ON Semiconductor®

Final Product/Process Change Notification

Document # : FPCN22087X
Issue Date: 20 September 2018

Title of Change:	Minigates Fab, Assembly Material, and Datasheet Change (SOT553)
Proposed first ship date:	27 December 2018 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:	Location code on the marking will be different.
Change Category:	☑ Wafer Fab Change ☑ Assembly Change ☑ Test Change ☐ Other _____

Change Sub-Category(s):

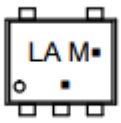
☑ Manufacturing Site Addition
☑ Manufacturing Site Transfer
☑ Manufacturing Process Change
☑ Material Change
☐ Product specific change
☑ Datasheet/Product Doc change
☑ Shipping/Packaging/Marking
☐ Other: _____

Sites Affected:	ON Semiconductor Sites: ON Seremban, Malaysia 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
Assy Site	ON Seremban, Malaysia	ON Leshan, China

	From	To
Product marking change	 LA =Device Code, M = Date Code (orientation at 0 degree), Dot(.)=Lead Free Package	 LA =Device Code, M = Date Code (orientation at 90 degree), Dot(.)=Lead Free Package

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

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)	Active Mode, LOW State (Note 1) Tri−State Mode 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 Diode Current			mA

ESD	ESD Classification	Human Body Model (Note 3) Machine Model (Note 4) Charged Device Model (Note 5)	2000 200 N/A	V V

New

V_{CC}	DC Supply Voltage	TSOP−5, SC−88A (NLV) SC−74A, SC−88A, UDFN6, SOT−553, SOT−953	−0.5 to +7.0 −0.5 to +6.5	V
V_{IN}	DC Input Voltage	TSOP−5, SC−88A (NLV) SC−74A, SC−88A, UDFN6, SOT−553, SOT−953	−0.5 to +7.0 −0.5 to +6.5	V
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	V
	DC Output Voltage SC−74A, SC−88A, UDFN6, SOT−553, SOT−953	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

V_{ESD}	ESD Withstand Voltage (Note 3)	Human Body Model Charged Device Model	2000 1000	V
$I_{Latchup}$	Latchup Performance (Note 4)		±100	mA

Existing datasheet

DC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C Min	T_A = 25°C Typ	T_A = 25°C Max	−55°C ≤ T_A ≤ 125°C Min	−55°C ≤ T_A ≤ 125°C 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_{LKG}	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_{IN} = 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 Min	T_A = 25°C Typ	T_A = 25°C Max	−55°C ≤ T_A ≤ 125°C Min	−55°C ≤ T_A ≤ 125°C Max	Units
V_{IH}	High−Level Input Voltage		1.65 to 1.95	0.65 V_{CC}			0.65 V_{CC}		V
			2.3 to 5.5	0.70 V_{CC}			0.70 V_{CC}		
V_{IL}	Low−Level Input Voltage		1.65 to 1.95			0.35 V_{CC}		0.35 V_{CC}	V
			2.3 to 5.5			0.30 V_{CC}		0.30 V_{CC}	
V_{OH}	High−Level Output Voltage	V_{IN} = V_{IH} or V_{IL} 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 1.65 2.3 2.7 3.0 3.0 4.5	V_{CC} − 1 1.29 1.9 2.2 2.4 2.3 3.8	V_{CC} 1.4 2.1 2.4 2.7 2.5 4.0		V_{CC} − 1 1.29 1.9 2.2 2.4 2.3 3.8		V
V_{OL}	Low−Level Output Voltage	V_{IN} = V_{IH} or V_{IL} 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 1.65 2.3 2.7 3.0 3.0 4.5		0.08 0.2 0.22 0.28 0.38 0.42	0.1 0.24 0.3 0.4 0.4 0.55 0.55		0.1 0.24 0.3 0.4 0.4 0.55 0.55	V
I_{IN}	Input Leakage Current	V_{IN} = 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_{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

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C Min	T_A = 25°C Typ	T_A = 25°C Max	−55°C ≤ T_A ≤ 125°C Min	−55°C ≤ T_A ≤ 125°C Max	Units
V_{T+}	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_{T-}	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

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C Min	T_A = 25°C Typ	T_A = 25°C Max	−55°C ≤ T_A ≤ 125°C Min	−55°C ≤ T_A ≤ 125°C Max	Units
V_{T+}	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_{T-}	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)

