



Title of Change:	Minigates Fab process, Assembly Material Change, and Datasheets Update (SOT953)																																																																									
Proposed first ship date:	24 January 2019 or earlier upon customer approval																																																																									
Contact information:	Contact your local ON Semiconductor Sales Office or <logic.fpcn@onsemi.com>																																																																									
Samples:	Contact your local ON Semiconductor Sales Office or <PCN.samples@onsemi.com> Sample requests are to be submitted no later than 30 days from the date of first notification, Initial PCN or Final PCN, for this change.																																																																									
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or < Don.Knudsen@onsemi.com >.																																																																									
Type of notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 90 days prior to implementation of the change. ON Semiconductor will consider this change accepted, unless an inquiry is made in writing within 30 days of delivery of this notice. To do so, contact <PCN.Support@onsemi.com>																																																																									
Change Part Identification:	The CS code on the label will show JP instead of US.																																																																									
Change Category:	☒ Wafer Fab Change ☒ Assembly Change ☒ Test Change ☐ Other _____																																																																									
Change Sub-Category(s):	☐ Manufacturing Site Addition ☒ Material Change ☒ Datasheet/Product Doc change ☒ Manufacturing Site Transfer ☐ Product specific change ☒ Shipping/Packaging/Marking ☒ Manufacturing Process Change ☐ Other: _____																																																																									
Sites Affected:	ON Semiconductor Sites: ON Leshan, China	External Foundry/Subcon Sites: External Foundry Japan External Foundry Israel																																																																								
Description and Purpose:																																																																										
Qualify new die source for Minigates to increase capacity and material standardization.																																																																										
Material to be changed	Before Change	After Change																																																																								
Wire	Au	Cu																																																																								
Die Source	Subcon Israel	Subcon Japan																																																																								
This also includes datasheet adjustment of the max operating voltage, alignment to JEDEC specs and clarification of OVT parameters per below datasheet example.																																																																										
Existing datasheet MAXIMUM RATINGS <table border="1"> <thead> <tr> <th>Symbol</th> <th>Characteristics</th> <th>Value</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td>V_{CC}</td> <td>DC Supply Voltage</td> <td>-0.5 to +7.0</td> <td>V</td> </tr> <tr> <td>V_I</td> <td>DC Input Voltage</td> <td>-0.5 ≤ V_I ≤ +7.0</td> <td>V</td> </tr> <tr> <td rowspan="4">V_O</td> <td>DC Output Voltage (SOT-953 Package) (Note 1)</td> <td>-0.5 to V_{CC} + 0.5</td> <td>V</td> </tr> <tr> <td>DC Output Voltage (SOT-353 / SOT-553 Packages)</td> <td>-0.5 to V_{CC} + 0.5</td> <td>V</td> </tr> <tr> <td>Active Mode, LOW State (Note 1)</td> <td>-0.5 to +7.0</td> <td>V</td> </tr> <tr> <td>Tri-State Mode (V_{CC} = 0 V)</td> <td>-0.5 to +7.0</td> <td>V</td> </tr> <tr> <td>ESD</td> <td>ESD Classification</td> <td>Human Body Model (Note 3) Machine Model (Note 4) Charged Device Model (Note 5)</td> <td>2000 200 N/A</td> <td>V V V</td> </tr> </tbody> </table> New <table border="1"> <thead> <tr> <th>Symbol</th> <th>Characteristics</th> <th>Value</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td>V_{CC}</td> <td>DC Supply Voltage</td> <td>SC-74A, SC-88A, UDFN6, SOT-553, SOT-563</td> <td>-0.5 to +7.0 -0.5 to +6.5</td> <td>V</td> </tr> <tr> <td>V_I</td> <td>DC Input Voltage</td> <td>SC-74A, SC-88A, UDFN6, SOT-553, SOT-563</td> <td>-0.5 to +7.0 -0.5 to +6.5</td> <td>V</td> </tr> <tr> <td rowspan="4">V_O</td> <td>DC Output Voltage (SOT-953 Package) (Note 1)</td> <td>Active Mode (High or Low State) Tri-State Mode (Note 1) Power-Down Mode (V_{CC} = 0 V)</td> <td>-0.5 to V_{CC} + 0.5 -0.5 to +7.0 -0.5 to +7.0</td> <td>V</td> </tr> <tr> <td>DC Output Voltage (SOT-353 / SOT-553 Packages)</td> <td>Active Mode (High or Low State) Tri-State Mode (Note 1) Power-Down Mode (V_{CC} = 0 V)</td> <td>-0.5 to V_{CC} + 0.5 -0.5 to +7.0 -0.5 to +7.0</td> <td>V</td> </tr> <tr> <td>DC Output Voltage (SC-74A, SC-88A, UDFN6, SOT-553, SOT-563)</td> <td>Active Mode (High or Low State) Tri-State Mode (Note 1) Power-Down Mode (V_{CC} = 0 V)</td> <td>-0.5 to V_{CC} + 0.5 -0.5 to +6.5 -0.5 to +6.5</td> <td>V</td> </tr> <tr> <td>DC Output Voltage (SOT-953 Package) (Note 1)</td> <td>Active Mode (High or Low State) Tri-State Mode (Note 1) Power-Down Mode (V_{CC} = 0 V)</td> <td>-0.5 to V_{CC} + 0.5 -0.5 to +7.0 -0.5 to +7.0</td> <td>V</td> </tr> <tr> <td>V_{ESD}</td> <td>ESD Withstand Voltage (Note 3)</td> <td>Human Body Model Charged Device Model</td> <td>2000 1000</td> <td>V V</td> </tr> <tr> <td>I_{latchup}</td> <td>Latchup Performance (Note 4)</td> <td></td> <td>±100</td> <td>mA</td> </tr> </tbody> </table>				Symbol	Characteristics	Value	Unit	V _{CC}	DC Supply Voltage	-0.5 to +7.0	V	V _I	DC Input Voltage	-0.5 ≤ V _I ≤ +7.0	V	V _O	DC Output Voltage (SOT-953 Package) (Note 1)	-0.5 to V _{CC} + 0.5	V	DC Output Voltage (SOT-353 / SOT-553 Packages)	-0.5 to V _{CC} + 0.5	V	Active Mode, LOW State (Note 1)	-0.5 to +7.0	V	Tri-State Mode (V _{CC} = 0 V)	-0.5 to +7.0	V	ESD	ESD Classification	Human Body Model (Note 3) Machine Model (Note 4) Charged Device Model (Note 5)	2000 200 N/A	V V V	Symbol	Characteristics	Value	Unit	V _{CC}	DC Supply Voltage	SC-74A, SC-88A, UDFN6, SOT-553, SOT-563	-0.5 to +7.0 -0.5 to +6.5	V	V _I	DC Input Voltage	SC-74A, SC-88A, UDFN6, SOT-553, SOT-563	-0.5 to +7.0 -0.5 to +6.5	V	V _O	DC Output Voltage (SOT-953 Package) (Note 1)	Active Mode (High or Low State) Tri-State Mode (Note 1) Power-Down Mode (V _{CC} = 0 V)	-0.5 to V _{CC} + 0.5 -0.5 to +7.0 -0.5 to +7.0	V	DC Output Voltage (SOT-353 / SOT-553 Packages)	Active Mode (High or Low State) Tri-State Mode (Note 1) Power-Down Mode (V _{CC} = 0 V)	-0.5 to V _{CC} + 0.5 -0.5 to +7.0 -0.5 to +7.0	V	DC Output Voltage (SC-74A, SC-88A, UDFN6, SOT-553, SOT-563)	Active Mode (High or Low State) Tri-State Mode (Note 1) Power-Down Mode (V _{CC} = 0 V)	-0.5 to V _{CC} + 0.5 -0.5 to +6.5 -0.5 to +6.5	V	DC Output Voltage (SOT-953 Package) (Note 1)	Active Mode (High or Low State) Tri-State Mode (Note 1) Power-Down Mode (V _{CC} = 0 V)	-0.5 to V _{CC} + 0.5 -0.5 to +7.0 -0.5 to +7.0	V	V _{ESD}	ESD Withstand Voltage (Note 3)	Human Body Model Charged Device Model	2000 1000	V V	I _{latchup}	Latchup Performance (Note 4)		±100	mA
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Existing datasheet

