TPS54233 issue for servo motor
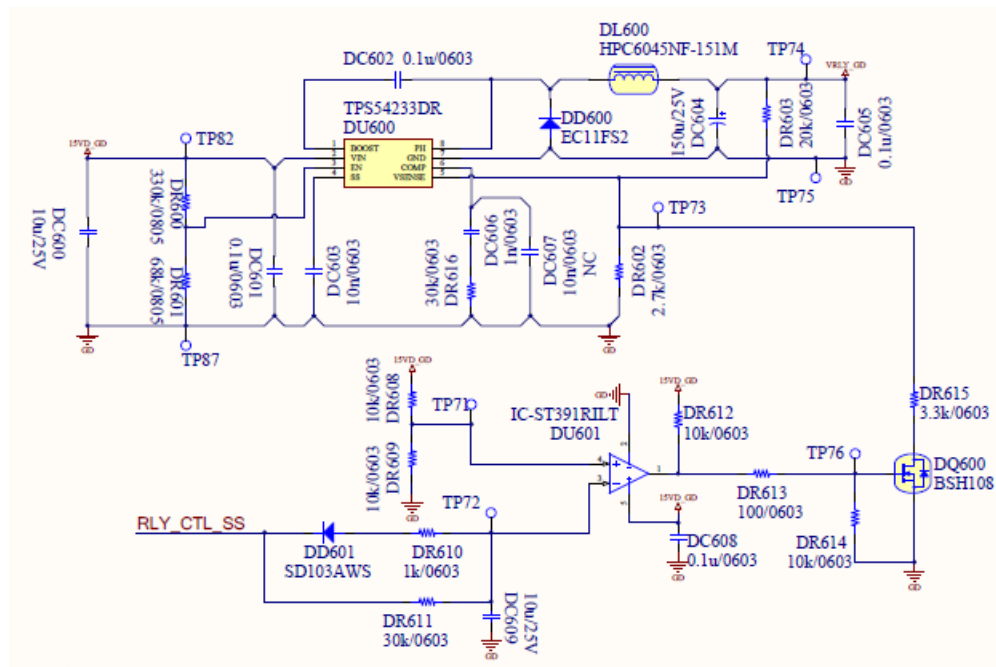
Brian Wang

2017/06/06

TEXAS INSTRUMENTS

Project Info.

Delta Crop. In TW
Servo motor Application
500Ku/year

Schematic

Vin: 15V, Vout: 6V
Iout: <500mA

Issue Description

During startup, the IC will be shutdown. What happened?

When there is a dummy load of 100 Ohm or certain values added at output rail, the output can be startup normally.
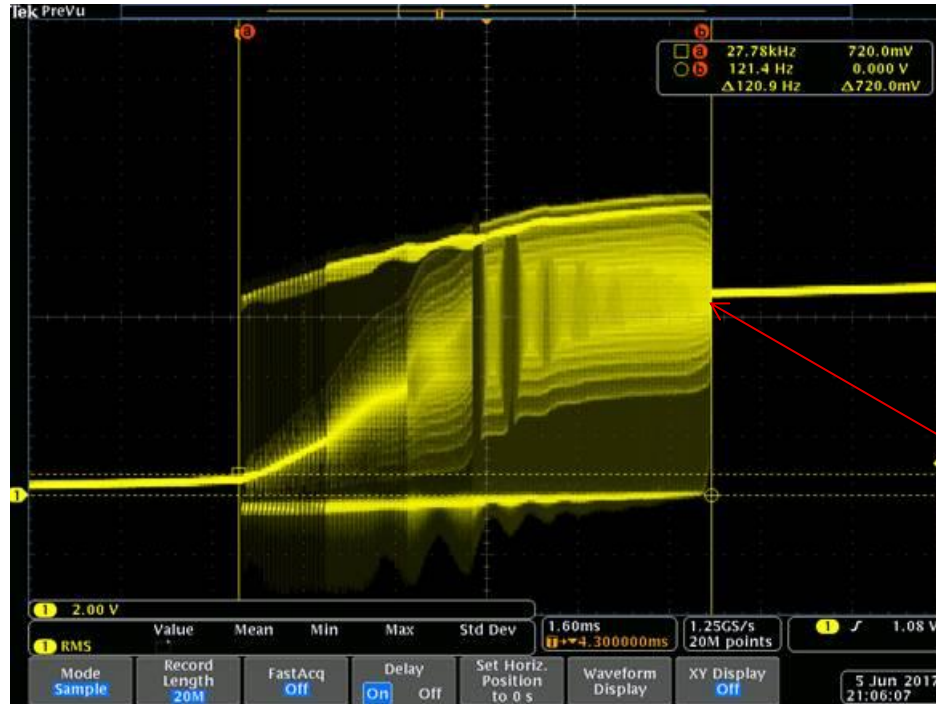
PS: We have tried the same configuration and component values on TPS54233EVM It works normally and the problem is gone.

