5000 OOBI Burst Analysis (T10/06-375r0)

August 17, 2006
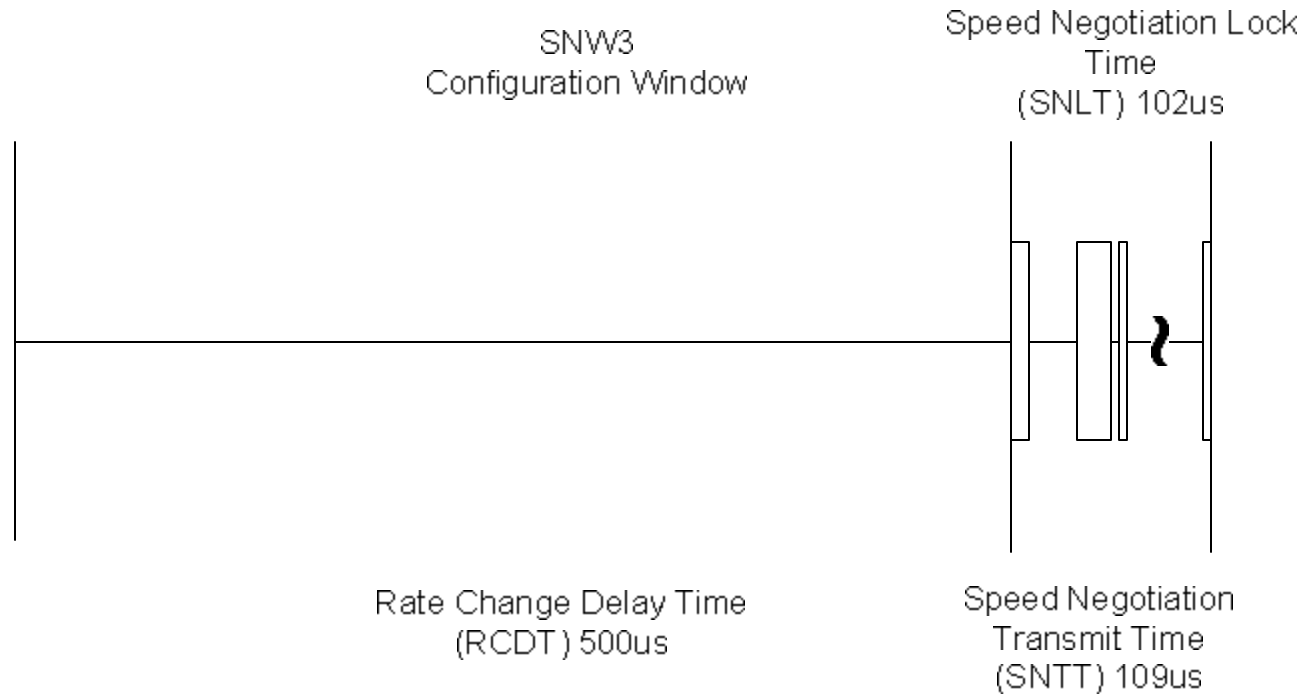
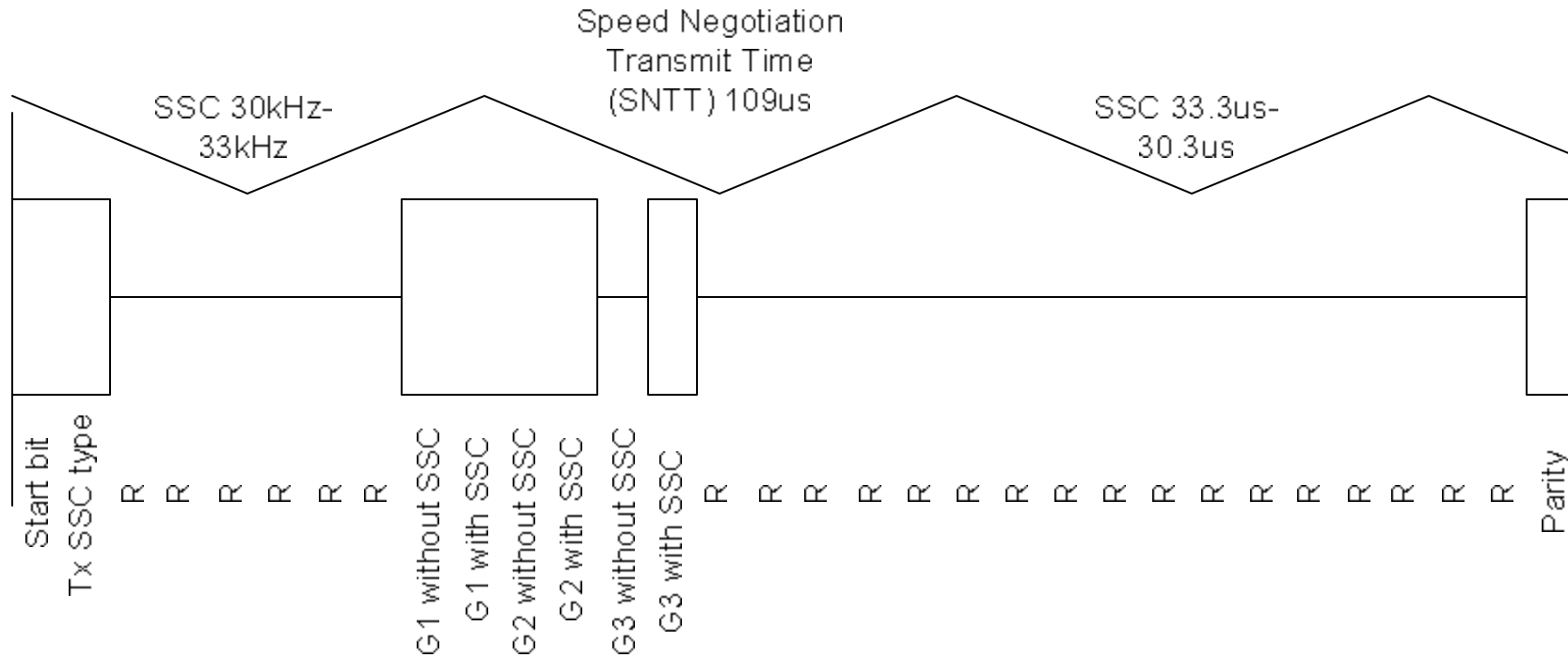**AIM ADS**

