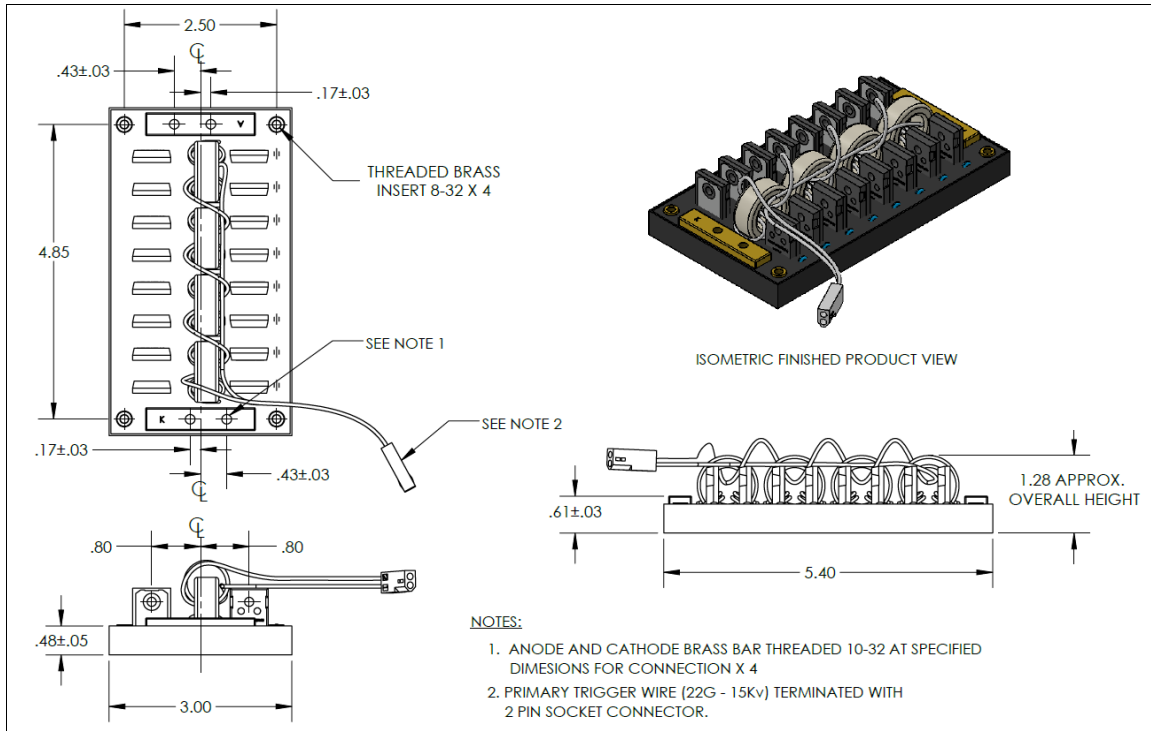
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Recommended Trigger Input

Trigger Voltage	200	Volts
Trigger Current	50	Amps



Dimensions in inches