Issue Description

Test on TPS54233EVM

Test on customer board
With TPS54233

PS: We have tried the same configuration and component values on TPS54233EVM
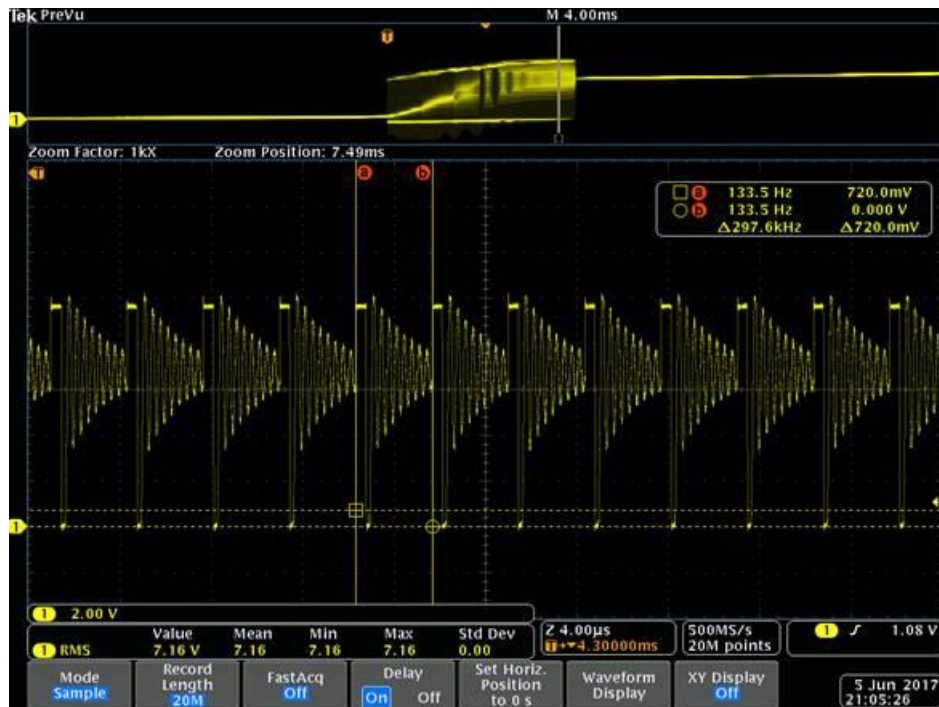It works normally and the problem is gone.

TEXAS INSTRUMENTS

Waveform
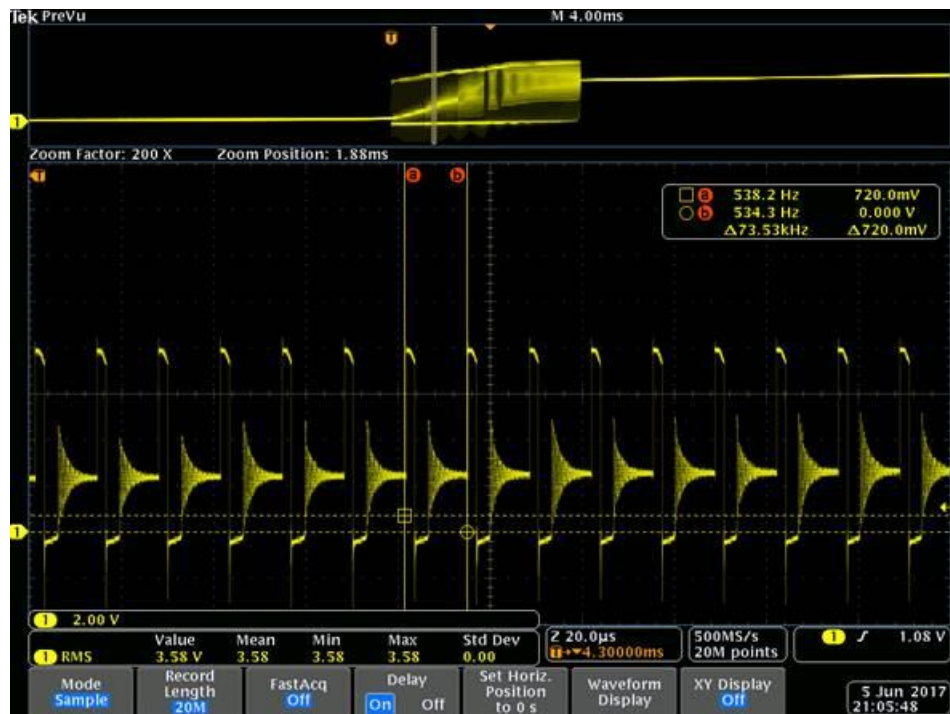

IC is shunting down

CH1: PH pin

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Waveform

CH1: PH pin

Waveform

CH1: PH pin

Waveform on pin6 (COMP)