Final Product/Process Change Notification

Document #: FPCN22964X
Issue Date: 01 Sep 2021

Title of Change:	MiniGates Fab, Assembly Material and Test Change (SC88) with datasheet update.
Proposed First Ship date:	08 Dec 2021 or earlier if approved by customer
Contact Information:	Contact your local onsemi Sales Office or logic.fpcn@onsemi.com
PCN Samples Contact:	Contact your local onsemi 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. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.
Additional Reliability Data:	Contact your local onsemi Office or ChangKit.Mok@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
Marking of Parts/ Traceability of Change:	For NC7 parts, the marking style will be different. The CS code on the reel label will be changed from US to JP.
Change Category:	Test Change, Assembly Change, Wafer Fab Change
Change Sub-Category(s):	Manufacturing Site Transfer, Shipping/Packaging/Marking, Datasheet/Product Doc change, Material Change, Manufacturing Process Change

Sites Affected:

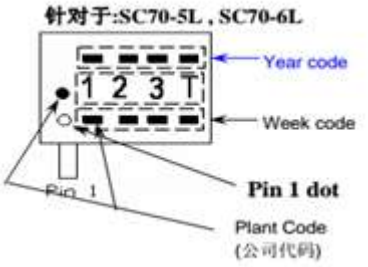
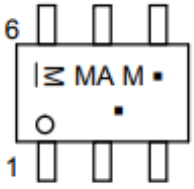
onsemi Sites	External Foundry/Subcon Sites
Leshan Phoenix Semiconductor, China	HANA Microelectronics, China
onsemi Cebu, Philippines	Tower Semiconductor, Israel
onsemi Maine, United States	Towerjazz Semiconductor, Japan (Toyama)

Description and Purpose:

FPCN22964X is issued to qualify new die source in Japan for TinyLogic® to increase the front end and back end capacity and standardizing materials.

For NC7 family:

Material to be changed	Before Change (Existing flow)		After Change (New flow)
Assy Site	Subcon China	onsemi Philippines	onsemi Leshan
Wire	Au	Au	Cu
Lead frame	LF SC88 6L 70X86 PPF	LF SC 88 6L C194 STAMPED	SC88 Lead frame with Vgroove
Mold Compound	MC SUMITOMO G600 HF	MC GREEN PA CK5000A 13MMX3.9G	Henkel GR640 HV-L1
Die Attach	DA EPOXY ABLESTICK 2200D	DA EPXY HE ABLESTIK 84-1LMISR4 5CC	Eutectic
Plating	Preplated	100% Sn	100% Sn
Die Source	On South Portland	On South Portland	Foundry Japan

	From		To
	Subcon China	onsemi Philippines	New Flow
Product marking change	 *Above marking is for subcon China, For onsemi Philippines there will be no plant code identifier*		 MA = Device Marking M = Date Code* ▪ = Pb−Free Package (Note: Microdot may be in either location) *Date Code orientation and/or position may vary depending upon manufacturing location.

Datasheet Update:

Datasheet Changes:

Provided here are comparison between the new and old datasheets regarding changing specifications and/or specification conditions.

- Areas of change are circled red.
- Items from the old datasheet that will be changed are highlighted red.
- The corresponding value on the new datasheet is highlighted in green.
- Please note that these changes are examples of changes to be made as a family specification. Changes to limits affecting individual part numbers will be noted as such.

There will be other changes that represent a clean-up and standardization to the datasheet to represent a family oriented specification format. These changes will include forms of the following:

- Correction of clerical errors such as spelling.
- Formatting to create family standards.
- Addition of new package types and possible removal of packages no longer available.
- Standardization of the switching waveforms test circuit figures.
- Formatting of the Device ordering information to provide more information to the customer regarding marking and Pin 1 orientation in tape or reel.

NC7SP/WP – Absolute Maximum Ratings

Existing Datasheet

Absolute Maximum Ratings (Note 1)

Supply Voltage (V_{CC})	-0.5V to +4.6V
DC Input Voltage (V_{IN})	-0.5V to +4.6V
DC Output Voltage (V_{OUT})	
HIGH or LOW State (Note 2)	-0.5V to V_{CC} +0.5V
V_{CC} = 0V	-0.5V to 4.6V

New

Maximum Ratings

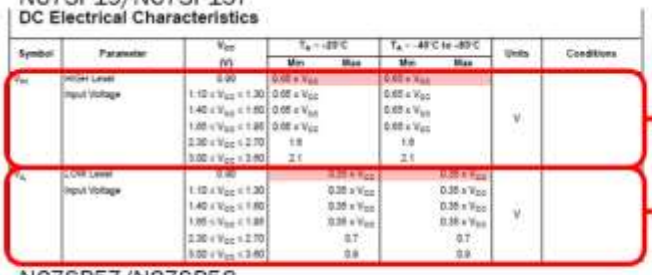
Symbol	Parameter		Value	Unit
V_{CC}	DC Supply Voltage		-0.5 to +4.3	V
V_{IN}	DC Input Voltage		-0.5 to +4.3	V
V_{OUT}	DC Output Voltage	Active-Mode (High or Low State)	-0.5 to V_{CC} + 0.5	V
		Tri-State Mode (Note 1)	-0.5 to +4.3	
		Power-Down Mode (V_{CC} = 0 V)	-0.5 to +4.3	

