

ENGINEERING CHANGE ORDER

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AQS
Attn: Gavin Zhao
gavinzhao@aqz-inc.com

Sutajio Ko-Usagi Pte LTD
bunnie@kosagi.com

ECO number: 0002 version: 1
Project: Novena
Subassembly: Novena main PCBA rev PVT2 release A
Reference PO: PO-0058

Background

The change to the inductor on PVT seems to have modified the power-on stability of the NCP3020B. On sudden in-rush, the system will power on briefly, and then power off again. Oscilloscope traces confirm that during power-on, there is a lot of noise on the 5V line evidencing instability of the NCP3020B, just before it shuts itself off.

Changing C23N from DNP to 22uF, 10V shows a nice clean waveform on the scope during power-on, thus empirically resolving the issue.

CHANGE ORDER DETAILS

ORIGINAL		NEW		Comments
Designator	Value	Designator	Value	
C23N	22uF, 10V, X5R, 20% (DNP)	C23N	22uF, 10V, X5R, 20%	Improve regulator stability during sudden power-on transient

MATERIAL DISPOSITION

C23N (22uF, 10V, X5R, 20%) must be added to the BOM for this change. However, the component is already purchased for assembly and if a full reel was purchased there should be adequate material available in excess for production.

Version history

version 1 – original order