



# Applied Pulsed Power, Inc.™

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## Model S29 Solid State Switch Module Preliminary Data Sheet

Using three silicon n-type thyristors in parallel, combining the aspects of SCR thyristors and high di/dt capability, Applied Pulsed Power, Inc. (APP) now provides a module for 75kA/ $\mu$ Sec peak di/dt operation.



This solid state switch module consists of three silicon thyristors in parallel, designed specifically for high di/dt, high voltage, pulsed power applications. A single gate and gate return lead for triggering the module internally separates to trigger the individual thyristors. An AlN ceramic substrate allows the thyristors to be cooled using an external heat sink.

### Operational Ratings for Module (T<sub>j</sub>=80°C, unless otherwise specified)

Peak Non-Repetitive Off-State Voltage	5000	Volts
Peak Non-Repetitive Current	9000	Amps
Peak di/dt	75	kA/ $\mu$ Sec
Maximum RMS On-State Current (T <sub>j</sub> =120°C)	100	Amps
Operating Temperature Range	-40 to +120	°C
Peak Rate of Reapplication of Off-State Voltage	1000	V/ $\mu$ Sec
Peak Reverse Voltage	-5	V

### Operational Characteristics for Module

Typical Leakage Current (T <sub>j</sub> =25°C)	1	$\mu$ Amp
	(T <sub>j</sub> =80°C)	300 $\mu$ Amp
	(T <sub>j</sub> =120°C)	2400 $\mu$ Amp
Turn-On Delay	120	nSec
Turn-On Delay Jitter	<2	nSec
Module Dimensions	82x45x16	mm

Preliminary Data as of August 17, 2004. APP reserves the right to update at any time.