Infineon

Never stop thinking

Speed Negotiation Window 3 (aka Configuration Window)

SNW3
Configuration Window

Speed Negotiation Lock
Time
(SNLT) 102us

Rate Change Delay Time
(RCDT) 500us

Speed Negotiation
Transmit Time
(SNTT) 109us

Speed Negotiation Transmit Time with 5000 OOBI Bursts.

Nominal	5000 OOBI * 666.6666ps = 3.333us	3.333us*32 = 106.66us
-2400ppm downspread	5000 OOBI * 668.266ps = 3.341us	3.341us*32 = 106.92us
+2400ppm upspread	5000 OOBI * 665.06ps = 3.325us	3.325us*32 = 106.4us
		Uncertainty 0.52us

Spec Values for Burst Transmission and Detection

- **Burst shall be 5000 OOBI**

  - Considering +/-2400ppm variation due to SSC

  - Transmit Min 3.325us, Nom 3.333us, Max 3.341us

- **Detection**

  - May detect 3.200us <= T < 3.466us

  - Shall detect 3.225us <= T <= 3.441us

  - Shall not detect T < 3.200us or T >= 3.466us

Summary

- This analysis considers the case where one system is always 2400ppm fast and the other is always 2400ppm slow.

- The accumulated error built up over 109us would be 0.52us.

- The burst is 3.33us.

- SSC will average out over the 109us because there are just over 3 periods in this timeframe.

- The timing for threshold detection is required to be better than 10ns for OOB detection.

- Conclusion: No timing issue for 5000 OOBI bursts.

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ADS
OOBI Burst Analysis
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