

	Doc or ECO #:	ECO-70160-005	Date:	03/15/2022	Author:	GD
	Rev. #:	A				
RF filter modification	Engineering Approval:	aeg	Date:	03/15/2022	Quality Approval	aeg

P/N #:	70160	Effective Date:	March 15, 2022
Title:	RS485 communication reliability improvements		

1.0 Purpose / Summary

Resistor values of RS485 communication chip are changed to accomplish reliable communication regardless the chip manufacturer.

2.0 Parts Affected

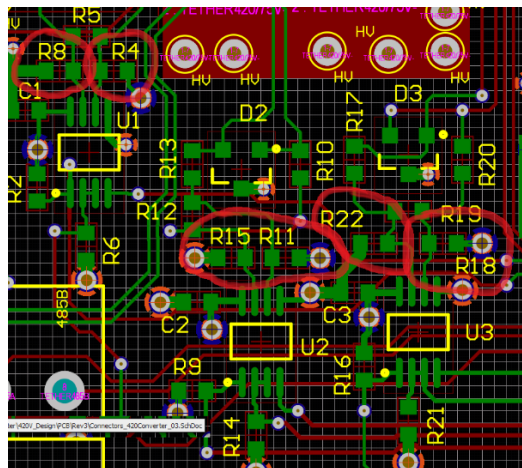
Part Number	Notes	Removed	Added	Modified	REV
RC0603FR-071KL	RESISTOR SMD 1K OHM 1% 1/10W 0603	☒	☐	☐	-
RC0603FR-074K7L	RES SMD 4.7K OHM 1% 1/10W 0604	☒	☐	☐	-
RMCF0603FG464R	RES 464 OHM 1% 1/10W 0603	☐	☒	☐	-
70060	SPAM	☐	☐	☒	B
70155	Power Module	☐	☐	☒	C
70192	Comms Module	☐	☐	☒	D

3.0 Detail

Serial communication tests would fail in during QC inspection. This was traced to a tolerance change in the biasing requirements on a batch of transceiver chips. New biasing resistors were selected to ensure the biasing was more robust.

Resistor networks (R4, R8, R11, R15, R18, R22) associated with RS485 communication chip on board (U1, U2, U3) needed to be modified to accommodate slight changes in tolerances with these chips depending on the chip manufacturer.

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Resistor Locations

The next revision of the power board will include the updated BOM.

4.0 Disposition of Material

Old stock should be reworked on occurrence of Q/C failures.

Change should be implemented on all new production runs.

5.0 Action Items

Action	Department	Acknowledgement Initials
Updated power converter module BOM reflecting the new modification	Engineering	GD
Update SharePoint Records	Engineering	AEG
Inform board assembly vendors about updated BOM	Engineering	GD

6.0 Modified / Referenced Documents:

Document	Current Revision
Click here to enter text.	Click here to enter text.

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7.0 Revision History

Date Revised (mm-dd-yyyy)	Location of Change (section, paragraph no., step no., etc.)	Description of Change Made	Name of Person making the Change
3/15/2022	All	Init	GD