DC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	V _{CC} (V)	T _A = 25°C			-55°C ≤ T _A ≤ 125°C		Unit
				Min	Typ	Max	Min	Max	
V _{IH}	High-Level Input Voltage		1.65 to 1.95 2.3 to 5.5	0.75 V _{CC} 0.7 V _{CC}			0.75 V _{CC} 0.7 V _{CC}		V
V _{IL}	Low-Level Input Voltage		1.65 to 1.95 2.3 to 5.5			0.25 V _{CC} 0.3 V _{CC}		0.25 V _{CC} 0.3 V _{CC}	V
I _{LKO}	Z-State Output Leakage Current	V _N = V _{IH} V _{OUT} = V _{CC} or GND	2.3 to 5.5			±5.0		±10.0	μA
V _{OL}	Low-Level Output Voltage V _N = V _{IL}	I _{OL} = 100 μA	1.65 to 5.5		0.0	0.1		0.1	V
		I _{OL} = 4 mA	1.65		0.08	0.24		0.24	
		I _{OL} = 8 mA	2.3		0.20	0.3		0.3	
		I _{OL} = 12 mA	2.7		0.22	0.4		0.4	
		I _{OL} = 16 mA	3.0		0.28	0.4		0.4	
		I _{OL} = 24 mA	3.0		0.38	0.55		0.55	
		I _{OL} = 32 mA	4.5		0.42	0.55		0.55	
I _{IN}	Input Leakage Current	V _N = 5.5 V or GND	0 to 5.5			±0.1		±1.0	μA
I _{OFF}	Power Off Leakage Current (SOT-353/SOT-553 Packages)	V _N = 5.5 V or V _{OUT} = 5.5 V	0			1		10	μA
I _{CC}	Quiescent Supply Current	V _N = 5.5 V or GND	5.5			1		10	μA
I _{CCT}	Quiescent Supply Current	V _N = 3.0 V	3.6			10		100	μA

