Product Update

Excelsys CoolX CoolPac and CoolMod

Advanced Energy is delighted to announce that the CoolX family, part of our Excelsys product line, has been enhanced to be BF (Body Floating) ready for Medical BF applications. This new enhancement will greatly simplify system safety certification for medical equipment system designers developing products that require BF certification. Removing the need to do this on system level greatly reduces system development time, greatly accelerating customer time to market.

This product enhancement will not impact current customers using the CoolX, and there will be no changes made to part numbers used for CoolX products. The BF-ready CoolX parts will be easily identifiable by new revision numbers.

What improvement are we making?

We are increasing the output to Earth isolation of our CoolX range of modular power supplies from 1 Means of Patient Protection (MOPP) to 1 MOPP for a working voltage equal to the mains voltage.

Why are we making this change?

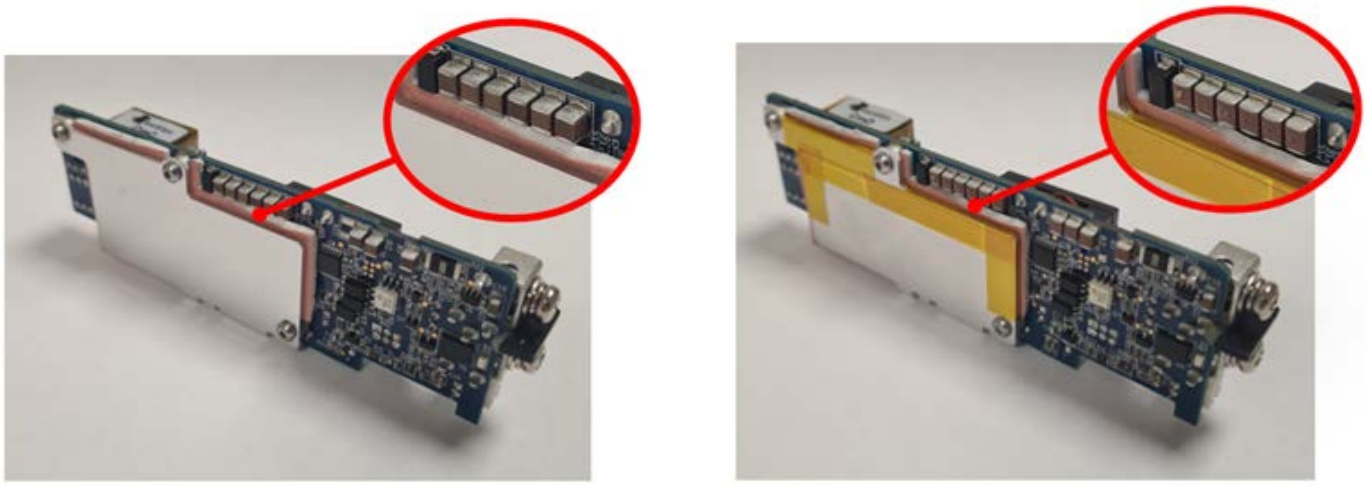
Many of the medical applications that the CoolX is designed into have applied parts (parts that come into contact with the patient in the context of a medical treatment) that have a low impedance connection to the patient.

These applied parts must have an isolation barrier between the patient connection and Earth to protect the patient if they come in contact with the mains voltage – for example, if another piece of medical equipment also connected to the patient has malfunctioned. This ensures that there is no path to Earth through the applied part for this hazardous voltage. These are known as Type BF (Body Floating) Applied Parts.

By implementing this barrier between Output and Earth on the power supply, there is no need for medical equipment designers to implement it within the applied part.

How will this be implemented?

The CoolX has already been designed with a robust isolation barrier from output to Earth, with a dielectric withstand voltage of 1.85 kVAC, which exceeds the requirement of 1 Means of Patient protection for a working voltage equal to Mains Voltage (1.5 kVAC dielectric strength). However, greater creepage and clearance from the module's circuitry to Earth (in this case the heatsink of the module) is required to meet the requirements.



By adding a layer of tape to the edge of the heat sink, the required 2.5 mm Creepage and 2 mm Clearance for 1 MOPP is also met.

What is the downside?

None! There has been no change to electrical, thermal or EMI performance of the CoolX. All that has been changed is the strength of the isolation barrier from Output to Earth, which means the CoolX can be used in Type BF applications with no additional barriers implemented on the Applied Parts.

When will this change occur?

The manufacturing cut in date will occur at the end of January and product stock will start to arrive by the end of February.

There will be a transition period where current stock will be used to meet open orders and, eventually, BF-ready parts will be used on all orders. Customers with backlog will start to receive BF-ready products sooner on higher run rate products than slower run rate products as older revision stock is depleted.
The transition period will begin in February, and we aim to finish transitioning all CoolX products in Q3 2022.

For customers that would like to order CoolX power supplies or individual piece parts specifically for BF rated application, sample requests can be made through our sales teams. Please be advised that in the present global environment, lead times for samples may be longer than typically expected, however every effort will be made to ensure early design-in sampling activity will see minimal impact.

If you have any questions, concerns, or comments, please contact your AE/Excelsys team.

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