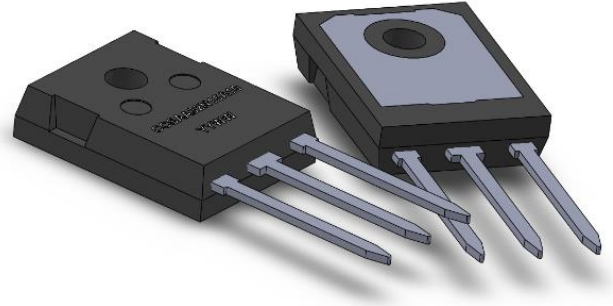


The **CCSAA32N15A10** is an advanced and high-voltage current-controlled thyristor packaged in a conventional three leaded TO-247 package. Like all Solidtron products, the internal semiconductor employs high cell density and an advanced planer termination design to achieve high peak current capability, low conduction loss, low off-state leakage, and extremely high turn-on di/dt capability. Unlike its sister, the VCS device, the CCS thyristor does not require a separate gate return lead which allows a three leaded package to be used. As a result, external lead spacing is increased nearly 100% which allows the component to be operated at full voltage without additional potting or other precautionary measures.

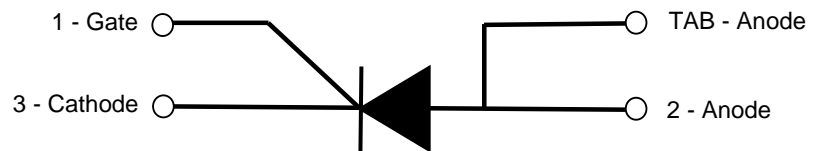
The **CCSAA32N15A10** is targeted to replace triggered spark gaps of similar voltage and current ratings.

TO-247(3) PACKAGE



KEY PRODUCT FEATURES

- 1500V Repetitive Peak Off-State Voltage
- $V_{GK} = 0V = OFF$
- 100kA/ μ Sec di/dt Capability
- < 100nSec Turn-On Delay Time
- 4kA Repetitive Anode Current



SCHEMATIC AND PIN ASSIGNMENT

MAXIMUM RATINGS

	VALUE	UNITS
Peak Off-State Anode Voltage	1500	V
Repetitive Peak Forward Anode Current (1/2 Cycle Pulse Width = /<1uSec)	4000	A
Repetitive Peak Reverse Anode Current (1/2 Cycle Pulse Width = /<1uSec)	3500	A
Critical Off-State Rate of Change of Voltage (dv/dt) immunity	5000	V/uSec
Case Temperature (Tc)	-55 to 125	°C
Rate of Change of Anode Current (di/dt)	100	kA/uSec
Peak Forward Gate Current (= /< 100uSec critically damped pulse)	TBD (min. 10A)	A
Peak Reverse Gate Voltage (Incidental)	-9	V

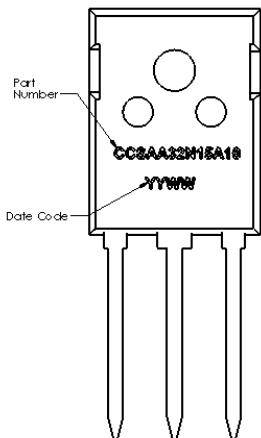
TYPICAL OPERATING CONDITIONS

	VALUES	UNITS
Off-State Anode Voltage	1200	V
Repetitive Peak Forward Anode Current (1/2 Cycle Pulse Width = 160nSec)	2600	A
Repetitive Peak Reverse Anode Current (1/2 Cycle Pulse Width = 160nSec)	2200	A
Off-State Rate of Change of Voltage (dv/dt) immunity	=/<150	V/mSec
Case Temperature (Tc)	-55 to 85	°C
Rate of Change of Anode Current (di/dt)	65	kA/uSec
Peak Forward Gate Current (<100uSec)	.5	A
Peak Reverse Gate Voltage (Incidental)	-5	V
Repetition Rate	=/<5	Hz

