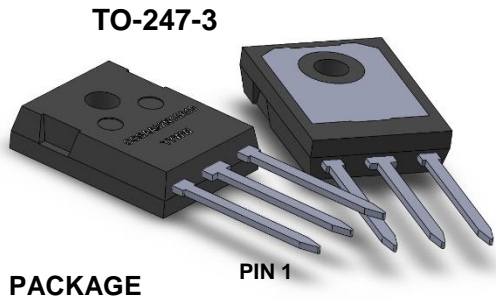


Production Status – July 2015

The performance specifications listed within this document are preliminary and subject to change upon the completion of a comprehensive product characterization effort currently underway.

The **CCS AA 32N15 A10** is an advanced high-voltage current-controlled thyristor packaged in a conventional 3 leaded TO247 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% allowing the component to be operated at full voltage without additional potting or other precautionary measures.

The **CCS AA 32N15 A10** is targeted to replace triggered spark gaps of similar voltage and current ratings.



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	100	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)	10	A
Peak Reverse Gate Voltage (Incidental)	-9	V

TYPICAL OPERATING CONDITIONS

	VALUE	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

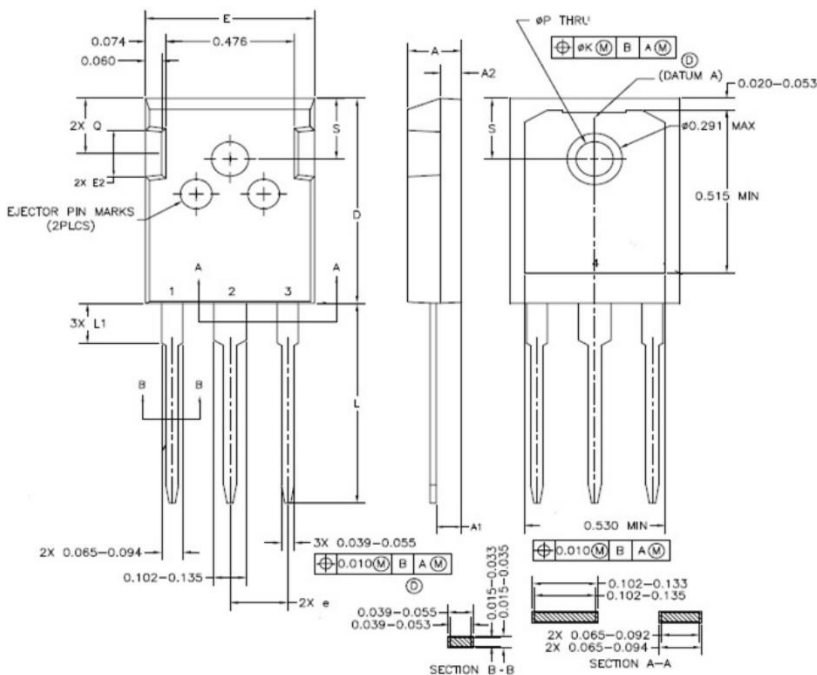
CONDITIONS

VALUES

UNITS

Anode-Cathode Breakdown Voltage	Gate shorted to Cathode, $I_A=100\mu A$	$T_C = -55^\circ C$	Min. 1500	V
		$T_C = +25^\circ C$		V
		$T_C = +125^\circ C$		V
Anode-Cathode Off-State Current	Gate shorted to Cathode, $V_{AK}=1500V$	$T_C = -55^\circ C$	Max. 50	nA
		$T_C = +25^\circ C$	Max. 100	nA
		$T_C = +85^\circ C$	Max. 1	μA
		$T_C = +125^\circ C$	Max. 10	μA
Turn-on Delay Time	Capacitor Discharge Through CVR		Typ. 50 Max. 100	nSec
Rate of Change of Anode Current (di/dt)	C=.13 μF , L _{SERIES} = 20nH, V _{SUPPLY} = 1250V, R _{SERIES} =50mohms, $T_C = +25^\circ C$, $I_G = 0.5A$		Typ. 65	kA/ μ Sec
Peak Anode Current			Typ. 2.7	kA

PACKAGE OUTLINE



CRITICAL DIMENSIONS TABULATED USING JEDEC TO-247 TABLE AD

SYMBOL	VALUE
A	0.185-0.209
A1	0.087-0.102
A2	0.059-0.098
D	0.819-0.845
E	0.610-0.640
E2	0.170-0.216
e	0.215
ϕK	$\phi 0.025$
L	0.780-0.800
L1	0.177- MAX
ϕP	$\phi 0.140-0.144$
Q	0.212-0.244
S	0.242

HANDLING



OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES IN ALL ASSEMBLY AND TEST AREA

NOTICE

End Users shall be compliant to all applicable DOD, ITAR, EAR, USML laws and regulations

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