



Customer Process Guidelines - Handling of Sampling Parts

AirPrime Modules



SIERRA
WIRELESS®

4115345 (FileHold), 2102904 (Arena)

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Due to the nature of wireless communications, transmission and reception of data can never be guaranteed. Data may be delayed, corrupted (i.e., have errors) or be totally lost. Although significant delays or losses of data are rare when wireless devices such as the Sierra Wireless modem are used in a normal manner with a well-constructed network, the Sierra Wireless modem should not be used in situations where failure to transmit or receive data could result in damage of any kind to the user or any other party, including but not limited to personal injury, death, or loss of property. Sierra Wireless accepts no responsibility for damages of any kind resulting from delays or errors in data transmitted or received using the Sierra Wireless modem, or for failure of the Sierra Wireless modem to transmit or receive such data.

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Do not operate the Sierra Wireless modem in areas where cellular modems are not advised without proper device certifications. These areas include environments where cellular radio can interfere such as explosive atmospheres, medical equipment, or any other equipment which may be susceptible to any form of radio interference. The Sierra Wireless modem can transmit signals that could interfere with this equipment. Do not operate the Sierra Wireless modem in any aircraft, whether the aircraft is on the ground or in flight. In aircraft, the Sierra Wireless modem **MUST BE POWERED OFF**. When operating, the Sierra Wireless modem can transmit signals that could interfere with various onboard systems.

Note: Some airlines may permit the use of cellular phones while the aircraft is on the ground and the door is open. Sierra Wireless modems may be used at this time.

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Document History

Version	Date	Updates
1.0	February 14, 2014	Creation
2.0	May 15, 2014	Updated for sampling modules shipped in dry bag
	August 13, 2014	Updated Table 1 Baking Conditions of AirPrime Modules
3.0	January 02, 2015	Clarified shielded and molded HL series modules; added Arena reference number
4.0	January 11, 2016	Updated the module list in Table 1 Baking Conditions of AirPrime Modules
5.0	June 07, 2017	Updated the module list in Table 1 Baking Conditions of AirPrime Modules



1. Introduction

This document presents guidelines for the handling of solderable AirPrime products as they are moisture/reflow sensitive surface mount devices.

>> 2. Specificity of Device Samples

As AirPrime solderable modules are MSL3, the components should be delivered in dry-pack. But for small sampling quantities requested for prototype use, Sierra Wireless may not be able to supply the components in dry-pack packaging.

Therefore, when receiving the components, the customer should consider that the components have exceeded their floor life.

To not damage the AirPrime modules when soldering it in the customer board, the modules need to be baked prior to any reflow.

Modules should be in a tray and baked as per Table 1 Baking Conditions of AirPrime Modules before any module reflow on the customer's PCB.

As the MSL level is only assumed during the sampling stage, units have to be placed inside a dry cabinet (<10%RH) once baked.

Some sampling modules may also be delivered in dry bag. In the same way, units delivered in dry bag have to be placed inside a dry cabinet (<10%RH) once the vacuum bag is opened.

Table 1. Baking Conditions of AirPrime Modules

AirPrime Modules	Baking Conditions
Shielded modules (AR series, SL series, some HL variants such as the HL6528x, WP series)	24 hours minimum at 85°C
Molded modules (WS6318, some HL8 variants such as the HL8548x)	48 hours minimum at 125°C

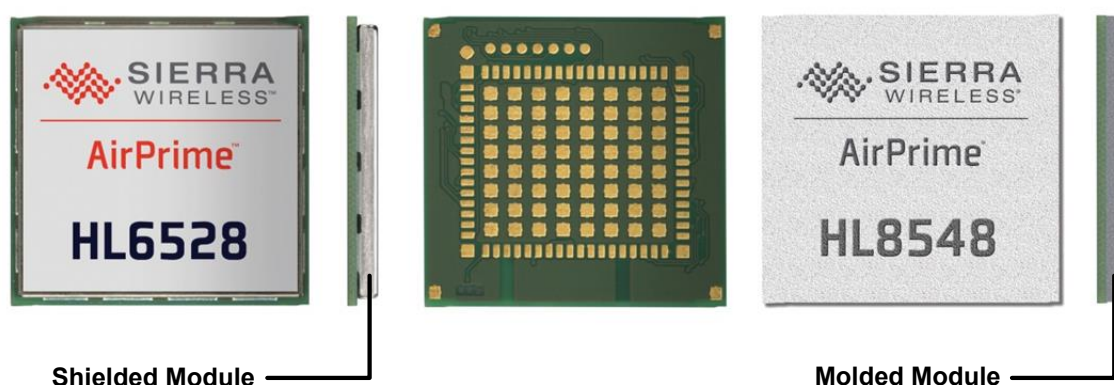


Figure 1. Different Assembly Technologies on AirPrime HL Series Modules

It is recommended to follow the standard MSL procedure, as described in the following norm:

- IPC/JEDEC J-STD-033A - Handling, Packing, Shipping and Use of Moisture / Reflow Sensitive Surface Mount Devices.



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