SmartSolar MPPT 250/100-Tr VE.Can issue with capacitor C609

Technote July 2022

www.victronenergy.com

Summary

On the recently produced MPPT 250 100-Tr VE.Can, SCC125110412, we have noticed that mechanical stress can cause a capacitor to crack. And, though never reported from the field and only when multiple consecutive failures occur, it is possible that as a result the PCB area around the capacitor starts to burn when power is applied.

This document is meant for direct customers. The described modification is mandatory for all affected units, both still in your stock as well as already sold/installed.

Background

All ceramic capacitors that can be under mechanical stress must be with flexible terminals. Unfortunately, for C609, the wrong type was used. Mechanical stress on the PCBA, for example mounting the cables in the connector, can cause the PCBA to bend a little and in some cases C609 can crack.

Affected model/serial numbers

Model: SmartSolar MPPT 250/100-Tr VE.Can, partnumber SCC125110412.

Serial numbers: HQ2150xxxxx up to and including HQ2220xxxxx

The serial number can be found on the carton, on the unit, in the E-Order environment and in the VictronConnect App as well as on the VRM Portal.

Solutions

Option 1 – self-rework

The appendix describes the required rework procedure. Do let us know the reworked serial numbers by email, repairs@victronenergy.com, for our administration. In case of any questions, don't hesitate to contact Repairs or your Sales manager.

Note that it is *not* necessary to create and RMA for units that you rework yourself.

Option 2- modification by Victron or a repair center

In case you prefer to not perform the modification yourself, make an RMA in the normal system.

Appendix – repair instructions

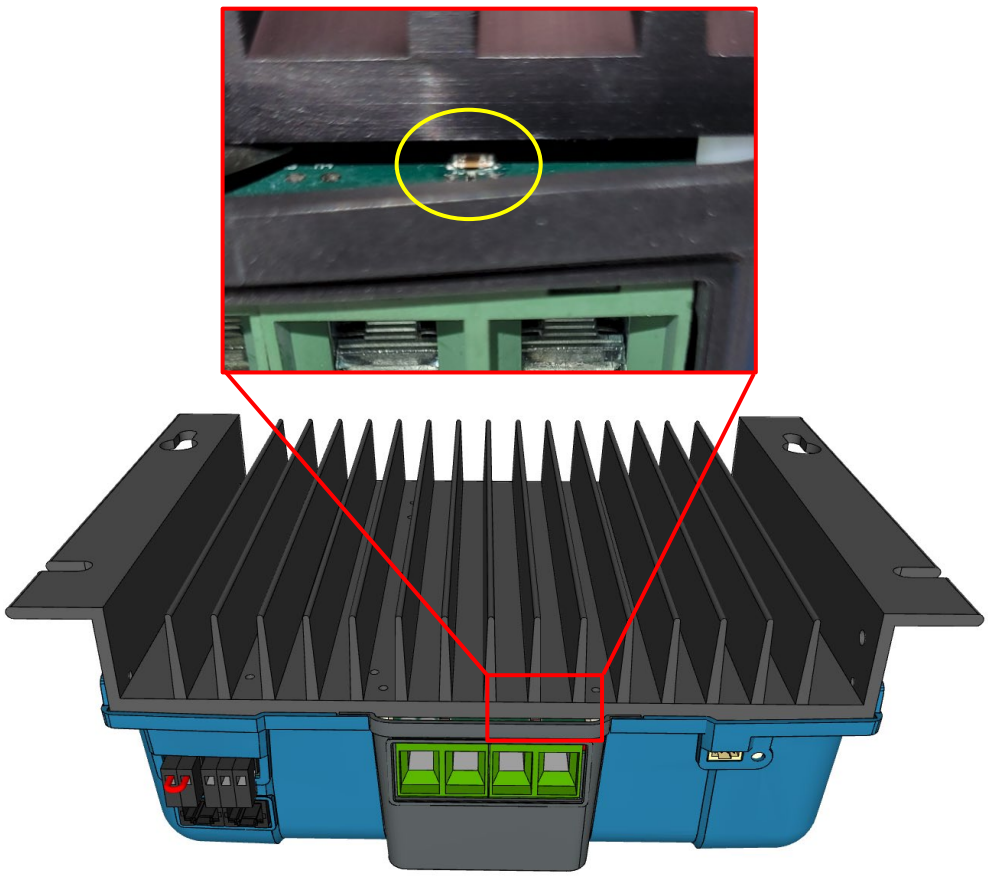
These instructions are provided to help those who are comfortable to self-perform the rework. When in doubt, do not hesitate and send the unit in for repair. We are more than happy to repair MPPT 250 100-Tr VE.Can affected by this problem.