New

DC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	V _{CC} (V)	T _A = 25°C			-55°C ≤ T _A ≤ 125°C		Units
				Min	Typ	Max	Min	Max	
V _{IH}	High-Level Input Voltage		1.65 to 1.95 2.3 to 5.5	0.65 V _{CC} 0.70 V _{CC}			0.65 V _{CC} 0.70 V _{CC}		V
V _{IL}	Low-Level Input Voltage		1.65 to 1.95 2.3 to 5.5			0.35 V _{CC} 0.30 V _{CC}		0.35 V _{CC} 0.30 V _{CC}	V
V _{OH}	High-Level Output Voltage	V _N = V _{IH} or V _{IL} I _{O1} = -100 μA I _{O1} = -4 mA I _{O1} = -8 mA I _{O1} = -12 mA I _{O1} = -16 mA I _{O1} = -24 mA I _{O1} = -32 mA	1.65 to 5.5 1.65 2.3 2.7 3.0 3.0 4.5	V _{CC} - 1 1.29 1.9 2.2 2.4 2.5 3.8	V _{CC}		V _{CC} - 1 1.29 1.9 2.2 2.4 2.5 3.8		V
V _{OL}	Low-Level Output Voltage	V _N = V _{IH} or V _{IL} I _{O1} = 100 μA I _{O1} = 4 mA I _{O1} = 8 mA I _{O1} = 12 mA I _{O1} = 16 mA I _{O1} = 24 mA I _{O1} = 32 mA	1.65 to 5.5 1.65 2.3 2.7 3.0 3.0 4.5		0.08 0.2 0.22 0.28 0.38 0.55 0.92		0.1 0.24 0.3 0.4 0.4 0.55 0.95		V
I _{IN}	Input Leakage Current	V _N = 5.5 V or GND	0 to 5.5			±0.1		±1.0	μA
I _{OZ}	3-State Output Leakage Current	V _{OUT} = 0 V to 5.5 V	1.65 to 5.5			±0.5		±5.0	μA
I _{OFF}	Power Off Leakage Current	V _N = 5.5 V or Current	0			1.0		10	μA
I _{CC}	Quiescent Supply Current	V _N = V _{CC} or GND	5.5			1.0		10	μA

Existing datasheet

DC ELECTRICAL CHARACTERISTICS

DC ELECTRICAL CHARACTERISTICS									
Symbol	Parameter	Condition	V _{CC} (V)	T _A = 25°C			-55°C ≤ T _A ≤ 125°C		Units
				Min	Typ	Max	Min	Max	
V _{I+}	Positive Input Threshold Voltage		1.65	0.6	1.0	1.4	0.6	1.4	V
			2.3	1.0	1.5	1.8	1.0	1.8	
			2.7	1.2	1.7	2.0	1.2	2.0	
			3.0	1.3	1.9	2.2	1.3	2.2	
			4.5	1.9	2.7	3.1	1.9	3.1	
			5.5	2.2	3.3	3.6	2.2	3.6	
V _{I-}	Negative Input Threshold Voltage		1.65	0.2	0.5	0.8	0.2	0.8	V
			2.3	0.4	0.75	1.15	0.4	1.15	
			2.7	0.5	0.87	1.4	0.5	1.4	
			3.0	0.6	1.0	1.5	0.6	1.5	
			4.5	1.0	1.5	2.0	1.0	2.0	
			5.5	1.2	1.9	2.3	1.2	2.3	

