

User Registration

Register today to create your account on Silabs.com. Your personalized profile allows you to receive technical document updates, new product announcements, “how-to” and design documents, product change notices (PCN) and other valuable content available only to registered users. <http://www.silabs.com/profile>

Bulletin Date: 11/14/2014		Bulletin Effective Date: 11/14/2014																		
Title: Si5338/35/34/56 CMOS (in-phase) Output Impedance Bulletin																				
Originator: Len Staller		Phone: 512-532-5235	Dept: Marketing																	
Customer Contact: Kathy Hagar		Phone: 512-532-5261	Dept: Inside Sales																	
Bulletin Details																				
<p>Description: Silicon Labs is announcing an errata and bulletin for Si5338/35/34/56 CMOS (in-phase) Output Impedance. When the output driver banks are configured for CMOS (in-phase) format, the typical output impedance of the driver is 55 ohms versus the 50 ohms as stated in the datasheet.</p> <p>Note that CMOS single-output and CMOS complimentary modes, the output impedance is 50 ohms as stated in the datasheet and are <u>not</u> affected.</p> <p>Workarounds: The higher output impedance is generally not an issue when driving traces with 50 Ohm characteristic impedance; however, if this is a concern in your application (e.g., trace impedance is expected to be less than 50 ohms) :</p> <ol style="list-style-type: none"> 1. Use the CMOS complimentary mode instead of the CMOS in-phase format mode. 2. Adjust the trace impedance to 55 ohms 3. The device does have programmable registers that may be used to adjust the output impedance. Contact Silicon Labs factory technical support for assistance with this option. 																				
<p>Reason: It was discovered that when using CMOS in-phase format, the output impedance is slightly above 50 ohms. While this will have minimal impact on most customers, Silicon Labs would like customers to consider the impact this could have in their application/design.</p>																				
<p>Product Identification: All Clock Generator products with orderable part numbers (OPNs) beginning with the following OPN prefixes are affected. Please see the datasheet’s ordering guide for complete information.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">OPN Prefix</th> <th colspan="2">OPN Examples</th> </tr> <tr> <th>Tubes or Trays Ordering Option (non Tape & Reel option)</th> <th>Tape & Reel Ordering Option (OPN ends in an “R” suffix)</th> </tr> </thead> <tbody> <tr> <td>Si5338</td> <td>Si5338X-A-GM Si5338X-Axxxxx-GM Si5338X-B-GM Si5338X-Bxxxxx-GM</td> <td>Si5338X-A-GMR Si5338X-Axxxxx-GMR Si5338X-B-GMR Si5338X-Bxxxxx-GMR</td> </tr> <tr> <td>Si5334</td> <td>Si5334X-Axxxxx-GM Si5334X-Bxxxxx-GM</td> <td>Si5334X-Axxxxx-GMR Si5334X-Bxxxxx-GMR</td> </tr> <tr> <td>Si5356A, Si5356B</td> <td>Si5356X-A-GM Si5356X-Axxxxx-GM Si5356X-B-GM Si5356X-Bxxxxx-GM</td> <td>Si5356X-A-GMR Si5356X-Axxxxx-GMR Si5356X-B-GMR Si5356X-Bxxxxx-GMR</td> </tr> <tr> <td>Si5335</td> <td>Si5335X-Axxxxx-GM Si5335X-Bxxxxx-GM</td> <td>Si5335X-Axxxxx-GMR Si5335X-Bxxxxx-GMR</td> </tr> </tbody> </table>				OPN Prefix	OPN Examples		Tubes or Trays Ordering Option (non Tape & Reel option)	Tape & Reel Ordering Option (OPN ends in an “R” suffix)	Si5338	Si5338X-A-GM Si5338X-Axxxxx-GM Si5338X-B-GM Si5338X-Bxxxxx-GM	Si5338X-A-GMR Si5338X-Axxxxx-GMR Si5338X-B-GMR Si5338X-Bxxxxx-GMR	Si5334	Si5334X-Axxxxx-GM Si5334X-Bxxxxx-GM	Si5334X-Axxxxx-GMR Si5334X-Bxxxxx-GMR	Si5356A, Si5356B	Si5356X-A-GM Si5356X-Axxxxx-GM Si5356X-B-GM Si5356X-Bxxxxx-GM	Si5356X-A-GMR Si5356X-Axxxxx-GMR Si5356X-B-GMR Si5356X-Bxxxxx-GMR	Si5335	Si5335X-Axxxxx-GM Si5335X-Bxxxxx-GM	Si5335X-Axxxxx-GMR Si5335X-Bxxxxx-GMR
OPN Prefix	OPN Examples																			
	Tubes or Trays Ordering Option (non Tape & Reel option)	Tape & Reel Ordering Option (OPN ends in an “R” suffix)																		
Si5338	Si5338X-A-GM Si5338X-Axxxxx-GM Si5338X-B-GM Si5338X-Bxxxxx-GM	Si5338X-A-GMR Si5338X-Axxxxx-GMR Si5338X-B-GMR Si5338X-Bxxxxx-GMR																		
Si5334	Si5334X-Axxxxx-GM Si5334X-Bxxxxx-GM	Si5334X-Axxxxx-GMR Si5334X-Bxxxxx-GMR																		
Si5356A, Si5356B	Si5356X-A-GM Si5356X-Axxxxx-GM Si5356X-B-GM Si5356X-Bxxxxx-GM	Si5356X-A-GMR Si5356X-Axxxxx-GMR Si5356X-B-GMR Si5356X-Bxxxxx-GMR																		
Si5335	Si5335X-Axxxxx-GM Si5335X-Bxxxxx-GM	Si5335X-Axxxxx-GMR Si5335X-Bxxxxx-GMR																		

Key: (1) X = device or functional grade; (2) xxxxx = NVM or customer specific code.

This change is considered a minor change which does not affect form, fit, function, quality, or reliability. The information is being provided as a customer courtesy.

Please contact your local Silicon Labs sales representative with any questions about this notification. A list of Silicon Labs sales representatives may be found at www.silabs.com

Customer Actions Needed:

Please see the latest datasheet and associated errata statement. If using CMOS (in-phase) format versus CMOS (complimentary) format, consider the impact a typical 55 ohm output impedance may have on your application/design.