NC7SP/NC7WP – DC Input Characteristics

Existing Datasheet

NC7SP19/NC7SP157

DC Electrical Characteristics



New

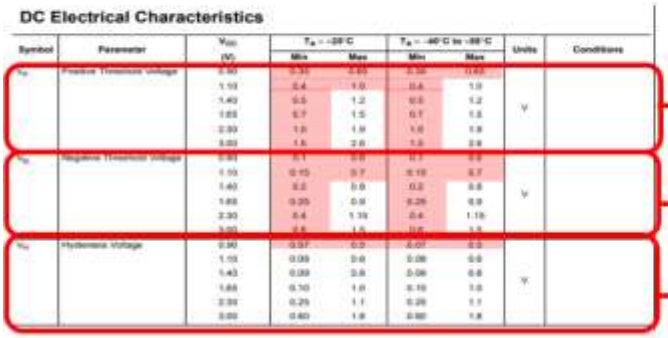
NC7SP57/NC7SP58

DC Electrical Characteristics

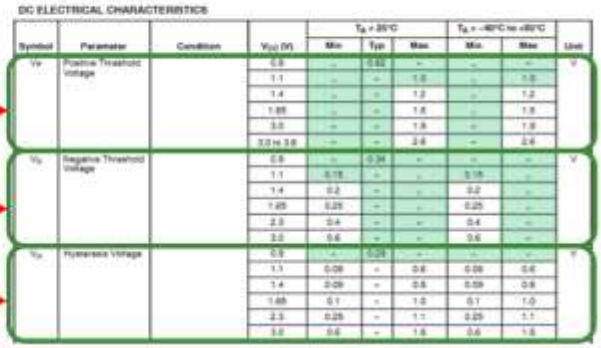
Existing Datasheet

NC7WP14

DC Electrical Characteristics

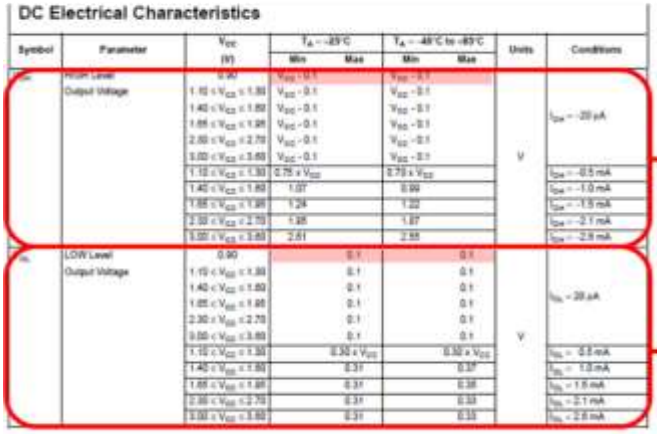


New



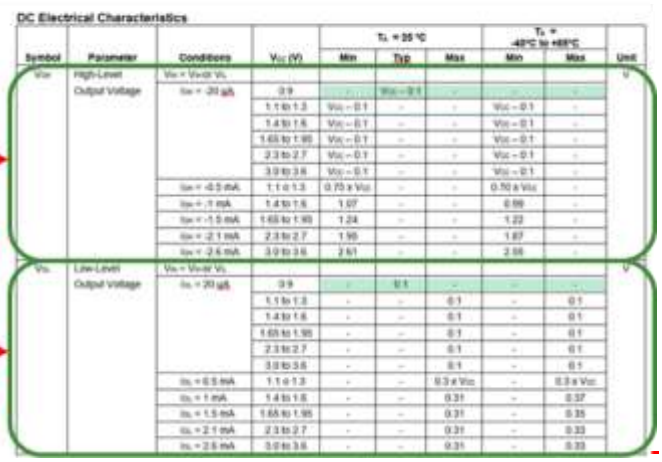
Existing Datasheet

DC Electrical Characteristics



New

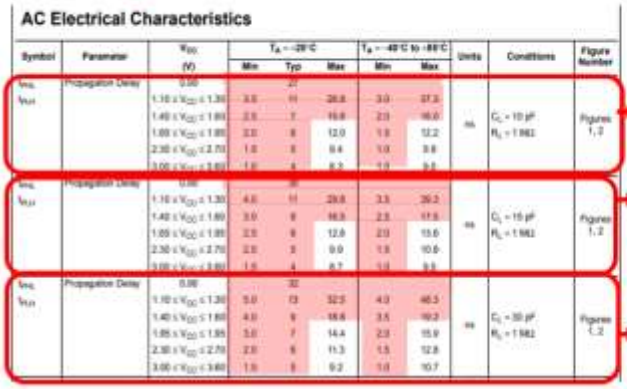
DC Electrical Characteristics



NC7WP14 – AC Characteristics

Existing Datasheet

AC Electrical Characteristics



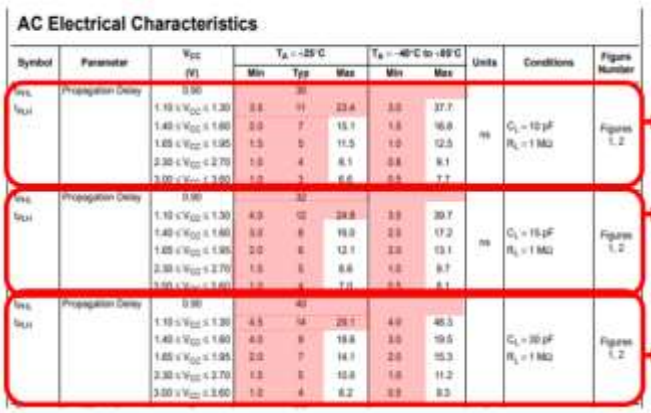
New

AC ELECTRICAL CHARACTERISTICS

NC7SP19 – AC Characteristics

Existing Datasheet

AC Electrical Characteristics



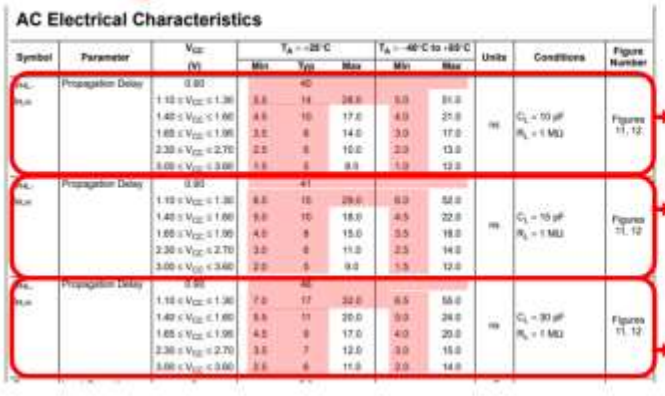
New

AC ELECTRICAL CHARACTERISTICS

NC7SP57/58– AC Characteristics

Existing Datasheet

AC Electrical Characteristics



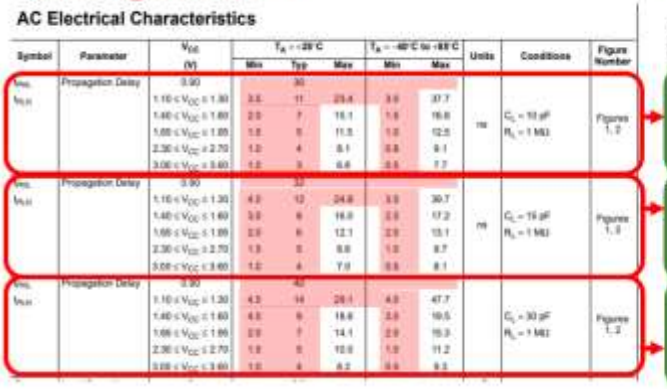
New

AC ELECTRICAL CHARACTERISTICS

NC7SP157– AC Characteristics

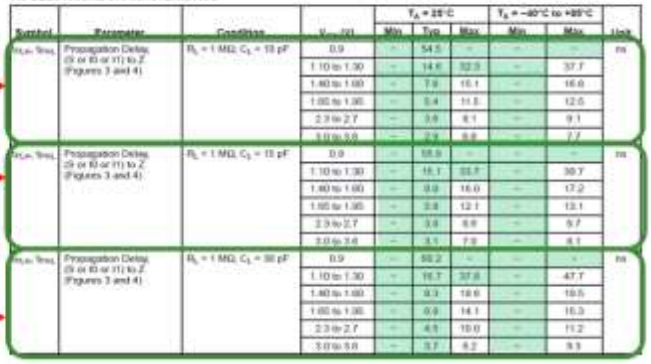
Existing Datasheet

AC Electrical Characteristics



New

AC ELECTRICAL CHARACTERISTICS



NC7SV/WV – Absolute Maximum Ratings

Existing Datasheet

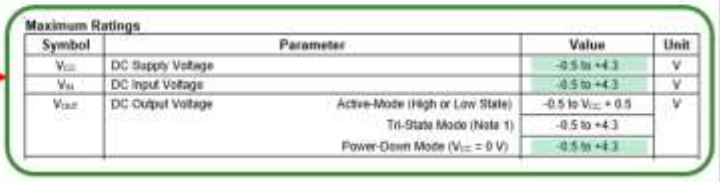
Absolute Maximum Ratings(Note 1)

Supply Voltage (V_{CC})	−0.5V to +4.6V
DC Input Voltage (V_{IN})	−0.5V to +4.6V
DC Output Voltage (V_{OUT})	
HIGH or LOW State (Note 2)	−0.5V to V_{CC} +0.5V
V_{CC} = 0V	−0.5V to 4.6V

New

Maximum Ratings

Symbol	Parameter		Value	Unit
V_{CC}	DC Supply Voltage		−0.5 to +4.3	V
V_{IN}	DC Input Voltage		−0.5 to +4.3	V
V_{OUT}	DC Output Voltage	Active-Mode (High or Low State)	−0.5 to V_{CC} + 0.5	V
		Tri-State Mode (Note 1)	−0.5 to +4.3	
		Power-Down Mode (V_{CC} = 0 V)	−0.5 to +4.3	



NC7SV/WV – Thermal Characteristics

Existing Datasheet

θ_{JA}	Thermal Resistance	SC70-6		425	°C/W
		MicroPak™-6		500	
		MicroPak2™-6		560	
P_D	Power Dissipation at +85°C	MicroPak™-6		130	mW
		SC70-6		150	
		MicroPak2™-6		120	

New

θ_{JA}	Thermal Resistance (Note 2)	SC-88 MicroPak	377 154	°C/W
P_D	Power Dissipation in Still Air	SC-88 MicroPak	332 812	mW