New

DC ELECTRICAL CHARACTERISTICS

DC ELECTRICAL CHARACTERISTICS									
Symbol	Parameter	Condition	V _{CC} (V)	T _A = 25°C			-55°C ≤ T _A ≤ 125°C		Units
				Min	Typ	Max	Min	Max	
V _{I+}	Positive Input Threshold Voltage		1.65	1.0	1.4		1.4		V
			2.3	1.5	1.8		1.8		
			2.7	1.7	2.0		2.0		
			3.0	1.9	2.2		2.2		
			4.5	2.7	3.1		3.1		
			5.5	3.3	3.6		3.6		
V _{I-}	Negative Input Threshold Voltage		1.65	0.2	0.5		0.2		V
			2.3	0.4	0.75		0.4		
			2.7	0.5	0.87		0.5		
			3.0	0.6	1.0		0.6		
			4.5	1.0	1.5		1.0		
			5.5	1.2	1.9		1.2		

Existing datasheet

AC ELECTRICAL CHARACTERISTICS (t_R = t_F = 3.0 ns)

TABLE 1. PROPAGATION DELAYS (t _{PLH} = t _{PHL} = t _{PL})										
Symbol	Parameter	Condition	V _{CC} (V)	T _A = 25°C			-55°C ≤ T _A ≤ 125°C			Units
				Min	Typ	Max	Min	Max		
t _{PLH} t _{PHL}	Propagation Delay A to YN (Figures 4 and 5, Table 1)	R _L = 1 MΩ C _L = 15 pF	1.8 ± 0.15	2.0	9.0	10	2.0	10.5	ns	
		R _L = 1 MΩ C _L = 15 pF	2.5 ± 0.2	1.0	7.5	1.0	8.0			
		R _L = 1 MΩ C _L = 15 pF	3.3 ± 0.3	0.8	5.2	0.8	5.5			
		R _L = 500 Ω C _L = 50 pF	5.0 ± 0.5	1.2	5.7	1.2	6.0			
		R _L = 1 MΩ C _L = 15 pF	5.0 ± 0.5	0.5	4.5	0.5	4.8			
		R _L = 500 Ω C _L = 50 pF	5.0 ± 0.5	0.8	5.0	0.8	5.3			
t _{2ZH} t _{2ZL}	Output Enable Time (Figures 6, 7 and 8, Table 1)	R _L = 250 Ω C _L = 50 pF	1.8 ± 0.15	2.0	7.8	9.5	2.0	10	ns	
			2.5 ± 0.2	1.8	8.5	1.8	9.0			
			3.3 ± 0.3	1.2	6.2	1.2	6.5			
			5.0 ± 0.5	0.8	5.5	0.8	5.8			
			1.8 ± 0.15	2.0	8.0	10	2.0	10.5		
t _{1HZ} t _{1LZ}	Output Disable Time (Figures 6, 7 and 8, Table 1)	R _L and R _I = 500 Ω C _L = 50 pF	1.8 ± 0.15	2.0	8.0	10	2.0	10.5	ns	
			2.5 ± 0.2	1.5	8.0	1.5	8.5			
			3.3 ± 0.3	0.8	5.7	0.8	6.0			
			5.0 ± 0.5	0.3	4.7	0.3	5.0			
			1.8 ± 0.15	2.0	8.0	10	2.0	10.5		

New

AC ELECTRICAL CHARACTERISTICS (t_R = t_F = 3.0 ns)

Symbol		Parameter	Condition	V _{CC} (V)	T _A = 25°C			-55°C ≤ T _A ≤ 125°C		Units
					Min	Typ	Max	Min	Max	
t _{PLH} t _{PHL}	Propagation Delay, A to Y (Figures 3 and 4)	R _L = 1 MΩ, C _L = 15 pF	1.65 to 1.95		9.0	10		10.5	ns	
		R _L = 1 MΩ, C _L = 15 pF	2.3 to 2.7			7.5		8.0		
		R _L = 1 MΩ, C _L = 15 pF	3.0 to 3.6			5.2		5.5		
		R _L = 500 Ω, C _L = 50 pF				5.7		6.0		
		R _L = 1 MΩ, C _L = 15 pF	4.5 to 5.5			4.5		4.8		
		R _L = 500 Ω, C _L = 50 pF				5.0		5.3		
t _{2ZH} t _{2ZL}	Output Enable Time, OE to Y (Figures 3 and 4)		1.65 to 1.95			9.5		10	ns	
			2.3 to 2.7			8.5		9.0		
			3.0 to 3.6			6.2		6.5		
			4.5 to 5.5			5.5		5.8		
t _{1HZ} t _{1LZ}	Output Disable Time, OE to Y (Figures 3 and 4)		1.65 to 1.95			10		10.5	ns	
			2.3 to 2.7			8.0		8.5		
			3.0 to 3.6			5.7		6.0		
			4.5 to 5.5			4.7		5.0		