Symbol	Parameter	Condition		V_{CC} (V)	T_A = 25°C Min	T_A = 25°C Typ	T_A = 25°C Max	−55°C ≤ T_A ≤ 125°C Min	−55°C ≤ T_A ≤ 125°C Max	Units
t_{PLH} t_{PHL}	Propagation Delay AN 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 R_L = 500 Ω	C_L = 15 pF C_L = 50 pF	3.3 ± 0.3	0.8 1.2		5.2 5.7	0.8 1.2	5.5 6.0	
		R_L = 1 MΩ R_L = 500 Ω	C_L = 15 pF C_L = 50 pF	5.0 ± 0.5	0.5 0.8		4.5 5.0	0.5 0.8	4.8 5.3	
t_{PZH} t_{PZL}	Output Enable Time (Figures 6, 7and 8, Table 1)	R_L = 250 Ω	C_L = 50 pF	1.8 ± 0.15	2.0	7.6	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_{PHZ} t_{PLZ}	Output Disable Time (Figures 6, 7and 8, Table 1)	R_L and R_T = 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_R = t_F = 3.0 ns)

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C Min	T_A = 25°C Typ	T_A = 25°C Max	−55°C ≤ T_A ≤ 125°C Min	−55°C ≤ T_A ≤ 125°C Max	Units
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_{PZH} t_{PZL}	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_{PHZ} t_{PLZ}	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
NL17SZ14XV5T2G

RMS S40806
PACKAGE SOT553

Test	Specification	Condition	Interval	Results
HTOL	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs	0/252
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/252
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/252
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/323
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/252
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/827
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
NL17SZ02XV5T2G	NL17SZ14XV5T2G
NL17SZ04XV5T2G	NL17SZ14XV5T2G
NL17SZ06XV5T2G	NL17SZ14XV5T2G
NL17SZ07XV5T2G	NL17SZ14XV5T2G
NL17SZ08XV5T2G	NL17SZ14XV5T2G
NL17SZ14XV5T2G	NL17SZ14XV5T2G
NL17SZ16XV5T2G	NL17SZ14XV5T2G
NL17SZ17XV5T2G	NL17SZ14XV5T2G
NL17SZ32XV5T2G	NL17SZ14XV5T2G
NL17SZ125XV5T2G	NL17SZ14XV5T2G
NL17SZ126XV5T2G	NL17SZ14XV5T2G
NL17SZU04XV5T2G	NL17SZ14XV5T2G

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.

ON Semiconductor®

最終製品 / プロセス変更通知

文書番号: FPCN22087X
発行日 : 20 September 2018

変更件名:	Minigates の Fab、組立て拠点、材料、およびデータシートの変更（SOT553）
初回出荷予定日:	27 December 2018 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> に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>に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> にお願いします。
変更部品の識別:	捺印上のロケーションコードが異なります。
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:

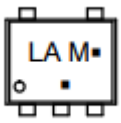
- ☑ 製造拠点の追加
- ☑ 製造拠点の移転
- ☑ 製造プロセスの変更
- ☑ 材料の変更
- ☐ 製品仕様の変更
- ☑ データシート/製品資料の変更
- ☑ 出荷/パッケージング/表記
- ☐ その他

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）
組立て拠点	オン セレンバン（マレーシア）	オン 楽山（中国）

	変更前	変更後
製品捺印変更	 LA =デバイス コード、M = 日付コード (0 度方向)、 ドット(.)=鉛フリー パッケージ	 LA =デバイス コード、M = 日付コード (90 度方向)、 ドット(.)=鉛フリー パッケージ

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

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)	Active Mode, LOW State (Note 1) Tri−State Mode 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

New

V_{CC}	DC Supply Voltage	TSOP−5, SC−88A (NLV) SC−74A, SC−88A, UDFN6, SOT−563, SOT−953	−0.5 to +7.0 −0.5 to +6.5	V
V_{IN}	DC Input Voltage	TSOP−5, SC−88A (NLV) SC−74A, SC−88A, UDFN6, SOT−563, SOT−953	−0.5 to +7.0 −0.5 to +6.5	V
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	V
	DC Output Voltage SC−74A, SC−88A, UDFN6, SOT−563, SOT−953	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 Classification	Human Body Model (Note 3) Machine Model (Note 4) Charged Device Model (Note 5)	2000 200 N/A	V V

V_{ESD}	ESD Withstand Voltage (Note 3)	Human Body Model Charged Device Model	2000 1000	V
$I_{Latchup}$	Latchup Performance (Note 4)		±100	mA

