

Applied Pulsed Power, Inc.TM

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Solid State Switch Model S50-I Preliminary Data Sheet

The model S50-I is designed to meet many of today's high frequency pulsed power switching needs using the advantages of an IGBT based solid state switch.

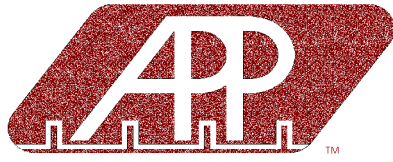
Voltage Ratings (T_j=80°C)

Model	Off-State Voltage	Peak Non-Repetitive Off-State Voltage	Dimensions* (mm)
S50-I-4	3.3kV	4.8kV	80 x 100 x 100
S50-I-5	4.2kV	6kV	92 x 100 x 100
S50-I-6	5kV	7.2kV	104 x 100 x 100
S50-I-7	5.8kV	8.4kV	116 x 100 x 100
S50-I-8	6.7kV	9.6kV	128 x 100 x 100
S50-I-9	7.5kV	10.8kV	140 x 100 x 100
S50-I-10	8.3kV	12kV	152 x 100 x 100
S50-I-11	9.1kV	13.2kV	164 x 100 x 100
S50-I-12	10kV	14.4kV	176 x 100 x 100

*Dimensions depend on cooling requirements.

Operational Ratings (T_j=80°C, unless otherwise specified)

Parameter	Value	Unit
Peak Non-Repetitive Current	200	Amps
Maximum RMS On-State Current (T _j =90°C)	32	Amps
Operating Temperature Range	0 to 60	°C
Turn-on Time	150	ns
Turn-off Time	500	ns
Maximum Leakage Current	1	mA
Peak Pulse Repetition Rate	10	kHz



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The S50-I uses air cooled heat sinks that float at high voltage. Anode and cathode connections are into taped metal electrodes at the two ends of the switch. Triggering of the switch is accomplished via a flying lead terminated in two pin MOLEX connector model #03-06-1023. The trigger signal needs to be 15V, 1A pulse. APP Model EA0038 trigger circuit can be used to trigger the Model S50-I. There are different options available for triggering, cooling, and electrical connections. The selection of any option may change the dimensions for the switch.

Options

T	Self Powered Trigger (TTL Input)
F	Self Powered Trigger (Fiber Optic Input)
L	Liquid Cooled Heat Sink
H	Single Heat Sink
C	Ceramic Base with no Heat Sink
M	Metal Base with no Heat Sink
S	Low Inductance Strip Line Connection
P	Anti-Parallel Diode
D	Series Diode
R#	Internal Series Resistance in Ohms

APP has a wide selection of commercial switches and can also supply custom switches to meet your pulsed power switching needs. APP also provides complete pulsed power systems. Contact sales at sales@appliedpulsedpower.com for more information.