**Reliability Data Summary:**

QV DEVICE NAME: NL17SZ14P5T5G

RMS S40916

PACKAGE SOT953

Test	Specification	Condition	Interval	Results
HTOL	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs	0/240
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/255
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/239
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/301
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/240
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/786
RSH	JESD22- B106	Ta = 265C, 10 sec		0/90
SD	JTSD002	Ta = 245C, 10 sec		0/45

Electrical Characteristic Summary:

Electrical characteristics Available upon request.

List of Affected Parts:

Part Number	Qualification Vehicle
NL17SZ00P5T5G	NL17SZ14P5T5G
NL17SZ02P5T5G	NL17SZ14P5T5G
NL17SZ04P5T5G	NL17SZ14P5T5G
NL17SZ05P5T5G	NL17SZ14P5T5G
NL17SZ07P5T5G	NL17SZ14P5T5G
NL17SZ08P5T5G	NL17SZ14P5T5G
NL17SZ14P5T5G	NL17SZ14P5T5G
NL17SZ17P5T5G	NL17SZ14P5T5G
NL17SZ32P5T5G	NL17SZ14P5T5G
NL17SZ34P5T5G	NL17SZ14P5T5G
NL17SZ86P5T5G	NL17SZ14P5T5G
NL17SZ125P5T5G	NL17SZ14P5T5G
NL17SZ126P5T5G	NL17SZ14P5T5G
NL17SZU04P5T5G	NL17SZ14P5T5G

Japanese translation of the notification starts here.
通知の日本語訳はここから始まります。

Note: *The Japanese version is for reference only. In case of any differences between the English and Japanese version, the English version shall control.*

注：日本語版は参照用です。英語版と日本語版の違いがある場合は、英語版が優先されます。



変更件名:	Minigates の Fab、組立て材料、およびデータシートの変更 (SOT553)		
初回出荷予定日:	24 January 2019 または、顧客の承認が得られた場合はそれ以前		
連絡先情報:	現地のオン・セミコンダクター営業所または <logic.fpcn@onsemi.com>にお問い合わせください。		
サンプル:	現地のオン・セミコンダクター営業所または <PCN.samples@onsemi.com> お問い合わせください。 サンプルは今回の変更の初回通知、初回 PCN、または最終 PCN の日付から 30 日以内に要求してください。		
その他の信頼性データ:	現地のオン・セミコンダクター営業所または <Don.Knudsen@onsemi.com> お問い合わせください。		
通知種別:	これは、お客様宛の最終製品 / プロセス変更通知 (FPCN) です。FPCN は、変更実施の 90 日前に発行されます。 オン・セミコンダクターは、この通知の送付から 30 日以内に書面による問い合わせがない限り、この変更が承諾されたものとみなします。お問い合わせは、<PCN.Support@onsemi.com> をお願いします。		
変更部品の識別:	ラベルの CS コードには、US の代わりに JP が表示されます。		
変更カテゴリ:	☒ ウェハファブの変更 ☒ アセンブリの変更 ☒ 試験の変更 ☐ その他		
変更サブカテゴリ:	☐ 製造拠点の追加 ☒ 製造拠点の移転 ☒ 製造プロセスの変更 ☒ 材料の変更 ☐ 製品仕様の変更 ☒ データシート/製品資料の変更 ☒ 出荷/パッケージング/表記 ☐ その他		
影響を受ける拠点:	オン・セミコンダクター拠点: オン セレンバン (マレーシア) オン 楽山 (中国)	外部製造工場 / 下請け業者拠点: 外部製造工場 (日本) 外部製造工場 (イスラエル)	
説明および目的:			
Minigates の生産能力の拡大のために新たなダイソースを認定するとともに、材料の標準化を行います。			
材料の変更	変更前	変更後	
ワイヤ-	Au	Cu	
ダイソース	外部製造工場 (イスラエル)	外部製造工場 (日本)	
本通知は以下の例のように、データシートの動作電圧の変更、JEDEC 仕様とのすり合せ、OVT パラメータの明確化を含みます。			
Existing datasheet MAXIMUM RATINGS		New	
Symbol	Characteristics	Value	Unit
V_{CC}	DC Supply Voltage	-0.5 to +7.0	V
V_I	DC Input Voltage	-0.5 to $V_I \leq +7.0$	V
V_O	DC Output Voltage (SOT-253 Package) (Note 1)	-0.5 to $V_{CC} + 0.5$	V
	DC Output Voltage (SOT-353 / SOT-553 Packages) Active Mode, LOW State (Note 1)	-0.5 to $V_{CC} + 0.5$	V
	Tri-State Mode	-0.5 to +7.0	V
	Power-Down Mode ($V_{CC} = 0$ V)	-0.5 to +7.0	V
ESD	ESD Classification	Human Body Model (Note 3) Machine Model (Note 4) Charged Device Model (Note 5)	2000 200 N/A
			V V V
V_{CC}	DC Supply Voltage	TSOP-5, SC-88A (NLV) SC-74A, SC-88A, UDRN6, SOT-553, SOT-563	-0.5 to +7.0 -0.5 to +6.5
V_I	DC Input Voltage	TSOP-5, SC-88A (NLV) SC-74A, SC-88A, UDRN6, SOT-553, SOT-563	-0.5 to +7.0 -0.5 to +6.5
V_{OUT}	DC Output Voltage (TSOP-5, SC-88A (NLV))	Active-Mode (High or Low State) Tri-State Mode (Note 1) Power-Down Mode ($V_{CC} = 0$ V)	-0.5 to $V_{CC} + 0.5$ -0.5 to +7.0 -0.5 to +7.0
	DC Output Voltage (SC-74A, SC-88A, UDRN6, SOT-553, SOT-563)	Active-Mode (High or Low State) Tri-State Mode (Note 1) Power-Down Mode ($V_{CC} = 0$ V)	-0.5 to $V_{CC} + 0.5$ -0.5 to +6.5 -0.5 to +6.5
V_{ESD}	ESD Withstand Voltage (Note 3)	Human Body Model Charged Device Model	2000 1000
$I_{LATCHUP}$	Latchup Performance (Note 4)		±100 mA