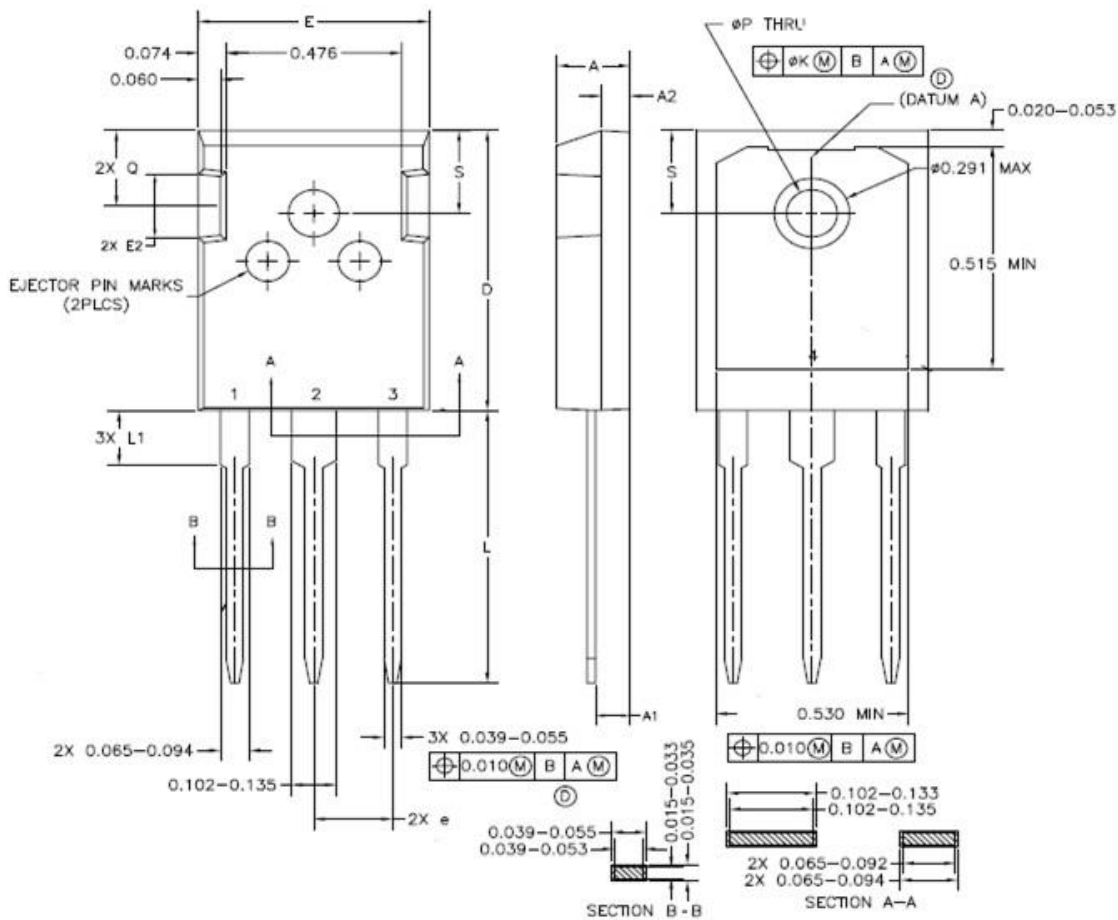
PERFORMANCE CHARACTERISTICS

	CONDITIONS	VALUES	UNITS	
Anode-Cathode Breakdown Voltage	Gate shorted to Cathode, IA=100uA	TC = -55 °C	Min. 1500	V
		TC = +25 °C		V
		TC = +125 °C		V
Anode-Cathode Off-State Current	Gate shorted to Cathode, VAK=1500V	TC = -55 °C	Max. 50	nA
		TC = +25 °C	Max. 100	nA
		TC = +85 °C	Max. 1	uA
		TC = +125 °C	Max. 10	uA
Turn-on Delay Time	Capacitor Discharge Through CVR C=.13uF, L _{SERIES} = 20nH, V _{SUPPLY} = 1250V,	Typ. 50 Max. 100	nSec	
Rate of Change of Anode Current (di/dt)	R _{SERIES} =50mohms, TC = +25 °C, I _G = 0.5A	Typ. 65	kA/uSec	
Peak Anode Current		Typ. 2.7	kA	

MARKINGS



PACKAGING DIMENSIONS



DIMENSIONS ARE IN INCHES

TOLERANCES UNLESS OTHERWISE NOTED:

TWO PLACE DECIMAL ± 0.010 THREE PLACE DECIMAL ± 0.004

HANDLING AND STORAGE

ESD Sensitivity



THIS DEVICE IS ESD SENSITIVE. OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES IN ALL ASSEMBLY AND TEST AREAS (REF. JESD625).

IMPROPER HANDLING OF THIS DEVICE MAY PERMANENTLY DAMAGE THE DEVICE AND RENDER IT UNUSABLE.

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