NC7SV/NC7WV– DC Input Characteristics

Existing Datasheet

NC7SV11/NC7SV19/NC7SV157/NC7WV04/NC7WV07/NC7WV16

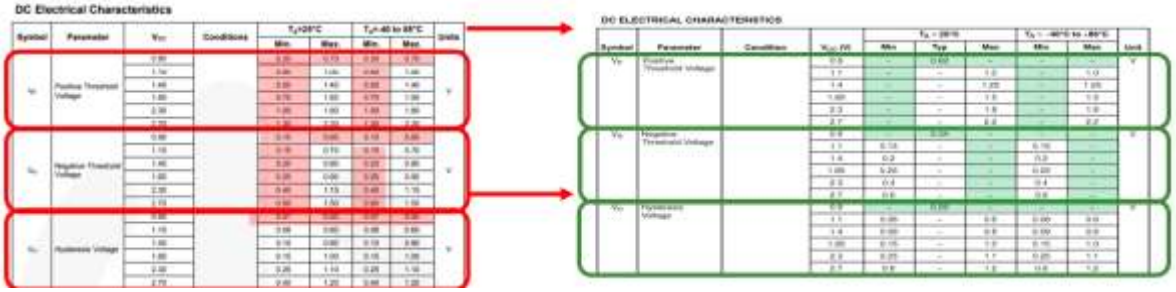
NC7WV17

New

Existing Datasheet

NC7SV57/NC7SV58/NC7WV14

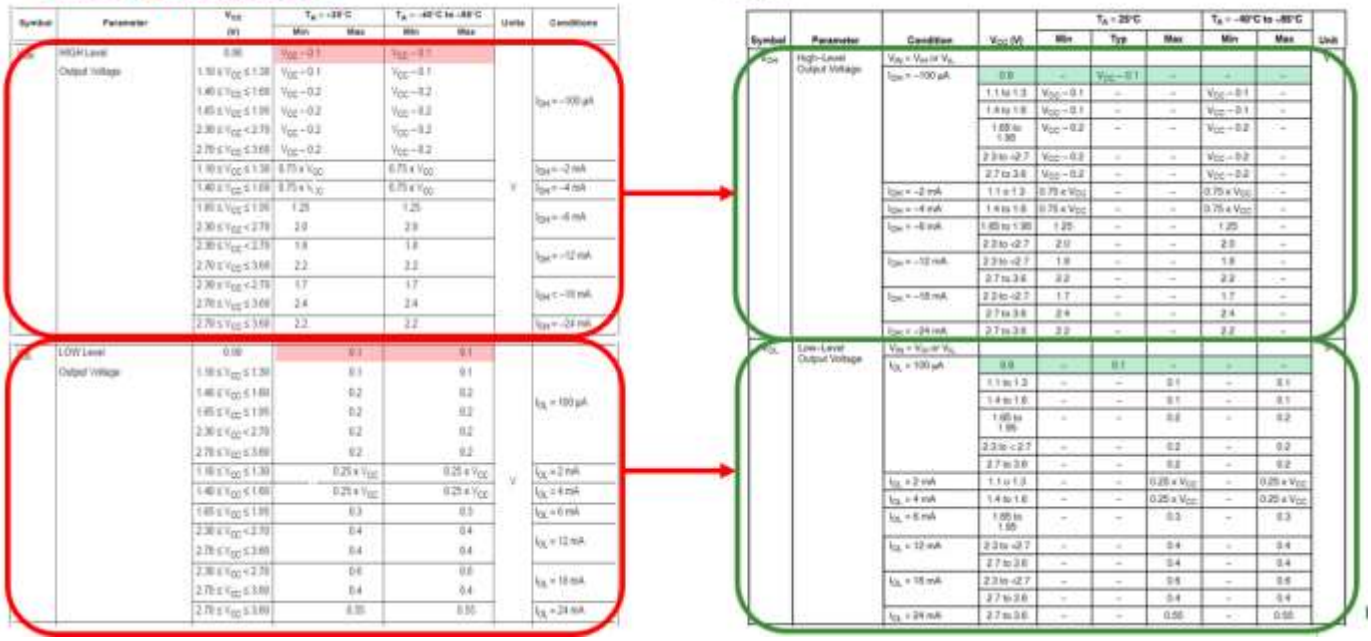
New



NC7SV/NC7WV except NC7WV07 – DC Output Characteristics

Existing Datasheet

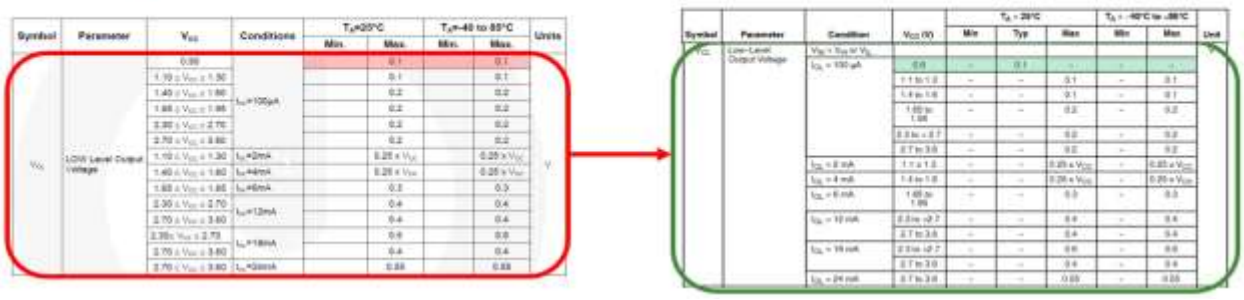
New



NC7WV07 – DC Output Characteristics

Existing Datasheet

New



NC7WV14–AC Characteristics

Existing Datasheet

Electrical Characteristics

Symbol	Parameter	V_{CC} (V)	Conditions	T_A = +25°C Min	Typ.	Max.	T_A = −40°C to +85°C Min	Max.	Units	Figure Number
t_{PLH}, t_{PHL}	Propagation Delay	0.80	C_L = 15pF, R_L = 1MΩ		12				ns	Figure 1 Figure 2
		1.10 ≤ V_{CC} ≤ 1.30	C_L = 15pF, R_L = 2kΩ	2.0	6.8	11.5	1.0	13.0		
		1.40 ≤ V_{CC} ≤ 1.60		1.0	5.2	8.3	0.8	7.0		
		1.65 ≤ V_{CC} ≤ 1.95	C_L = 30pF, R_L = 500Ω	1.0	4.0	5.2	0.7	6.2		
		2.30 ≤ V_{CC} ≤ 2.70		0.8	3.0	3.7	0.6	4.4		
		2.70 ≤ V_{CC} ≤ 3.60		0.7	2.5	3.3	0.5	3.8		

New

AC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C Min	Typ	Max	T_A = −40°C to +85°C Min	Max	Unit
t_{PLH}, t_{PHL}	Propagation Delay, A to Y (Figures 3 and 4)	R_L = 1 MΩ, C_L = 15 pF	0.8	–	18.1	–	–	–	ns
		R_L = 2 kΩ, C_L = 15 pF	1.1 to 1.3	–	8.0	12.2	–	16.6	
			1.4 to 1.6	–	5.8	8.3	–	7.0	
		R_L = 500 Ω, C_L = 30 pF	1.65 to 1.95	–	3.2	5.2	–	6.2	
			2.3 to 2.7	–	2.6	3.7	–	4.4	
			2.7 to 3.6	–	2.2	3.3	–	3.8	

NC7WV07–AC Characteristics

Existing Datasheet

AC Electrical Characteristics

Symbol	Parameter	V_{CC}	Conditions	T_A=25°C Min.	Typ.	Max.	T_A=-40 to 85°C Min.	Max.	Units	Figure
t_{PHL}, t_{PLH}	Propagation Delay	0.80	C_L=15pF, R_L=R_1=R_2=1MΩ		13				ns	Figure 4 Figure 5
		1.10 ≤ V_{CC} ≤ 1.30	C_L=15pF, R_L=R_1=R_2=2kΩ	2.0	6.0	15.0	1.0	18.6		
		1.40 ≤ V_{CC} ≤ 1.65		1.0	5.2	8.7	1.0	8.7		
		1.65 ≤ V_{CC} ≤ 1.95	C_L=30pF, R_L=R_1=R_2=500Ω	1.0	3.0	6.0	1.0	6.8		
		2.30 ≤ V_{CC} ≤ 2.70		0.7	1.2	3.6	0.8	4.7		
		2.70 ≤ V_{CC} ≤ 3.60		0.6	1.0	3.3	0.4	4.0		

New

AC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C Min	Typ	Max	T_A = −40°C to +85°C Min	Max	Unit
t_{PLH}, t_{PHL}	Propagation Delay, A to Y (Figures 3 and 4)	R_1 = R_L = 1 MΩ, C_L = 15 pF	0.8	–	17.8	–	–	–	ns
		R_1 = R_L = 2 kΩ, C_L = 15 pF	1.1 to 1.3	–	5.1	15.0	–	18.6	
			1.4 to 1.6	–	3.6	8.7	–	8.7	
		R_1 = R_L = 500 Ω, C_L = 30 pF	1.65 to 1.95	–	2.4	6.0	–	6.8	
			2.3 to 2.7	–	1.9	3.6	–	4.7	
			2.7 to 3.6	–	1.6	3.3	–	4.0	

NC7SV11– AC Characteristics

Existing Datasheet

AC Electrical Characteristics

Symbol	Parameter	V_{CC} (V)	T_A = -55°C Min	Typ	Max	T_A = -40°C to +85°C Min	Max	Units	Conditions	Figure Number
t_{PHL}	Propagation Delay	0.80		12				ns	C_L = 15 pF, R_L = 1 MΩ	Figure 1, 2
t_{PLH}		1.10 ≤ V_{CC} ≤ 1.30	2.0	6.8	17.0	1.0	19.2			
		1.40 ≤ V_{CC} ≤ 1.60	1.0	5.8	10.2	0.8	12.0		C_L = 15 pF, R_L = 2 kΩ	
		1.65 ≤ V_{CC} ≤ 1.95	1.0	3.0	7.8	0.7	9.2		C_L = 30 pF	
		2.30 ≤ V_{CC} ≤ 2.70	0.8	3.0	5.2	0.8	5.9		R_L = 500 kΩ	
		2.70 ≤ V_{CC} ≤ 3.60	0.7	2.8	4.5	0.6	4.8			

New

AC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C Min	Typ	Max	T_A = −40°C to +85°C Min	Max	Unit
t_{PLH}, t_{PHL}	Propagation Delay, (A or B or C) to Y (Figures 3 and 4)	R_L = 1 MΩ, C_L = 15 pF	0.8	–	14.4	–	–	–	ns
		R_L = 2 kΩ, C_L = 15 pF	1.1 to 1.3	–	5.0	17.0	–	19.2	
			1.4 to 1.6	–	3.0	10.2	–	12.0	
		R_L = 500 Ω, C_L = 30 pF	1.65 to 1.95	–	2.7	7.8	–	9.2	
			2.3 to 2.7	–	2.0	5.2	–	5.9	
			2.7 to 3.6	–	1.7	4.5	–	4.8	

NC7SV57/58–AC Characteristics

Existing Datasheet

AC Electrical Characteristics

Symbol	Parameter	V_{CC}	Conditions	T_A=25°C Min	Typ.	Max.	T_A=-40 to 85°C Typ.	Min.	Units	Figure
t_{PHL}, t_{PLH}	Propagation Delay	0.80	C_L=15pF, R_L=1MΩ		15.0				ns	Figure 15 Figure 16
		1.10 ≤ V_{CC} ≤ 1.30	C_L=15pF, R_L=2kΩ	4.0	8.8	18.8	3.3	31.0		
		1.40 ≤ V_{CC} ≤ 1.60		3.0	6.8	10.0	2.0	12.0		
		1.65 ≤ V_{CC} ≤ 1.95	C_L=30pF, R_L=500Ω	2.0	4.8	9.1	1.9	10.0		
		2.30 ≤ V_{CC} ≤ 2.70		1.5	3.1	6.2	1.4	6.7		
		2.70 ≤ V_{CC} ≤ 3.60		1.2	2.8	5.4	1.2	6.1		

New

AC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C Min	Typ	Max	T_A = −40°C to +85°C Min	Max	Unit
t_{PLH}, t_{PHL}	Propagation Delay, (D or I1 or I2) to Y (Figures 12 and 13)	R_L = 1 MΩ, C_L = 15 pF	0.8	–	22.2	–	–	–	ns
		R_L = 2 kΩ, C_L = 15 pF	1.10 to 1.30	–	7.1	16.5	–	31.0	
			1.40 to 1.60	–	4.4	10.0	–	12.0	
		R_L = 500 Ω, C_L = 30 pF	1.65 to 1.95	–	3.7	9.1	–	10.0	
			2.3 to 2.7	–	2.9	6.2	–	6.7	
			3.0 to 3.6	–	2.4	5.4	–	6.1	

NC7SV157–AC Characteristics

Existing Datasheet

AC Electrical Characteristics

Symbol	Parameter	V_{CC} (V)	T_A = -55°C Min	Typ	Max	T_A = -40°C to +85°C Min	Max	Units	Conditions	Figure Number
t_{PHL}	Propagation Delay	0.80		15				ns	C_L = 15 pF, R_L = 1 MΩ	Figure 1, 2
t_{PLH}	5 to Z	1.10 ≤ V_{CC} ≤ 1.30	3.0	6	15.5	2.2	18.8			
		1.40 ≤ V_{CC} ≤ 1.60	2.0	4	8.5	1.0	9.5		C_L = 15 pF, R_L = 2 kΩ	
		1.65 ≤ V_{CC} ≤ 1.95	1.0	3	6.7	1.2	7.5			
		2.30 ≤ V_{CC} ≤ 2.70	1.0	2	4.1	0.8	4.4		C_L = 30 pF, R_L = 500Ω	
		2.70 ≤ V_{CC} ≤ 3.60	0.8	1.8	3.4	0.7	3.6			

New

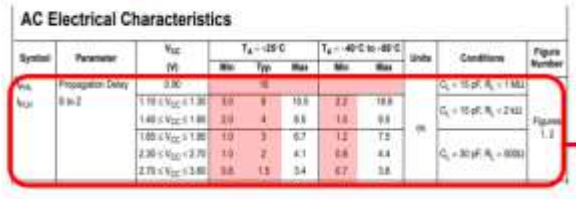
AC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C Min	Typ	Max	T_A = −40°C to +85°C Min	Max	Unit
t_{PLH}, t_{PHL}	Propagation Delay, (S or I_0 or I_1) to Z (Figures 3 and 4)	R_L = 1 MΩ, C_L = 15 pF	0.8	–	18.1	–	–	–	ns
		R_L = 2 kΩ, C_L = 15 pF	1.1 to 1.3	–	8.3	15.5	–	18.8	
			1.4 to 1.6	–	5.8	8.5	–	9.5	
		R_L = 500 Ω, C_L = 30 pF	1.65 to 1.95	–	3.1	6.7	–	7.5	
			2.3 to 2.7	–	2.2	4.1	–	4.4	
			2.7 to 3.6	–	1.9	3.4	–	3.6	

