



**PRODUCT BULLETIN**  
Generic Copy

**19-Feb-2007**

**SUBJECT: ON Semiconductor Product Bulletin #15730**

**TITLE: Creation of Family Specification for NBSG111BA**

**EFFECTIVE DATE: 19-Feb-2007**

**AFFECTED PRODUCT DIVISION(S): Analog High Frequency Products**

**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**

Contact your local ON Semiconductor Sales Office or GREGG HOOKER <[FFMGNR@onsemi.com](mailto:FFMGNR@onsemi.com)>

**NOTIFICATION TYPE:**

ON Semiconductor considers this change approved unless specific conditions of acceptance are provided in writing. To do so, contact your local ON Semiconductor sales office.

**DESCRIPTION AND PURPOSE:**

This Product Bulletin makes corrections to the existing Datasheet to align it with Family Specification Limits for Voh and Vbb.

1.) In DC Characteristics Tables

**Current Datasheet Limits for IEE**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
I <sub>ee</sub> (mA)	70	85	100	70	85	100	70	85	100

**Revised Datasheet Limits for IEE**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
I <sub>ee</sub> (mA)	70	85	<b>110</b>	70	85	<b>110</b>	70	85	<b>110</b>

2.) In DC Characteristics Table 6 for RSPECL Vcc = 2.5V; Vee = 0V

**Current Datasheet Limits for Voh**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
V <sub>oh</sub> (mV)	1490	1540	1590	1510	1560	1610	1520	1570	1620

**Revised Datasheet Limits for Voh**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
V <sub>oh</sub> (mV)	<b>1365</b>	<b>1520</b>	<b>1615</b>	<b>1410</b>	<b>1530</b>	<b>1660</b>	<b>1435</b>	<b>1560</b>	<b>1685</b>

3.) In DC Characteristics Table 7 for RSPECL Vcc = 3.3V; Vee = 0V

**Current Datasheet Limits for Voh**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
V <sub>oh</sub> (mV)	2290	2340	2390	2310	2360	2410	2320	2370	2420



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**Revised Datasheet Limits for Voh**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
Voh (mV)	<b>2165</b>	<b>2320</b>	<b>2415</b>	<b>2210</b>	<b>2330</b>	<b>2460</b>	<b>2235</b>	<b>2360</b>	<b>2485</b>

4.) In DC Characteristics Table 8 for RSNECL Vcc = 0V; Vee = -3.465 to -2.375V

**Current Datasheet Limits for Voh**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
Voh (mV)	-1010	-960	-910	-990	-940	-890	-980	-930	-880

**Revised Datasheet Limits for Voh**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
Voh (mV)	<b>-1135</b>	<b>-980</b>	<b>-885</b>	<b>-1090</b>	<b>-970</b>	<b>-840</b>	<b>-1065</b>	<b>-940</b>	<b>-815</b>

5.) In DC Characteristics Table 6 for RSPECL Vcc = 2.5V; Vee = 0V

**Current Datasheet Limits for Vbb**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
Vbb (mV)	1080	1140	1200	1080	1140	1200	1080	1140	1200

**Revised Datasheet Limits for Vbb**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
Vbb (mV)	<b>1025</b>	<b>1100</b>	<b>1265</b>	<b>1025</b>	<b>1100</b>	<b>1265</b>	<b>1025</b>	<b>1100</b>	<b>1265</b>

6.) In DC Characteristics Table 7 for RSPECL Vcc = 3.3V; Vee = 0V

**Current Datasheet Limits for Vbb**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
Vbb (mV)	1880	1940	2000	1880	1940	2000	1880	1940	2000

**Revised Datasheet Limits for Vbb**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
Vbb (mV)	<b>1825</b>	<b>1900</b>	<b>2065</b>	<b>1825</b>	<b>1900</b>	<b>2065</b>	<b>1825</b>	<b>1900</b>	<b>2065</b>

7.) In DC Characteristics Table 8 for RSNECL Vcc = 0V; Vee = -3.465 to -2.375V

**Current Datasheet Limits for Vbb**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
Vbb (mV)	-1420	-1360	-1300	-1420	-1360	-1300	-1420	-1360	-1300

**Revised Datasheet Limits for Vbb**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
Vbb (mV)	<b>-1475</b>	<b>-1400</b>	<b>-1235</b>	<b>-1475</b>	<b>-1400</b>	<b>-1235</b>	<b>-1475</b>	<b>-1400</b>	<b>-1235</b>



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8.) In DC Characteristics Table 6 for RSPECL Vcc = 2.5V; Vee = 0V

**Current Datasheet Limits for Vmm**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
Vmm (mV)	1100	1250	1400	1100	1250	1400	1100	1250	1400

**Revised Datasheet Limits for Vmm**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
Vmm (mV)	<b>1050</b>	1250	<b>1450</b>	<b>1050</b>	1250	<b>1450</b>	<b>1050</b>	1250	<b>1450</b>

9.) In DC Characteristics Table 7 for RSPECL Vcc = 3.3V; Vee = 0V

**Current Datasheet Limits for Vmm**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
Vmm (mV)	1500	1650	1800	1500	1650	1800	1500	1650	1800

**Revised Datasheet Limits for Vmm**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
Vmm (mV)	<b>1450</b>	1650	<b>1850</b>	<b>1450</b>	1650	<b>1850</b>	<b>1450</b>	1650	<b>1850</b>

10.) In DC Characteristics Table 8 for RSNECL Vcc = 0V; Vee = -3.465 to -2.375V

**Current Datasheet Limits for Vmm**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
Vmm (mV)	Vmmt-150	Vmmt	Vmmt-150	Vmmt-150	Vmmt	Vmmt-150	Vmmt-150	Vmmt	Vmmt-150

**Revised Datasheet Limits for Vmm at -2.5V Vee**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
Vmm (mV)	<b>-1450</b>	-1250	<b>-1850</b>	<b>-1450</b>	-1250	<b>-1850</b>	<b>-1450</b>	-1250	<b>-1850</b>

**Revised Datasheet Limits for Vmm at -3.3V Vee**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
Vmm (mV)	<b>-1850</b>	-1650	<b>-1450</b>	<b>-1850</b>	-1650	<b>-1450</b>	<b>-1850</b>	-1650	<b>-1450</b>

11.) In DC Characteristics Table for RSPECL and RSNECL Tables across voltage and temperature.

**Current Datasheet Limits for Voutpp**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
Voutpp (mV)	300	370	450	300	370	450	300	370	450

**Revised Datasheet Limits for Voutpp**

Symbol	-40 deg C			25 deg C			70 deg C		
	min	typ	max	min	typ	max	min	typ	max
Voutpp (mV)	<b>305</b>	370	450	<b>305</b>	370	450	<b>305</b>	370	450

**AFFECTED DEVICE LIST:**

- NBSG111BA
- NBSG111BAR2