IS-1825xSRH, IS-1825BSEH, ISL71823xSRH CT Timing Capacitor Recommendation

Renesas recommends using a 470pF or larger CT timing capacitor with the IS-1825xSxH and ISL71823xSRH series of parts. When possible, use CT = 1nF to match the factory test conditions.

Details

Some production lots may exhibit erratic switching behavior when using 330pF or smaller timing capacitors. This is more likely at high temperatures with VCC below 12V. Small CT capacitors discharge quickly at the beginning of each oscillator cycle, which causes the output and LEB pulses of the oscillator to be narrow. In these production lots, this pulse is too narrow to properly trigger the T-Flip Flop or S-R Latch. If the T-Flip Flop fails to trigger, the IS-1825 does not reliably produce pulses on both OUTA and OUTB. Pulses may be present on only one of the pins, or it erratically switches between the two outputs. If the S-R Latch fails to trigger, the part does not reliably produce any pulses. In either case, the CLK/LEB pin behaves normally while OUTA and OUTB do not.

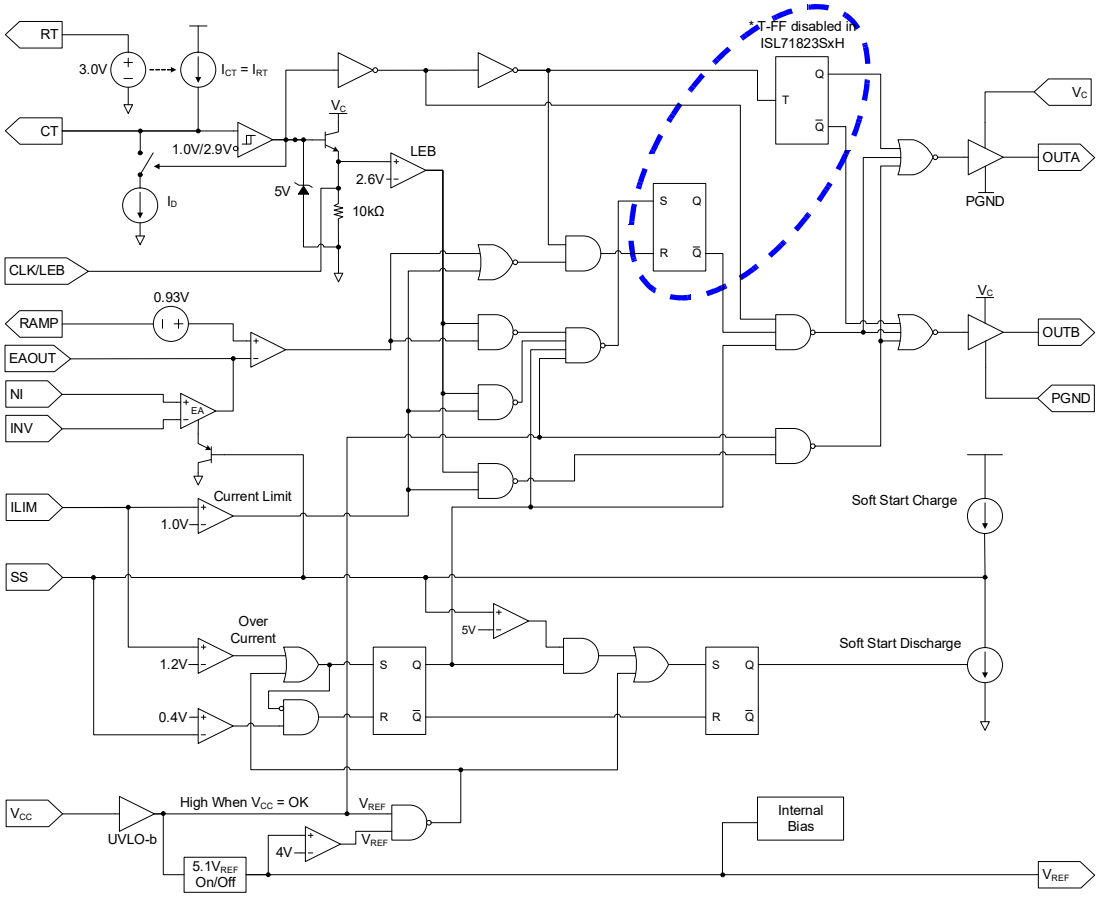

Figure 1. Block Diagram

Revision History

Revision	Date	Description
1.00	Feb 2, 2023	Initial release.

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Corporate Headquarters

TOYOSU FORESIA, 3-2-24 Toyosu,
Koto-ku, Tokyo 135-0061, Japan

www.renesas.com

Contact Information

For further information on a product, technology, the most up-to-date version of a document, or your nearest sales office, please visit:

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