NC7SV19– AC Characteristics

Existing Datasheet

AC Electrical Characteristics



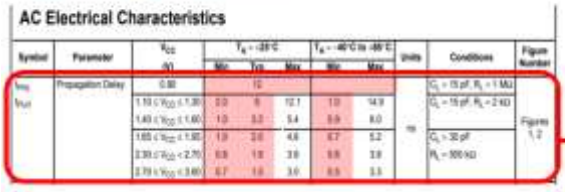
New

AC ELECTRICAL CHARACTERISTICS

NC7WV04– AC Characteristics

Existing Datasheet

AC Electrical Characteristics



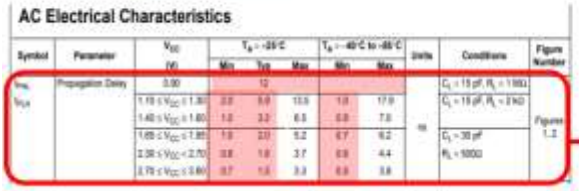
New

AC ELECTRICAL CHARACTERISTICS

NC7WV16– AC Characteristics

Existing Datasheet

AC Electrical Characteristics



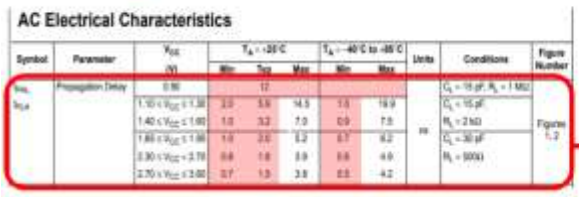
New

AC ELECTRICAL CHARACTERISTICS

NC7WV17– AC Characteristics

Existing Datasheet

AC Electrical Characteristics



New

AC ELECTRICAL CHARACTERISTICS

Reliability Data Summary:

QV DEVICE NAME: NL17SG373ADFT2G
RMS: S72646 / S65396 / S51765
PACKAGE: SC88

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	2016 hrs	0/240
TC + PC	JESD22-A104	Ta= -65°C to + 150°C	1000 cyc	0/240
HAST + PC	JESD22-A110	130°C, 85% RH, 18.8psig, bias	192 hrs	0/240
uHAST + PC	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/240
PC	J-STD-020 JESD-A113	MSL 1 @ 260°C	-	0/720

Electrical Characteristics Summary:

Electrical characteristics available upon request.

List of Affected Parts:

Note: *Only the standard (off the shelf) part numbers are listed in the parts list. Any custom parts affected by this PCN are shown in the customer specific PCN addendum in the PCN email notification, or on the* ***PCN Customized Portal****.*

Part Number	Qualification Vehicle
NC7WV16P6X	NL17SG373ADFT2G
NC7SP57P6X	NL17SG373ADFT2G
NC7WV04P6X	NL17SG373ADFT2G
NC7SV157P6X	NL17SG373ADFT2G
NC7SV57P6X	NL17SG373ADFT2G
NC7WV14P6X	NL17SG373ADFT2G
NC7WP14P6X	NL17SG373ADFT2G
NC7SV19P6X	NL17SG373ADFT2G
NC7SP157P6X	NL17SG373ADFT2G
NC7SP58P6X	NL17SG373ADFT2G
NC7WV17P6X	NL17SG373ADFT2G
NC7SV58P6X	NL17SG373ADFT2G
NC7WV07P6X	NL17SG373ADFT2G
NC7SV11P6X	NL17SG373ADFT2G
NC7SP19P6X	NL17SG373ADFT2G
NL17SG373ADFT2G	NL17SG373ADFT2G

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.

最終製品/プロセス変更通知

文書番号#: FPCN22964X
発行日: 01 Sep 2021

変更件名:	データシート更新を伴う MiniGates のウェハー工場、組立拠点と材料、およびテスト変更 (SC88)
初回出荷予定日:	2021 年 12 月 08 日またはお客様から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、この変更の初回 PCN または最終 PCN の最初の通知 の日付から 30 日以内に要求してください。 サンプル納入時は、依頼日、数量、特別梱包 材/ラベル条 件によって異なります。
追加の信頼性データ:	お客さまの地域のオンセミ営業所または< ChangKit.Mok@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> 宛てにお願いします。
変更部品の識別:	NC7 製品では、マーキングスタイルは異なるものになります。リールラベルの CS コードは US から JP に変更されます。

変更カテゴリ: テストの変更, アセンブリの変更, ウェハファブの変更

変更サブカテゴリ: 製造拠点の移管, 出荷/梱包/マーキング, データシート/製品資料の変更, 材料の変更, 製造プロセスの変更

影響を受ける拠点:

オン・セミコンダクター拠点:	**外部製造工場 / 下請業者拠点:**
Leshan Phoenix Semiconductor, China	HANA Microelectronics, China
onsemi Cebu, Philippines	Tower Semiconductor, Israel
onsemi Maine, United States	Towerjazz Semiconductor, Japan (Toyama)

説明および目的:

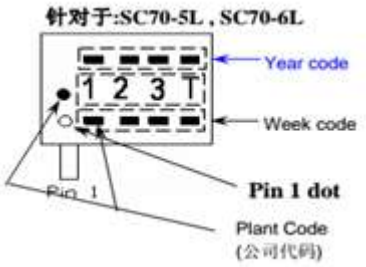
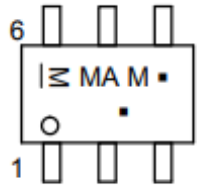
FPCN22964X は、前工程および後工程の生産 能力拡大のため、また材料を標準 化するために、TinyLogic®の日本における新 規のダイソースを認 定することを目的として発行されます。

NC7 ファミリー向け:

変更される材料	**変更前の表記 (既存のフロー)**		**変更後の表記 (新規フロー)**
組み立て拠点	Subcon China	onsemi Philippines	onsemi Leshan
ワイヤ	Au	Au	Cu
リードフレーム	LF SC88 6L 70X86 PPF	LF SC 88 6L C194 STAMPED	SC88 Lead frame with Vgroove
モールド・コンパウンド	MC SUMITOMO G600 HF	MC GREEN PA CK5000A 13MMX3.9G	Henkel GR640 HV-L1
ダイ接着剤	DA EPOXY ABLESTICK 2200D	DA EPXY HE ABLESTIK 84-1LMISR4 5CC	Eutectic
メッキ	Preplated	100% Sn	100% Sn
ダイソース	On South Portland	On South Portland	Foundry Japan

最終製品 / プロセス変更通知

文書番号#: FPCN22964X
発行日: 01 Sep 2021

	変更前		変更後
	サブコン中国	**オンセミフィリピン**	**新規フロー**
製品マーキング変更	 *上記のマーキングはサブコン中国向けです。オンセミフィリピンについては、プラントコード識別子はありません。*		 MA = Device Marking M = Date Code* ▪ = Pb−Free Package (Note: Microdot may be in either location) *Date Code orientation and/or position may vary depending upon manufacturing location.

データシートの更新:

データシートの変更:

仕様および/または仕様条件の変更に関する新旧データシート間での比較を以下に示します。

- 変更箇所は赤色で囲まれています。
- 旧データシートから変更される項目は赤色でハイライトされています。
- 新データシートで対応する値は緑色でハイライトされています。
- これらの変更はファミリー仕様として加えられる変更の例ですのでご注意ください。 個々の製品番号に影響を及ぼす規格への変更はそのように記述されます。

他にも、ファミリーに合わせて仕様フォーマットを表現するためにデータシートの整理と標準化をしたことによる変更があります。これらの変更は、以下のような形で行われます。

- スペルなどの事務的なミスの訂正。
- ファミリーの標準を作成するための書式設定。
- 新しいパッケージタイプの追加、および入手できなくなったパッケージの削除見込み。
- スイッチング波形試験回路図の標準化。
- マーキング、およびテープまたはリールでのピン 1 の向きに関して、お客様にさらなる情報を提供するための、デバイス注文情報の書式設定。

NC7SP/WP – 絶対最大定格

Existing Datasheet

Absolute Maximum Ratings(Note 1)

Supply Voltage (V_{CC})	−0.5V to +4.6V
DC Input Voltage (V_{IN})	−0.5V to +4.6V
DC Output Voltage (V_{OUT})	
HIGH or LOW State (Note 2)	−0.5V to V_{CC} +0.5V
V_{CC} = 0V	−0.5V to 4.6V

New

Maximum Ratings

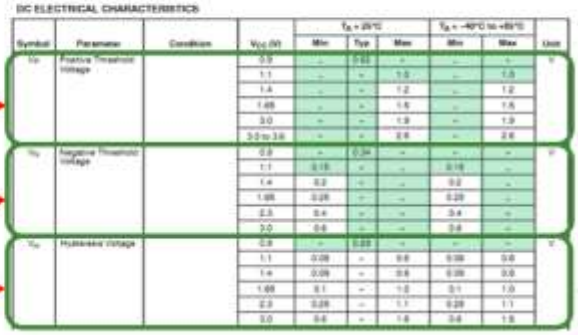
Symbol	Parameter		Value	Unit
V_{CC}	DC Supply Voltage		−0.5 to +4.3	V
V_{IN}	DC Input Voltage		−0.5 to +4.3	V
V_{OUT}	DC Output Voltage	Active-Mode (High or Low State)	−0.5 to V_{CC} + 0.5	V
		Tri-State Mode (Note 1)	−0.5 to +4.3	
		Power-Down Mode (V_{CC} = 0 V)	−0.5 to +4.3	