C609 is not necessary for the unit the function properly. Removing it will eliminate the unit to be at risk. C609 is accessible through the gap between the plastic insert and heatsink. C609 can be removed mechanically by using a simple bent metal strip (S-tool), tapping the tool with a hammer breaks the capacitor off the PCB.

In case you can not make an S-tool or something similar yourself we can ship one to you. You can contact service and repair for more information.

Make sure to disconnect PV and Battery

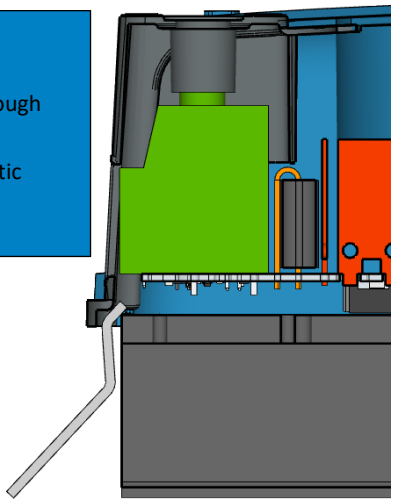
C609 position



Place the S-tool

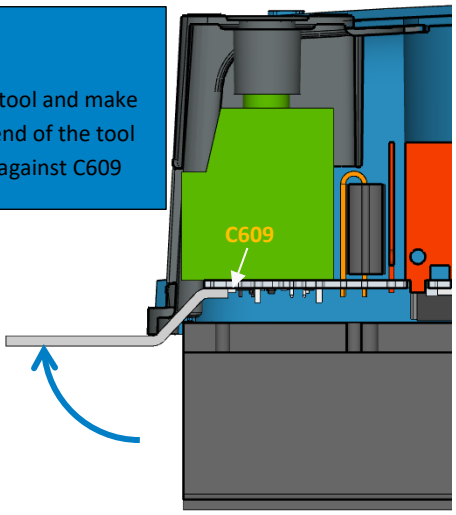
Step 1.

Slide the tool through the gap between heatsink and plastic insert.



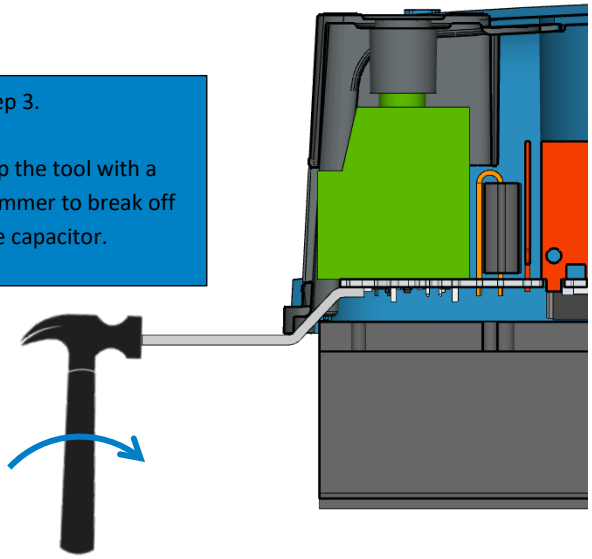
Step2.

Level the tool and make sure the end of the tool is resting against C609



Step 3.

Tap the tool with a hammer to break off the capacitor.



Step 4.

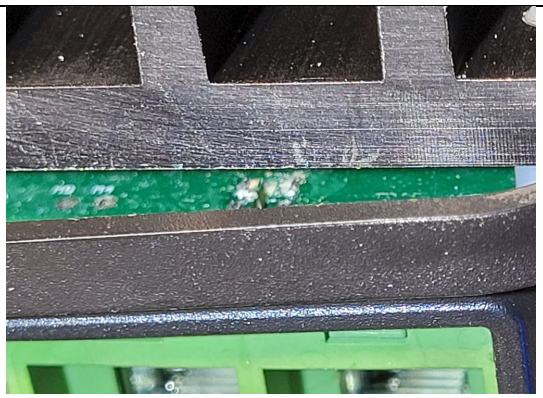
Tilt the housing to retrieve the capacitor.

Do not leave the capacitor in the product!

Step 5.

Finally, verify that C609 is removed properly: only two solderpads must remain.

No component residue should remain on the PCB.



Specification S-tool