Existing datasheet

DC ELECTRICAL CHARACTERISTICS

				T _A = 25°C			-55°C ≤ T _A ≤ 125°C		
Symbol	Parameter	Condition	V _{CC} (V)	Min	Typ	Max	Min	Max	Unit
V _{IH}	High-Level Input Voltage		1.65 to 1.95 2.3 to 5.5	0.75 V _{CC} 0.7 V _{CC}			0.75 V _{CC} 0.7 V _{CC}		V
V _{IL}	Low-Level Input Voltage		1.65 to 1.95 2.3 to 5.5			0.25 V _{CC} 0.3 V _{CC}		0.25 V _{CC} 0.3 V _{CC}	V
I _{LKO}	Z-State Output Leakage Current	V _{IN} = V _{IH} V _{OUT} = V _{CC} or GND	2.3 to 5.5			±5.0		±10.0	µA
V _{OL}	Low-Level Output Voltage V _N = V _{IL}	I _{OL} = 100 µA	1.65 to 5.5		0.0	0.1		0.1	V
		I _{OL} = 4 mA	1.65		0.08	0.24		0.24	
		I _{OL} = 8 mA	2.3		0.20	0.3		0.3	
		I _{OL} = 12 mA	2.7		0.22	0.4		0.4	
		I _{OL} = 16 mA	3.0		0.28	0.4		0.4	
		I _{OL} = 24 mA	3.0		0.38	0.55		0.55	
	I _{OL} = 32 mA	4.5		0.42	0.55		0.55		
I _{IN}	Input Leakage Current	V _{IN} = 5.5 V or GND	0 to 5.5			±0.1		±1.0	µA
I _{OFF}	Power Off Leakage Current (SOT-353/ SOT-553 Packages)	V _{IN} = 5.5 V or V _{OUT} = 5.5 V	0			1		10	µA
I _{CC}	Quiescent Supply Current	V _{IN} = 5.5 V or GND	5.5			1		10	µA
I _{CCT}	Quiescent Supply Current	V _{IN} = 3.0 V	3.6			10		100	µA