NC7SP/NC7WP – DC 入力特性

Existing Datasheet
NC7SP19/NC7SP157
DC Electrical Characteristics

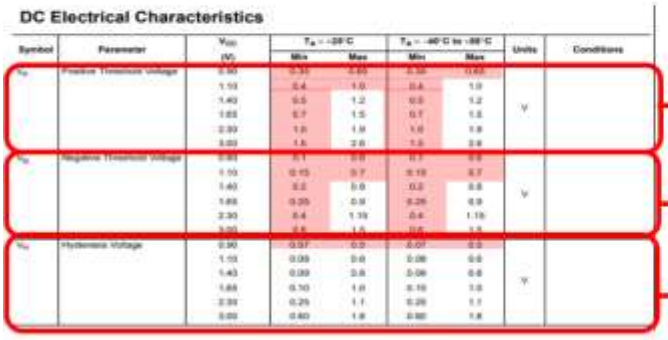
New

NC7SP57/NC7SP58
DC Electrical Characteristics

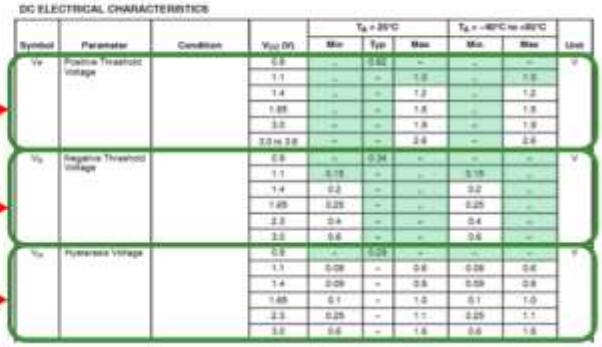


Existing Datasheet
NC7WP14

DC Electrical Characteristics

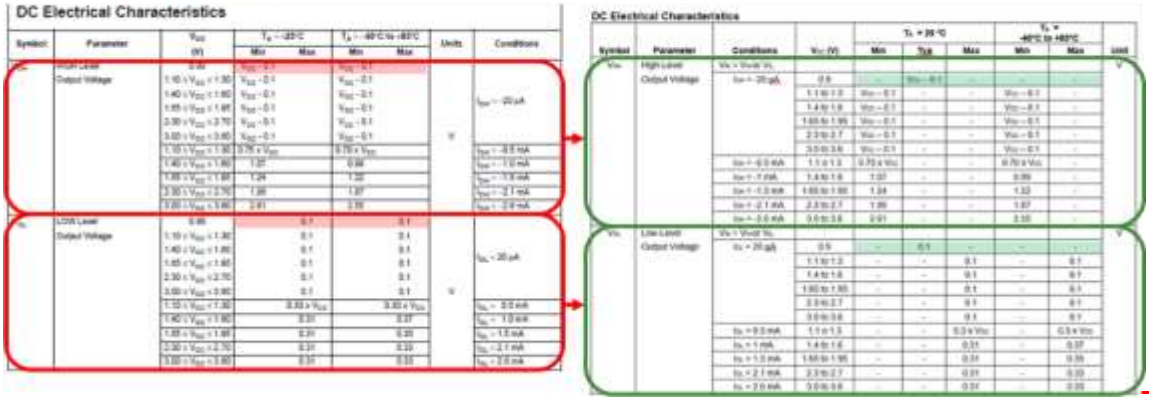


New



Existing Datasheet

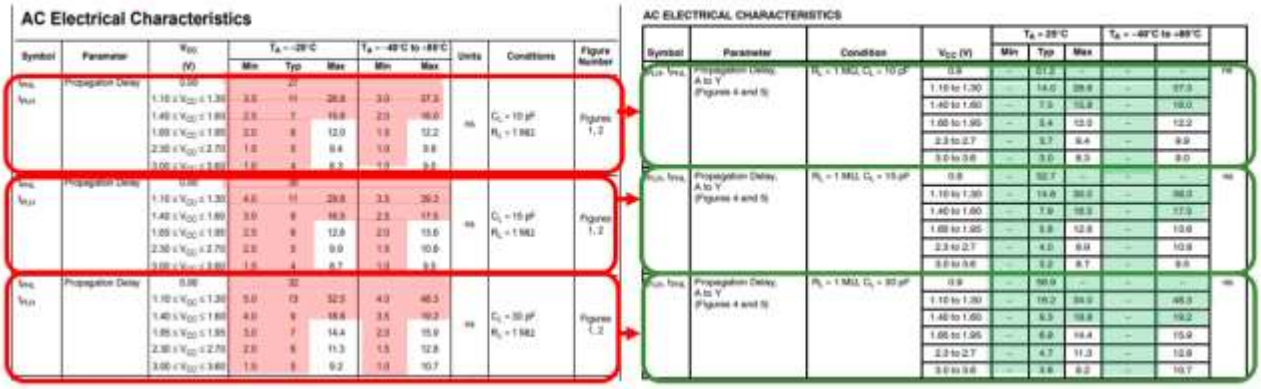
New



NC7WP14 – AC 特性

Existing Datasheet

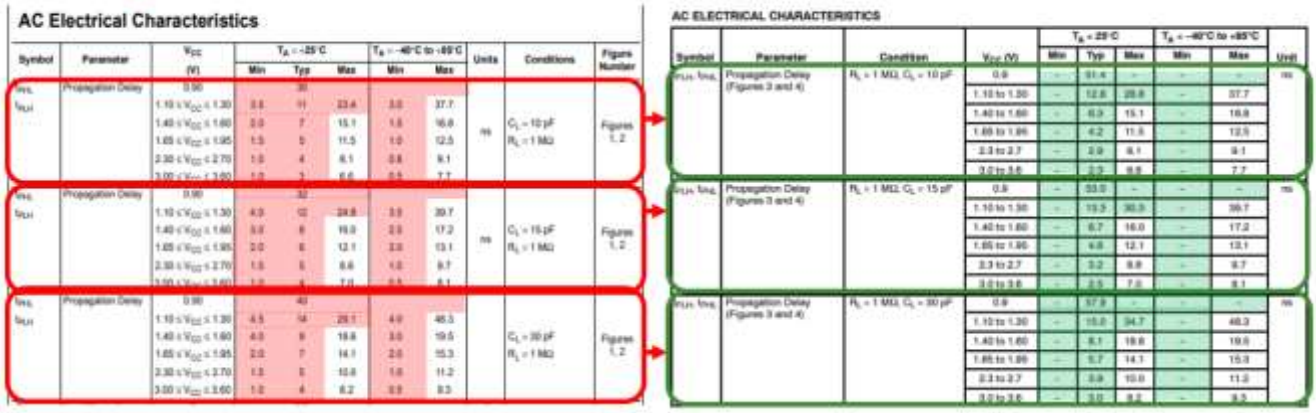
New



NC7SP19 – AC 特性

Existing Datasheet

New



NC7SP57/58– AC 特性

Existing Datasheet

AC Electrical Characteristics

Symbol	Parameter	V_{CC} (V)	T_A = −25°C Min	T_A = −25°C Typ	T_A = −25°C Max	T_A = −40°C to +85°C Min	T_A = −40°C to +85°C Max	Units	Conditions	Figure Number
t_{PHL}, t_{PLH}	Propagation Delay	0.90		40						
		1.10 ≤ V_{CC} ≤ 1.30	3.5	14	28.0	3.0	31.0			
		1.40 ≤ V_{CC} ≤ 1.60	4.5	10	17.0	4.0	21.0	ns	C_L = 10 pF, R_L = 1 MΩ	Figures 11, 12
		1.65 ≤ V_{CC} ≤ 1.95	3.5	8	14.0	3.0	17.0			
		2.30 ≤ V_{CC} ≤ 2.70	2.5	6	10.0	2.0	13.0			
		3.00 ≤ V_{CC} ≤ 3.60	1.5	5	8.5	1.0	12.0			
t_{PHL}, t_{PLH}	Propagation Delay	0.90		41						
		1.10 ≤ V_{CC} ≤ 1.30	6.5	15	29.0	6.0	32.0			
		1.40 ≤ V_{CC} ≤ 1.60	5.0	10	18.0	4.5	22.0	ns	C_L = 15 pF, R_L = 1 MΩ	Figures 11, 12
		1.65 ≤ V_{CC} ≤ 1.95	4.0	8	15.0	3.5	18.0			
		2.30 ≤ V_{CC} ≤ 2.70	3.0	6	11.0	2.5	14.0			
		3.00 ≤ V_{CC} ≤ 3.60	2.0	5	9.0	1.5	12.0			
t_{PHL}, t_{PLH}	Propagation Delay	0.90		42						
		1.10 ≤ V_{CC} ≤ 1.30	7.0	17	32.0	6.5	35.0			
		1.40 ≤ V_{CC} ≤ 1.60	5.5	11	20.0	5.0	24.0	ns	C_L = 30 pF, R_L = 1 MΩ	Figures 11, 12
		1.65 ≤ V_{CC} ≤ 1.95	4.5	9	17.0	4.0	20.0			
		2.30 ≤ V_{CC} ≤ 2.70	3.5	7	12.0	3.0	15.0			
		3.00 ≤ V_{CC} ≤ 3.60	2.5	6	11.0	2.0	14.0			

New

AC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C Min	T_A = 25°C Typ	T_A = 25°C Max	T_A = −40°C to +85°C Min	T_A = −40°C to +85°C Max	Unit
t_{PLH}, t_{PHL}	Propagation Delay (0 or 1 (z or 1Z) to Y) (Figures 12 and 13)	R_L = 1 MΩ, C_L = 10 pF	0.9	–	54.5	–	–	–	ns
			1.10 to 1.30	–	15.1	30.8	–	31.0	
			1.40 to 1.60	–	9.2	17.0	–	21.0	
			1.65 to 1.95	–	6.8	14.0	–	17.0	
			2.3 to 2.7	–	4.0	10.0	–	13.0	
			3.0 to 3.6	–	3.4	8.0	–	12.0	
t_{PLH}, t_{PHL}	Propagation Delay (0 or 1 (z or 1Z) to Y) (Figures 12 and 13)	R_L = 1 MΩ, C_L = 15 pF	0.9	–	55.6	–	–	–	ns
			1.10 to 1.30	–	15.6	32.7	–	32.0	
			1.40 to 1.60	–	8.8	18.0	–	22.0	
			1.65 to 1.95	–	6.3	15.0	–	18.0	
			2.3 to 2.7	–	4.2	11.0	–	14.0	
			3.0 to 3.6	–	3.6	9.0	–	12.0	
t_{PLH}, t_{PHL}	Propagation Delay (0 or 1 (z or 1Z) to Y) (Figures 12 and 13)	R_L = 1 MΩ, C_L = 30 pF	0.9	–	60.2	–	–	–	ns
			1.10 to 1.30	–	17.2	33.8	–	35.0	
			1.40 to 1.60	–	9.9	20.0	–	24.0	
			1.65 to 1.95	–	7.4	17.0	–	20.0	
			2.3 to 2.7	–	5.0	12.0	–	15.0	
			3.0 to 3.6	–	4.1	11.0	–	14.0	

