

## High Temperature Operation (125°C)

This data sheet addendum is to be used in conjunction with the existing AT25SF161 datasheet specifications. The Adesto AT25SF161 16Mbit Serial Flash devices will operate @ 125°C with the following datasheet caveats. All other parameters will meet the existing datasheet specifications.

The ordering code suffix (CAN# Code) 'HR' or 'HT' must be used to ensure correct operation at this extended temperature range. Adesto will not modify and republish the current datasheet to reflect the CAN# 'HR' ordering code or the above caveats. The standard [AT25SF161 datasheet](http://www.adestotech.com) is available at <http://www.adestotech.com>.

## 1. Electrical and Performance Specifications

### 1.1 DC and AC Operating Range

		AT25SF161-xxxHR
Operating Temperature		-40°C to +125°C

### 1.2 DC Characteristics

Symbol	Parameter	Condition	2.5V to 3.6V			Units
			Min	Typ	Max	
$I_{DPD}$	Deep Power-Down Current	$\overline{CS}, \overline{HOLD}, \overline{WP} = V_{IH}$			10 <sup>(1)</sup>	μA
$I_{SB}$	Standby Current	$\overline{CS}, \overline{HOLD}, \overline{WP} = V_{IH}$			35 <sup>(2)</sup>	μA

1. Industrial temperature limit is 5μA.
2. Industrial temperature limit is 25μA.

## 1.3 Program and Erase Characteristics

Symbol	Parameter	2.5V to 3.6V			
		Min	Typ	Max	Units
$t_{PP}^{(1)}$	Page Program Time (256 Bytes)		1.5	4	ms
$t_{CHPE}^{(1)(2)}$	Chip Erase Time		12	25	sec

1. Maximum values indicate worst-case performance after 10,000 erase/program cycles.
2. Not 100% tested (value guaranteed by design and characterization).

## 1.4 Endurance

	AT25SF161-xxxHR
Endurance (Maximum)	10,000 cycles

## 1.5 Data Retention

	AT25SF161-xxxHR/
Retention <sup>(1)</sup>	

1. Represents typical value based on equivalent operation derived from Arrhenius calculations under post cycling high temperature conditions; not indicative of performance at constant device operation life at 125°C.

## 2. Ordering Code

### 2.1 Ordering Code Detail

Ordering Code <sup>(1)</sup>	Package	Operating Voltage	Max. Freq. (MHz)	Operation Range
AT25SF161-SHDHR-T	8S2	2.5V to 3.6V	85MHz	Extended (-40°C to +125°C)
AT25SF161-SHDHR-B				
AT25SF161-SSHDHR-T	8S1			
AT25SF161-SSHDHR-B				

1. The shipping carrier option code is not marked on the devices.

Package Type	
<b>8S1</b>	8-lead, 0.150" Wide, Plastic Gull Wing Small Outline Package (JEDEC SOIC)
<b>8S2</b>	8-lead, 0.208" Wide, Plastic Gull Wing Small Outline Package (EIAJ SOIC)

# 1. Revision History

Revision Level – Release Date	History
A – November 2015	Initial release.
B – February 2016	Removed AT25SF161-DWF-HT product option. Updated Endurance and Data Retention specifications.



## Corporate Office

California | USA  
Adesto Headquarters  
1250 Borregas Avenue  
Sunnyvale, CA 94089  
Phone: (+1) 408.400.0578  
Email: [contact@adestotech.com](mailto:contact@adestotech.com)

© 2016 Adesto Technologies. All rights reserved. / Rev.: DS-25SF161-046B-2/2016

Disclaimer: Adesto Technologies Corporation makes no warranty for the use of its products, other than those expressly contained in the Company's standard warranty which is detailed in Adesto's Terms and Conditions located on the Company's web site. The Company assumes no responsibility for any errors which may appear in this document, reserves the right to change devices or specifications detailed herein at any time without notice, and does not make any commitment to update the information contained herein. No licenses to patents or other intellectual property of Adesto are granted by the Company in connection with the sale of Adesto products, expressly or by implication. Adesto's products are not authorized for use as critical components in life support devices or systems.