Existing datasheet

DC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C Min	Typ	Max	−55°C ≤ T_A ≤ 125°C 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_{LKG}	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_{IN} = 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 Min	Typ	Max	−55°C ≤ T_A ≤ 125°C Min	Max	Units
V_{IH}	High−Level Input Voltage		1.65 to 1.95	0.65 V_{CC}			0.65 V_{CC}		V
			2.3 to 5.5	0.70 V_{CC}			0.70 V_{CC}		
V_{IL}	Low−Level Input Voltage		1.65 to 1.95			0.35 V_{CC}		0.35 V_{CC}	V
			2.3 to 5.5			0.30 V_{CC}		0.30 V_{CC}	
V_{OH}	High−Level Output Voltage	V_{IN} = V_{IH} or V_{IL} 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 1.65 2.3 2.7 3.0 3.0 4.5	V_{CC} − 1 1.29 1.9 2.2 2.4 2.3 3.8	V_{CC} 1.4 2.1 2.5 2.7 2.5 4.0		V_{CC} − 1 1.29 1.9 2.2 2.4 2.3 3.8		V
V_{OL}	Low−Level Output Voltage	V_{IN} = V_{IH} or V_{IL} 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 1.65 2.3 2.7 3.0 3.0 4.5		0.08 0.2 0.22 0.28 0.38 0.42	0.1 0.24 0.3 0.4 0.4 0.55 0.55		0.1 0.24 0.3 0.4 0.4 0.55 0.55	V
I_{IN}	Input Leakage Current	V_{IN} = 5.5 V or GND	1.65 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_{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

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C Min	Typ	Max	−55°C ≤ T_A ≤ 125°C Min	Max	Units
V_{T+}	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_T	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

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C Min	Typ	Max	−55°C ≤ T_A ≤ 125°C Min	Max	Units
V_{T+}	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_{T-}	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)

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C Min	Typ	Max	−55°C ≤ T_A ≤ 125°C Min	Max	Units
t_{PLH} t_{PHL}	Propagation Delay AN 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 R_L = 500 Ω C_L = 50 pF	3.3 ± 0.3	0.8 1.2		5.2 5.7	0.8 1.2	5.5 6.0	
		R_L = 1 MΩ C_L = 15 pF R_L = 500 Ω C_L = 50 pF	5.0 ± 0.5	0.5 0.8		4.5 5.0	0.5 0.8	4.8 5.3	
t_{PZH} t_{PZL}	Output Enable Time (Figures 6, 7and 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_{PHZ} t_{PLZ}	Output Disable Time (Figures 6, 7and 8, Table 1)	R_L and R_T = 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_R = t_F = 3.0 ns)

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C Min	Typ	Max	−55°C ≤ T_A ≤ 125°C Min	Max	Units
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_{PZH} t_{PZL}	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_{PHZ} t_{PLZ}	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
NL17SZ14XV5T2G

RMS S40806
PACKAGE SOT553

テスト	仕様	条件	間隔	結果
HTOL	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs	0/252
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/252
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/252
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/323
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/252
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/827
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
NL17SZ02XV5T2G	NL17SZ14XV5T2G
NL17SZ04XV5T2G	NL17SZ14XV5T2G
NL17SZ06XV5T2G	NL17SZ14XV5T2G
NL17SZ07XV5T2G	NL17SZ14XV5T2G
NL17SZ08XV5T2G	NL17SZ14XV5T2G
NL17SZ14XV5T2G	NL17SZ14XV5T2G
NL17SZ16XV5T2G	NL17SZ14XV5T2G
NL17SZ17XV5T2G	NL17SZ14XV5T2G
NL17SZ32XV5T2G	NL17SZ14XV5T2G
NL17SZ125XV5T2G	NL17SZ14XV5T2G
NL17SZ126XV5T2G	NL17SZ14XV5T2G
NL17SZU04XV5T2G	NL17SZ14XV5T2G

Appendix A: Changed Products

Product	Customer Part Number	Qualification Vehicle
NL17SZ02XV5T2G		NL17SZ14XV5T2G
NL17SZ04XV5T2G		NL17SZ14XV5T2G
NL17SZ06XV5T2G		NL17SZ14XV5T2G
NL17SZ07XV5T2G		NL17SZ14XV5T2G
NL17SZ08XV5T2G		NL17SZ14XV5T2G
NL17SZ125XV5T2G		NL17SZ14XV5T2G
NL17SZ126XV5T2G		NL17SZ14XV5T2G
NL17SZ14XV5T2G		NL17SZ14XV5T2G
NL17SZ16XV5T2G		NL17SZ14XV5T2G
NL17SZ17XV5T2G		NL17SZ14XV5T2G
NL17SZ32XV5T2G		NL17SZ14XV5T2G
NL17SZU04XV5T2G		NL17SZ14XV5T2G