NC7SP157– AC 特性

Existing Datasheet

AC Electrical Characteristics

Symbol	Parameter	V_{CC} (V)	T_A = −25°C Min	T_A = −25°C Typ	T_A = −25°C Max	T_A = −40°C to +85°C Min	T_A = −40°C to +85°C Max	Units	Conditions	Figure Number
t_{PHL}, t_{PLH}	Propagation Delay	0.90		30						
		1.10 ≤ V_{CC} ≤ 1.30	3.5	11	23.4	3.0	27.7			
		1.40 ≤ V_{CC} ≤ 1.60	2.5	7	15.1	1.5	16.8	ns	C_L = 10 pF, R_L = 1 MΩ	Figures 1, 2
		1.65 ≤ V_{CC} ≤ 1.95	1.5	5	11.3	1.0	12.5			
		2.30 ≤ V_{CC} ≤ 2.70	1.0	4	8.1	0.5	9.1			
		3.00 ≤ V_{CC} ≤ 3.60	1.0	3	6.6	0.5	7.7			
t_{PHL}, t_{PLH}	Propagation Delay	0.90		32						
		1.10 ≤ V_{CC} ≤ 1.30	4.3	12	24.8	3.5	30.7			
		1.40 ≤ V_{CC} ≤ 1.60	3.0	9	16.0	2.5	17.2	ns	C_L = 15 pF, R_L = 1 MΩ	Figures 1, 2
		1.65 ≤ V_{CC} ≤ 1.95	2.5	6	12.1	2.0	13.1			
		2.30 ≤ V_{CC} ≤ 2.70	1.5	5	8.6	1.0	8.7			
		3.00 ≤ V_{CC} ≤ 3.60	1.0	4	7.0	0.5	8.1			
t_{PHL}, t_{PLH}	Propagation Delay	0.90		42						
		1.10 ≤ V_{CC} ≤ 1.30	4.3	14	26.1	4.0	47.7			
		1.40 ≤ V_{CC} ≤ 1.60	4.0	9	18.6	3.0	19.5	ns	C_L = 30 pF, R_L = 1 MΩ	Figures 1, 2
		1.65 ≤ V_{CC} ≤ 1.95	2.5	7	14.1	2.0	15.3			
		2.30 ≤ V_{CC} ≤ 2.70	1.5	5	10.0	1.0	11.2			
		3.00 ≤ V_{CC} ≤ 3.60	1.0	4	8.2	0.5	9.3			

New

AC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C Min	T_A = 25°C Typ	T_A = 25°C Max	T_A = −40°C to +85°C Min	T_A = −40°C to +85°C Max	Unit
t_{PLH}, t_{PHL}	Propagation Delay (0 or 1 (z or 1Z) to Z) (Figures 3 and 4)	R_L = 1 MΩ, C_L = 10 pF	0.9	–	54.5	–	–	–	ns
			1.10 to 1.30	–	14.6	32.5	–	37.7	
			1.40 to 1.60	–	7.9	15.1	–	16.8	
			1.65 to 1.95	–	5.4	11.5	–	12.5	
			2.3 to 2.7	–	3.6	8.1	–	9.1	
			3.0 to 3.6	–	2.9	6.6	–	7.7	
t_{PLH}, t_{PHL}	Propagation Delay (0 or 1 (z or 1Z) to Z) (Figures 3 and 4)	R_L = 1 MΩ, C_L = 15 pF	0.9	–	55.6	–	–	–	ns
			1.10 to 1.30	–	16.1	33.7	–	30.7	
			1.40 to 1.60	–	9.0	16.0	–	17.2	
			1.65 to 1.95	–	6.8	12.1	–	13.1	
			2.3 to 2.7	–	3.8	8.8	–	9.7	
			3.0 to 3.6	–	3.1	7.0	–	8.1	
t_{PLH}, t_{PHL}	Propagation Delay (0 or 1 (z or 1Z) to Z) (Figures 3 and 4)	R_L = 1 MΩ, C_L = 30 pF	0.9	–	56.2	–	–	–	ns
			1.10 to 1.30	–	16.7	37.8	–	47.7	
			1.40 to 1.60	–	9.3	18.6	–	19.5	
			1.65 to 1.95	–	6.9	14.1	–	15.3	
			2.3 to 2.7	–	4.5	10.0	–	11.2	
			3.0 to 3.6	–	3.7	8.2	–	9.3	

NC7SV/WV – 絶対最大定格

Existing Datasheet

Absolute Maximum Ratings(Note 1)

Supply Voltage (V_{CC})	−0.5V to +4.6V
DC Input Voltage (V_{IN})	−0.5V to +4.6V
DC Output Voltage (V_{OUT})	
HIGH or LOW State (Note 2)	−0.5V to V_{CC} +0.5V
V_{CC} = 0V	−0.5V to 4.6V

Symbol	Parameter	Rating
V_{CC}	Supply Voltage	−0.5V to +4.6V
V_{IN}	DC Input Voltage	−0.5V to +4.6V
V_{OUT}	DC Output Voltage HIGH or LOW State(2) V_{CC} = 0V	−0.5V to V_{CC} +0.5V −0.5V to +4.6V

New

Maximum Ratings

Symbol	Parameter		Value	Unit
V_{CC}	DC Supply Voltage		−0.5 to +4.3	V
V_{IN}	DC Input Voltage		−0.5 to +4.3	V
V_{OUT}	DC Output Voltage	Active-Mode (High or Low State)	−0.5 to V_{CC} + 0.5	V
		Tri-State Mode (Note 1)	−0.5 to +4.3	
		Power-Down Mode (V_{CC} = 0 V)	−0.5 to +4.3	

Maximum Ratings

Symbol	Parameter		Value	Unit
V_{CC}	DC Supply Voltage		−0.5 to +4.3	V
V_{IN}	DC Input Voltage		−0.5 to +4.3	V
V_{OUT}	DC Output Voltage	Active-Mode (High or Low State)	−0.5 to V_{CC} + 0.5	V
		Tri-State Mode (Note 1)	−0.5 to +4.3	
		Power-Down Mode (V_{CC} = 0 V)	−0.5 to +4.3	

NC7SV/WV – 熱特性

Existing Datasheet

θ_{JA}	Thermal Resistance	SC70-6		425	°C/W
		MicroPak™-6		500	
		MicroPak2™-6		560	
P_D	Power Dissipation at +85°C	MicroPak™-6		130	mW
		SC70-6		150	
		MicroPak2™-6		120	

New

θ_{JA}	Thermal Resistance (Note 2)	SC−88 MicroPak	377 154	°C/W
P_D	Power Dissipation in Still Air	SC−88 MicroPak	332 812	mW

