

SMCT TA 32N14 A10
Thin-Pak™ Voltage Controlled SolidTRON®
Data Sheet Rev 3 CAO-20140515

<i>Device</i>	<i>Package format</i>	<i>Code</i>	<i>Semiconductor type</i>	<i>Off-state non-trigger voltage</i> $V_{DRM}(V) (X100)$	<i>Testing</i>
SMCT	TA	32	N	14	A10

Description:

N-Type MOS-controlled thyristor.
Metal surfaces tinned with 63Sn/37Pb solder.
Package is perforated, metalized ceramic substrate attached to silicon die.

Applications:

EFD / EFI / ESA / LEFFI / SAF
Capacitor Discharge
Pulse Power

Features:

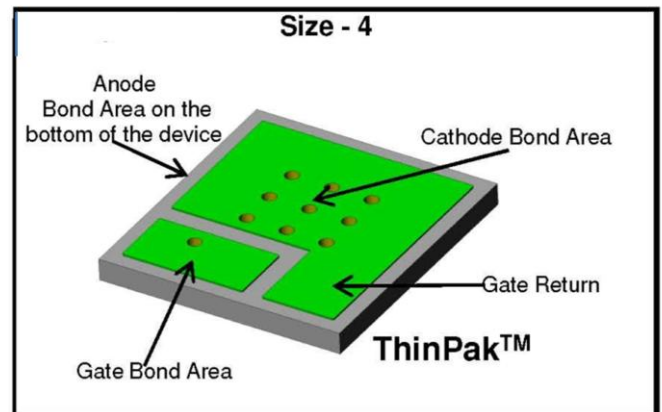
1400V peak off-state voltage
4kA surge on-state maximum current
120kA/us di/dt performance
<100ns turn on delay / no turn-on delay jitter
High peak current capability
Low on-state conduction losses
Low inductance packaging
Solid state reliability
Epoxy underfill to protect high voltage terminals

Use of Gate Return Bond Area

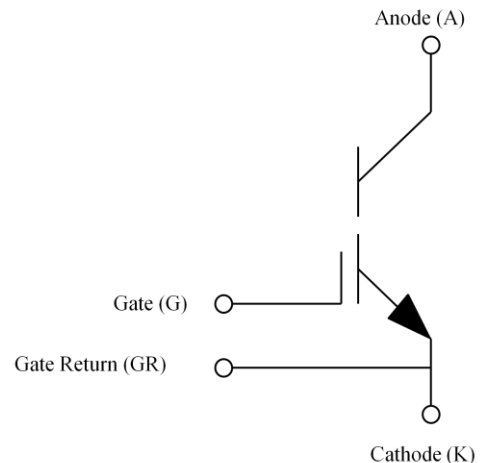
The MCT was designed for high di/dt applications. An independent cathode connection or "Gate Return Bond Area" is provided to minimize the effects of rapidly changing Anode-Cathode current on the Gate control voltage, ($V=L*di/dt$).

It is critical the end user utilize the Gate Return Bond Area as the point at which the gate driver reference (return) is attached to the VCS device.

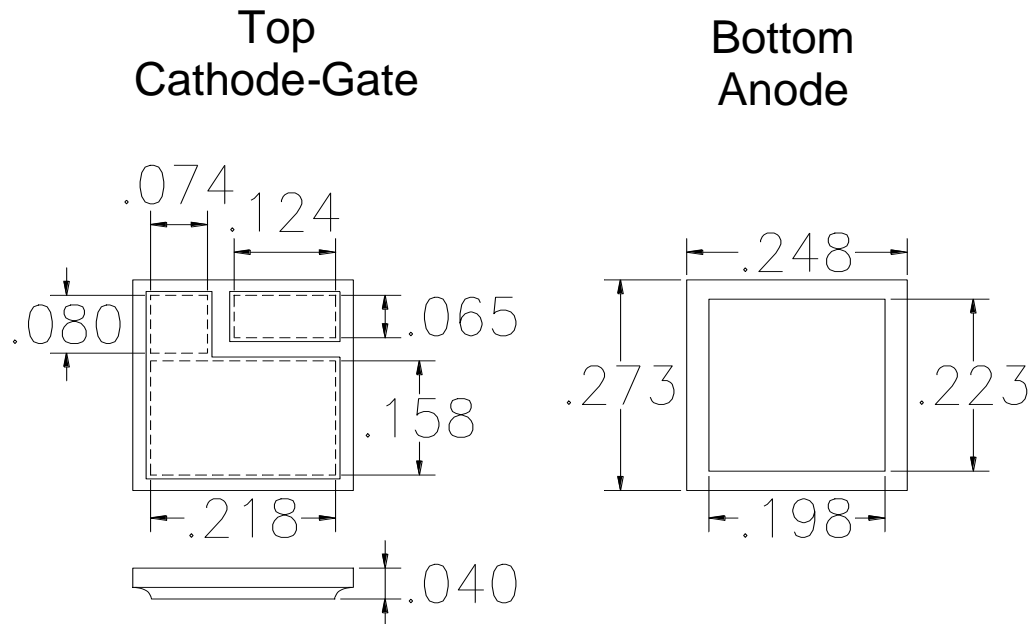
Package



Schematic Symbol



Package Dimensions



Process and Storage

1. All metal surfaces are tinned using 63pb/37sn solder.
2. Installation reflow temperature not to exceed 260° C.
3. Appropriate to all MOS gated devices, proper ESD handling and storage must be observed.

Test Profile

1. Gate Integrity at 25° C and 25 Volts applied is measured as Pass or Fail
2. Di/Dt discharge at 25° C and 1250 Volts is measured for 100 pulses against <100ns and >4Ka specifications
3. Voltage Blocking Stability at 80° C and 1500 V is measured against < 200nA specification
4. Turn on Threshold at 25° C and 12 V is measured to ensure latching <1.5V specification
5. Forward Voltage Drop at 25° C and 10 A is measured against <1.1V specification
6. Gate Integrity at 25° C and 25 V applied is measured as Pass or Fail