New

DC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	V _{CC} (V)	T _A = 25°C			-55°C ≤ T _A ≤ 125°C			Units
				Min	Typ	Max	Min	Max		
V _{IH}	High-Level Input Voltage		1.65 to 1.95 2.3 to 5.5	0.65 V _{CC} 0.70 V _{CC}			0.65 V _{CC} 0.70 V _{CC}		V	
V _{IL}	Low-Level Input Voltage		1.65 to 1.95 2.3 to 5.5			0.35 V _{CC} 0.30 V _{CC}		0.35 V _{CC} 0.30 V _{CC}	V	
V _{OH}	High-Level Output Voltage V _N = V _{IH} or V _L I _{OH} = -100 µA I _{OH} = -4 mA I _{OH} = -8 mA I _{OH} = -12 mA I _{OH} = -16 mA I _{OH} = -24 mA I _{OH} = -32 mA		1.65 to 5.5	V _{CC} - 1 1.65	V _{CC} - 1 1.29	V _{CC} - 1 1.4		V _{CC} - 1 1.29	V	
				1.65	1.29	1.4		1.29		
				2.3	1.9	2.1		1.9		
				2.7	2.2	2.4		2.2		
				3.0	2.4	2.5		2.4		
				3.0	2.3	2.5		2.3		
				3.0	2.3	2.5		2.3		
				3.0	2.3	2.5		2.3		
V _{OL}	Low-Level Output Voltage V _N = V _{IH} or V _L I _{OL} = 100 µA I _{OL} = 4 mA I _{OL} = 8 mA I _{OL} = 12 mA I _{OL} = 16 mA I _{OL} = 24 mA I _{OL} = 32 mA		1.65 to 5.5				0.1 0.24		0.1 0.24	V
				1.65			0.08 0.24		0.3 0.4	
				2.3			0.2 0.22		0.4 0.4	
				2.7			0.3 0.28		0.4 0.4	
				3.0			0.38 0.38		0.55 0.55	
				3.0			0.42 0.42		0.55 0.55	
				3.0			0.42 0.42		0.55 0.55	
				3.0			0.42 0.42		0.55 0.55	
I _{IN}	Input Leakage Current	V _{IN} = 5.5 V or GND	1.65 to 5.5			±0.1		±1.0	µA	
I _{COZ}	3-State Output Leakage Current	V _{OUT} = 0 V to 5.5 V	1.65 to 5.5			±0.5		±5.0	µA	
I _{OFF}	Power Off Leakage Current	V _{IN} = 5.5 V or V _{OUT} = 5.5 V	0			1.0		10	µA	
I _{CC}	Quiescent Supply Current	V _{IN} = V _{CC} or GND	5.5			1.0		10	µA	

Existing datasheet

DC ELECTRICAL CHARACTERISTICS

TABLE 1: Absolute Maximum Ratings										
Symbol	Parameter	Condition	V _{CC} (V)	T _A = 25°C			-55°C ≤ T _A ≤ 125°C			Units
				Min	Typ	Max	Min	Max		
V _{I+}	Positive Input Threshold Voltage		1.65	0.6	1.0	1.4	0.6	1.4	V	
			2.3	1.0	1.5	1.8	1.0	1.8		
			2.7	1.2	1.7	2.0	1.2	2.0		
			3.0	1.3	1.9	2.2	1.3	2.2		
			4.5	1.9	2.7	3.1	1.9	3.1		
			5.5	2.2	3.3	3.6	2.2	3.6		
V _{I-}	Negative Input Threshold Voltage		1.65	0.2	0.5	0.8	0.2	0.8	V	
			2.3	0.4	0.75	1.15	0.4	1.15		
			2.7	0.5	0.87	1.4	0.5	1.4		
			3.0	0.6	1.0	1.5	0.6	1.5		
			4.5	1.0	1.5	2.0	1.0	2.0		
			5.5	1.2	1.9	2.3	1.2	2.3		

New

DC ELECTRICAL CHARACTERISTICS

Absolute Maximum Ratings									
Symbol	Parameter	Condition	V _{CC} (V)	T _A = 25°C			-55°C ≤ T _A ≤ 125°C		Units
				Min	Typ	Max	Min	Max	
V _{I+}	Positive Input Threshold Voltage		1.65	1.0	1.4		1.4		V
			2.3	1.5	1.8		1.8		
			2.7	1.7	2.0		2.0		
			3.0	1.9	2.2		2.2		
			4.5	2.7	3.1		3.1		
			5.5	3.3	3.6		3.6		
V _{I-}	Negative Input Threshold Voltage		1.65	0.2	0.5		0.2		V
			2.3	0.4	0.75		0.4		
			2.7	0.5	0.87		0.5		
			3.0	0.6	1.0		0.6		
			4.5	1.0	1.5		1.0		
			5.5	1.2	1.9		1.2		

Existing datasheet

AC ELECTRICAL CHARACTERISTICS (t_{RI} = t_R = 3.0 ns)