NC7SV/NC7WV– DC 入力特性

Existing Datasheet

NC7SV11/NC7SV19/NC7SV157/NC7WV04/NC7WV07/NC7WV16

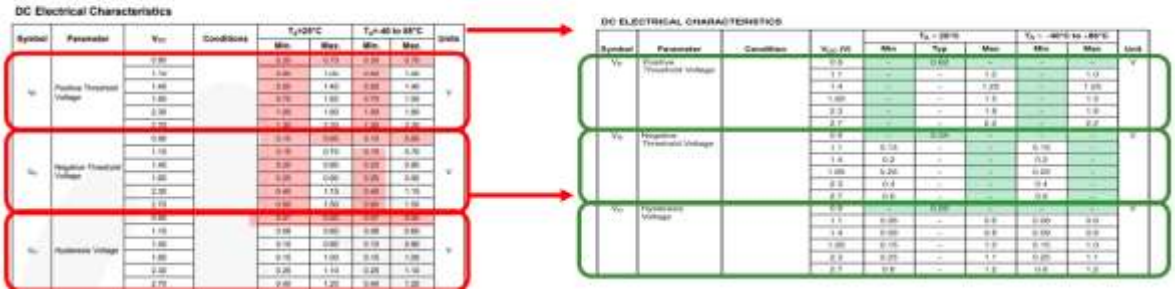
New

NC7WV17

Existing Datasheet

NC7SV57/NC7SV58/NC7WV14

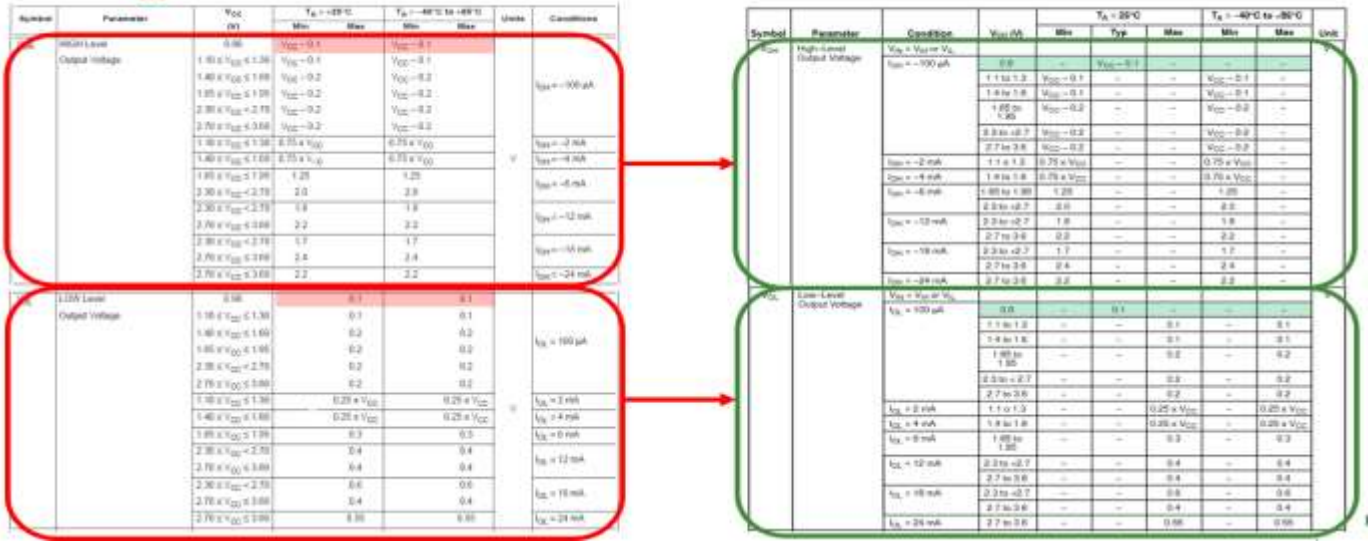
New



NC7SV/NC7WV (NC7WV07 を除く) – DC 出力特性

Existing Datasheet

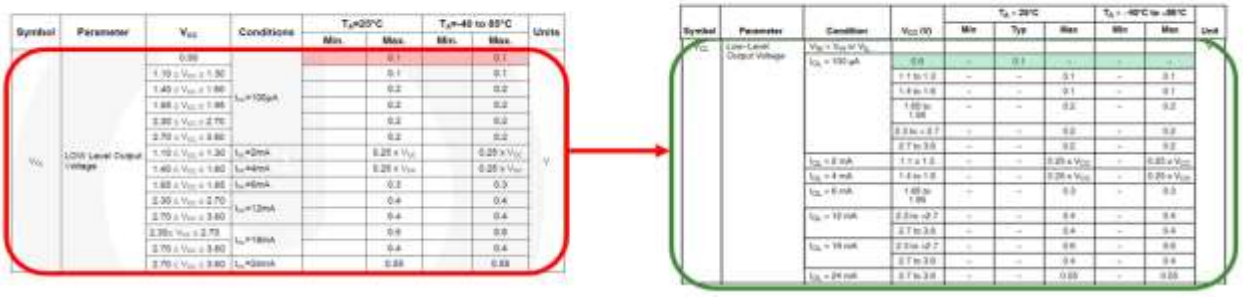
New



NC7WV07 – DC 出力特性

Existing Datasheet

New



NC7WV14– AC 特性

Existing Datasheet

Electrical Characteristics

Symbol	Parameter	V_{CC} (V)	Conditions	T_A = +25°C Min	Typ	Max	T_A = −40°C to +85°C Min	Max	Units	Figure Number
t_{PHL}, t_{PLH}	Propagation Delay	0.90	C_L = 15pF, R_L = 1MΩ		12				ns	Figure 1, Figure 2
		1.10 ≤ V_{CC} ≤ 1.30	C_L = 15pF, R_L = 2kΩ	2.0	6.9	11.5	1.0	13.0		
		1.40 ≤ V_{CC} ≤ 1.60		1.0	3.2	6.3	0.5	7.5		
		1.65 ≤ V_{CC} ≤ 1.95	C_L = 30pF R_L = 500Ω	1.0	2.9	5.2	0.7	6.2		
		2.30 ≤ V_{CC} ≤ 2.70		0.8	1.8	3.7	0.5	4.4		
		2.70 ≤ V_{CC} ≤ 3.60		0.7	1.5	3.3	0.5	3.8		

New

AC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C Min	Typ	Max	T_A = −40°C to +85°C Min	Max	Unit
t_{PLH}, t_{PHL}	Propagation Delay, A to Y (Figures 3 and 4)	R_L = 1 MΩ, C_L = 15 pF	0.9	–	19.1	–	–	–	ns
		R_L = 2 kΩ, C_L = 15 pF	1.1 to 1.3	–	8.0	12.2	–	15.6	
			1.4 to 1.6	–	3.8	6.3	–	7.0	
		R_L = 500 Ω, C_L = 30 pF	1.65 to 1.95	–	3.2	5.2	–	6.2	
			2.3 to 2.7	–	2.6	3.7	–	4.4	
			2.7 to 3.6	–	2.2	3.3	–	3.8	

NC7WV07– AC 特性

Existing Datasheet

AC Electrical Characteristics

Symbol	Parameter	V_{CC}	Conditions	T_A=25°C Min.	Typ.	Max.	T_A=-40 to 85°C Min.	Max.	Units	Figure
t_{PHL}, t_{PLH}	Propagation Delay	0.90	C_L=15pF R_L=R_1=R_2=1MΩ		13				ns	Figure 4 Figure 5
		1.10 ≤ V_{CC} ≤ 1.30	C_L=15pF R_L=R_1=R_2=2kΩ	2.0	6.0	15.0	1.0	18.0		
		1.40 ≤ V_{CC} ≤ 1.60		1.0	4.2	8.7	1.0	9.7		
		1.65 ≤ V_{CC} ≤ 1.95	C_L=30pF R_L=R_1=R_2=500Ω	1.0	3.0	6.0	1.0	6.8		
		2.30 ≤ V_{CC} ≤ 2.70		0.7	1.2	3.6	0.5	4.7		
		2.70 ≤ V_{CC} ≤ 3.60		0.6	1.0	3.3	0.4	4.0		

New

AC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C Min	Typ	Max	T_A = −40°C to +85°C Min	Max	Unit
t_{PLH}, t_{PHL}	Propagation Delay, A to Y (Figures 3 and 4)	R_1 = R_L = 1 MΩ, C_L = 15 pF	0.9	–	11.8	–	–	–	ns
		R_1 = R_L = 2 kΩ, C_L = 15 pF	1.1 to 1.3	–	5.1	15.0	–	18.6	
			1.4 to 1.6	–	3.6	8.7	–	9.7	
		R_1 = R_L = 500 Ω, C_L = 30 pF	1.65 to 1.95	–	2.4	6.0	–	6.8	
			2.3 to 2.7	–	1.9	3.6	–	4.7	
			2.7 to 3.6	–	1.6	3.3	–	4.0	

NC7SV11– AC 特性

Existing Datasheet

AC Electrical Characteristics

Symbol	Parameter	V_{CC} (V)	T_A = −25°C Min	Typ	Max	T_A = −40°C to +85°C Min	Max	Units	Conditions	Figure Number
t_{PHL}	Propagation Delay	0.90		12				ns	C_L = 15 pF, R_L = 1 MΩ	Figures 1, 2
t_{PLH}		1.10 ≤ V_{CC} ≤ 1.30	2.0	6.8	17.0	1.0	19.2			
		1.40 ≤ V_{CC} ≤ 1.60	1.0	4.8	10.2	0.8	12.0		C_L = 15 pF, R_L = 2 kΩ	
		1.65 ≤ V_{CC} ≤ 1.95	1.0	3.0	7.8	0.7	9.2		C_L = 30 pF	
		2.30 ≤ V_{CC} ≤ 2.70	0.8	3.0	5.2	0.8	6.8		R_L = 500 kΩ	
		2.70 ≤ V_{CC} ≤ 3.60	0.7	2.8	4.5	0.8	4.8			

New

AC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C Min	Typ	Max	T_A = −40°C to +85°C Min	Max	Unit
t_{PLH}, t_{PHL}	Propagation Delay, (A or B or C) to Y (Figures 3 and 4)	R_L = 1 MΩ, C_L = 15 pF	0.9	–	14.4	–	–	–	ns
		R_L = 2 kΩ, C_L = 15 pF	1.1 to 1.3	–	9.0	17.0	–	19.2	
			1.4 to 1.6	–	3.8	10.2	–	12.0	
		R_L = 500 Ω, C_L = 30 pF	1.65 to 1.95	–	2.7	7.8	–	9.2	
			2.3 to 2.7	–	2.0	5.2	–	6.8	
			2.7 to 3.6	–	1.7	4.5	–	4.8	

NC7SV57/58– AC 特性

Existing Datasheet

AC Electrical Characteristics

Symbol	Parameter	V_{CC}	Conditions	T_A=25°C Min.	Typ.	T_A=-40 to 85°C Min.	Typ.	Max.	Units	Figure
t_{PHL}, t_{PLH}	Propagation Delay	0.90	C_L=15pF, R_L=1MΩ		16.0				ns	Figure 15 Figure 16
		1.10 ≤ V_{CC} ≤ 1.30	C_L=15pF, R_L=2kΩ	4.0	8.6	18.5	3.3	21.0		
		1.40 ≤ V_{CC} ≤ 1.60		3.0	6.6	10.6	3.0	12.0		
		1.65 ≤ V_{CC} ≤ 1.95		3.0	4.8	9.1	1.9	10.0		
		2.30 ≤ V_{CC} ≤ 2.70	C_L=30pF, R_L=500Ω	1.5	3.1	6.2	1.4	6.7		
		2.70 ≤ V_{CC} ≤ 3.60		1.2	2.8	5.4	1.2	6.1		

New

AC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C Min	Typ	Max	T_A = −40°C to +85°C Min	Max	Unit
t_{PLH}, t_{PHL}	Propagation Delay (S or IT or I2) to Y (Figures 12 and 13)	R_L = 1 MΩ, C_L = 15 pF	0.9	–	22.2	–	–	–	ns
		R_L = 2 kΩ, C_L = 15 pF	1.10 to 1.30	–	7.1	16.5	–	21.0	
			1.40 to 1.60	–	4.4	10.0	–	12.0	
		R_L = 500 Ω, C_L = 30 pF	1.65 to 1.95	–	3.7	9.1	–	10.0	
			2.3 to 2.7	–	2.9	6.2	–	6.7	
			3.0 to 3.6	–	2.4	5.4	–	6.1	

NC7SV157– AC 特性

Existing Datasheet

AC Electrical Characteristics

Symbol	Parameter	V_{CC} (V)	T_A = −25°C Min	Typ	Max	T_A = −40°C to +85°C Min	Max	Units	Conditions	Figure Number
t_{PHL}	Propagation Delay	0.90		15				ns	C_L = 15 pF, R_L = 1 MΩ	Figures 1, 2
t_{PLH}	5 to Z	1.10 ≤ V_{CC} ≤ 1.30	3.0	8	15.5	2.2	18.0			
		1.40 ≤ V_{CC} ≤ 1.60	2.0	4	8.5	1.0	9.5		C_L = 15 pF, R_L = 2 kΩ	
		1.65 ≤ V_{CC} ≤ 1.95	1.0	3	6.7	1.2	7.5			
		2.30 ≤ V_{CC} ≤ 2.70	1.0	2	4.1	0.8	4.4		C_L = 30 pF, R_L = 500Ω	
		2.70 ≤ V_{CC} ≤ 3.60	0.8	1.8	3.4	0.7	3.6			

New

AC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C Min	Typ	Max	T_A = −40°C to +85°C Min	Max	Unit
t_{PLH}, t_{PHL}	Propagation Delay, (S or I_0 or I_1) to Z (Figures 3 and 4)	R_L = 1 MΩ, C_L = 15 pF	0.9	–	19.1	–	–	–	ns
		R_L = 2 kΩ, C_L = 15 pF	1.1 to 1.3	–	8.3	15.5	–	18.8	
			1.4 to 1.6	–	3.8	8.5	–	9.5	
		R_L = 500 Ω, C_L = 30 pF	1.65 to 1.95	–	3.1	6.7	–	7.5	
			2.3 to 2.7	–	2.2	4.1	–	4.4	
			2.7 to 3.6	–	1.9	3.4	–	3.6	

NC7SV19– AC 特性

Existing Datasheet

AC Electrical Characteristics

Symbol	Parameter	V_{CC} (V)	T_A = −25°C			T_A = −40°C to +85°C		Units	Conditions	Figure Number
			Min	Typ	Max	Min	Max			
t_{PHL}, t_{PLH}	Propagation Delay	0.90		10				ns	C_L = 15 pF, R_L = 1 MΩ	Figures 1, 2
	A to Y	1.10 ≤ V_{CC} ≤ 1.30	3.0	6	10.5	2.2	10.8		C_L = 15 pF, R_L = 2 kΩ	
		1.40 ≤ V_{CC} ≤ 1.60	2.0	4	6.5	1.5	6.8			
		1.65 ≤ V_{CC} ≤ 1.95	1.0	3	5.7	1.2	7.5		C_L = 30 pF, R_L = 500Ω	
		2.30 ≤ V_{CC} ≤ 2.70	1.0	2	4.1	0.8	4.4			
		2.70 ≤ V_{CC} ≤ 3.60	0.8	1.5	3.4	0.7	3.8			

New

AC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C			T_A = −40°C to +85°C		Unit
				Min	Typ	Max	Min	Max	
t_{PLH}, t_{PHL}	Propagation Delay, (S or I_0 or I_1) to Z (Figures 3 and 4)	R_L = 1 MΩ, C_L = 15 pF	0.9	–	16.6	–	–	–	ns
		R_L = 2 kΩ, C_L = 15 pF	1.1 to 1.3	–	8.2	16.5	–	18.6	
			1.4 to 1.6	–	5.2	8.5	–	9.5	
		R_L = 500 Ω, C_L = 30 pF	1.65 to 1.95	–	3.7	6.7	–	7.5	
			2.3 to 2.7	–	2.5	4.1	–	4.4	
			2.7 to 3.6	–	1.7	3.4	–	3.8	

NC7WV04– AC 特性

Existing Datasheet

AC Electrical Characteristics

Symbol	Parameter	V_{CC} (V)	T_A = −25°C			T_A = −40°C to +85°C		Units	Conditions	Figure Number
			Min	Typ	Max	Min	Max			
t_{PHL}, t_{PLH}	Propagation Delay	0.90		10				ns	C_L = 15 pF, R_L = 1 MΩ	Figures 1, 2
	A to Y	1.10 ≤ V_{CC} ≤ 1.30	3.0	6	12.1	1.0	14.9		C_L = 15 pF, R_L = 2 kΩ	
		1.40 ≤ V_{CC} ≤ 1.60	1.0	3.2	5.4	0.9	8.0			
		1.65 ≤ V_{CC} ≤ 1.95	1.0	2.6	4.8	0.7	5.2		C_L = 30 pF	
		2.30 ≤ V_{CC} ≤ 2.70	0.8	1.8	3.8	0.6	3.8		R_L = 500 kΩ	
		2.70 ≤ V_{CC} ≤ 3.60	0.7	1.6	3.6	0.5	3.3			

New

AC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C			T_A = −40°C to +85°C		Unit
				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	0.9	–	17.4	–	–	–	ns
		R_L = 2 kΩ, C_L = 15 pF	1.1 to 1.3	–	8.5	12.1	–	14.9	
			1.4 to 1.6	–	5.6	8.4	–	8.0	
		R_L = 500 Ω, C_L = 30 pF	1.65 to 1.95	–	3.5	4.8	–	5.2	
			2.3 to 2.7	–	1.8	3.8	–	3.8	
			2.7 to 3.6	–	1.6	3.0	–	3.3	

NC7WV16– AC 特性

Existing Datasheet

AC Electrical Characteristics

Symbol	Parameter	V_{CC} (V)	T_A = −25°C			T_A = −40°C to +85°C		Units	Conditions	Figure Number
			Min	Typ	Max	Min	Max			
t_{PHL}, t_{PLH}	Propagation Delay	0.90		12				ns	C_L = 15 pF, R_L = 1 MΩ	Figures 1, 2
	A to Y	1.10 ≤ V_{CC} ≤ 1.30	2.0	5.0	10.5	1.0	17.9		C_L = 15 pF, R_L = 2 kΩ	
		1.40 ≤ V_{CC} ≤ 1.60	1.0	3.2	6.5	0.9	7.0			
		1.65 ≤ V_{CC} ≤ 1.95	1.0	2.0	5.2	0.7	6.2		C_L = 30 pF	
		2.30 ≤ V_{CC} ≤ 2.70	0.8	1.8	3.7	0.6	4.4		R_L = 500Ω	
		2.70 ≤ V_{CC} ≤ 3.60	0.7	1.5	3.3	0.5	3.8			

New

AC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C			T_A = −40°C to +85°C		Unit
				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	0.9	–	12.8	–	–	–	ns
		R_L = 2 kΩ, C_L = 15 pF	1.1 to 1.3	–	4.1	10.5	–	17.9	
			1.4 to 1.6	–	2.7	6.5	–	7.0	
		R_L = 500 Ω, C_L = 30 pF	1.65 to 1.95	–	2.5	5.2	–	6.2	
			2.3 to 2.7	–	1.6	3.7	–	4.4	
			2.7 to 3.6	–	1.6	3.5	–	3.8	

NC7WV17– AC 特性

Existing Datasheet

AC Electrical Characteristics

Symbol	Parameter	V_{CC} (V)	T_A = −25°C			T_A = −40°C to +85°C		Units	Conditions	Figure Number
			Min	Typ	Max	Min	Max			
t_{PHL}, t_{PLH}	Propagation Delay	0.90		12				ns	C_L = 15 pF, R_L = 1 MΩ	Figures 1, 2
	A to Y	1.10 ≤ V_{CC} ≤ 1.30	2.0	5.0	14.5	1.0	19.9		C_L = 15 pF	
		1.40 ≤ V_{CC} ≤ 1.60	1.0	3.2	7.0	0.9	7.5		R_L = 2 kΩ	
		1.65 ≤ V_{CC} ≤ 1.95	1.0	2.6	6.2	0.7	6.2		C_L = 30 pF	
		2.30 ≤ V_{CC} ≤ 2.70	0.8	1.8	3.9	0.6	4.6		R_L = 500Ω	
		2.70 ≤ V_{CC} ≤ 3.60	0.7	1.5	3.8	0.5	4.2			

New

AC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	V_{CC} (V)	T_A = 25°C			T_A = −40°C to +85°C		Unit
				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	0.9	–	17.2	–	–	–	ns
		R_L = 2 kΩ, C_L = 15 pF	1.1 to 1.3	–	8.1	14.5	–	19.9	
			1.4 to 1.6	–	5.6	7.0	–	7.5	
		R_L = 500 Ω, C_L = 30 pF	1.65 to 1.95	–	3.3	6.2	–	6.2	
			2.3 to 2.7	–	2.5	3.8	–	4.6	
			2.7 to 3.6	–	2.2	3.8	–	4.2	

信頼性データの要約:

デバイス名 : NL17SG373ADFT2G
RMS: S72646 / S65396 / S51765
パッケージ : SC88

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	2016 hrs	0/240
TC + PC	JESD22-A104	Ta= -65°C to + 150°C	1000 cyc	0/240
HAST + PC	JESD22-A110	130°C, 85% RH, 18.8psig, bias	192 hrs	0/240
uHAST + PC	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/240
PC	J-STD-020 JESD-A113	MSL 1 @ 260°C	-	0/720

電気的特性の要約:

電気的特性はご要望に応じてご提出いたします。

影響を受ける部品の一覧:

注: 部品一覧には標準部品番号 (既製品) のみが記載されています。本 PCN の影響を受けるカスタム部品番号は、PCN メールで提供される顧客個別の付録、または PCN カスタマイズポータルに記載されています。

部品番号	認定試験用ビークル
NC7WV16P6X	NL17SG373ADFT2G
NC7SP57P6X	NL17SG373ADFT2G
NC7WV04P6X	NL17SG373ADFT2G
NC7SV157P6X	NL17SG373ADFT2G
NC7SV57P6X	NL17SG373ADFT2G
NC7WV14P6X	NL17SG373ADFT2G
NC7WP14P6X	NL17SG373ADFT2G
NC7SV19P6X	NL17SG373ADFT2G
NC7SP157P6X	NL17SG373ADFT2G
NC7SP58P6X	NL17SG373ADFT2G
NC7WV17P6X	NL17SG373ADFT2G
NC7SV58P6X	NL17SG373ADFT2G
NC7WV07P6X	NL17SG373ADFT2G
NC7SV11P6X	NL17SG373ADFT2G
NC7SP19P6X	NL17SG373ADFT2G
NL17SG373ADFT2G	NL17SG373ADFT2G