Symbol	Parameter	Condition	V _{CC} (V)	T _A = 25°C			-55°C ≤ T _A ≤ 125°C			Units
				Min	Typ	Max	Min	Max		
t _{PLH} t _{PHL}	Propagation Delay A to YN (Figures 4 and 5, Table 1)	R _L = 1 MΩ C _L = 15 pF	1.8 ± 0.15	2.0	9.0	10	2.0	10.5	ns	
		R _L = 1 MΩ C _L = 15 pF	2.5 ± 0.2	1.0		7.5	1.0	8.0		
		R _L = 1 MΩ C _L = 15 pF	3.3 ± 0.3	0.8		5.2	0.8	5.5		
		R _L = 500 Ω C _L = 50 pF		1.2		5.7	1.2	6.0		
		R _L = 1 MΩ C _L = 15 pF	5.0 ± 0.5	0.5		4.5	0.5	4.8		
		R _L = 500 Ω C _L = 50 pF		0.8		5.0	0.8	5.3		
t _{2H} t _{2L}	Output Enable Time (Figures 6, 7 and 8, Table 1)	R _L = 250 Ω C _L = 50 pF	1.8 ± 0.15	2.0	7.8	9.5	2.0	10	ns	
			2.5 ± 0.2	1.8		8.5	1.8	9.0		
			3.3 ± 0.3	1.2		6.2	1.2	6.5		
			5.0 ± 0.5	0.8		5.5	0.8	5.8		
t _{1H2} t _{1L2}	Output Disable Time (Figures 6, 7 and 8, Table 1)	R _L and R ₁ = 500 Ω C _L = 50 pF	1.8 ± 0.15	2.0	8.0	10	2.0	10.5	ns	
			2.5 ± 0.2	1.5		8.0	1.5	8.5		
			3.3 ± 0.3	0.8		5.7	0.8	6.0		
			5.0 ± 0.5	0.3		4.7	0.3	5.0		

New

AC ELECTRICAL CHARACTERISTICS (t_{RI} = t_R = 3.0 ns)

Symbol	Parameter	Condition	V _{CC} (V)	T _A = 25°C			-55°C ≤ T _A ≤ 125°C			Units
				Min	Typ	Max	Min	Max		
t _{PLH} t _{PHL}	Propagation Delay, A to Y (Figures 3 and 4)	R _L = 1 MΩ, C _L = 15 pF	1.65 to 1.95		9.0	10		10.5	ns	
		R _L = 1 MΩ, C _L = 15 pF	2.3 to 2.7			7.5		8.0		
		R _L = 1 MΩ, C _L = 15 pF	3.0 to 3.6			5.2		5.5		
		R _L = 500 Ω, C _L = 50 pF				5.7		6.0		
		R _L = 1 MΩ, C _L = 15 pF	4.5 to 5.5			4.5		4.8		
		R _L = 500 Ω, C _L = 50 pF				5.0		5.3		
t _{2H} t _{2L}	Output Enable Time, OE to Y (Figures 3 and 4)		1.65 to 1.95			9.5		10	ns	
			2.3 to 2.7			8.5		9.0		
			3.0 to 3.6			6.2		6.5		
			4.5 to 5.5			5.5		5.8		
t _{1H2} t _{1L2}	Output Disable Time, OE to Y (Figures 3 and 4)		1.65 to 1.95			10		10.5	ns	
			2.3 to 2.7			8.0		8.5		
			3.0 to 3.6			5.7		6.0		
			4.5 to 5.5			4.7		5.0		



信頼性データの要約:

QV 素子名: NL17SZ14P5T5G

RMS S40916

PACKAGE SOT953

テスト	仕様	条件	間隔	結果
HTOL	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs	0/240
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/255
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/239
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/301
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/240
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/786
RSH	JESD22- B106	Ta = 265C, 10 sec		0/90
SD	JTSD002	Ta = 245C, 10 sec		0/45

電気特性の要約:

電気特性は要求に基づき提出します。

影響を受ける部品の一覧:

部品番号	品質試験用ピークル
NL17SZ00P5T5G	NL17SZ14P5T5G
NL17SZ02P5T5G	NL17SZ14P5T5G
NL17SZ04P5T5G	NL17SZ14P5T5G
NL17SZ05P5T5G	NL17SZ14P5T5G
NL17SZ07P5T5G	NL17SZ14P5T5G
NL17SZ08P5T5G	NL17SZ14P5T5G
NL17SZ14P5T5G	NL17SZ14P5T5G
NL17SZ17P5T5G	NL17SZ14P5T5G
NL17SZ32P5T5G	NL17SZ14P5T5G
NL17SZ34P5T5G	NL17SZ14P5T5G
NL17SZ86P5T5G	NL17SZ14P5T5G
NL17SZ125P5T5G	NL17SZ14P5T5G
NL17SZ126P5T5G	NL17SZ14P5T5G
NL17SZU04P5T5G	NL17SZ14P5T5G