



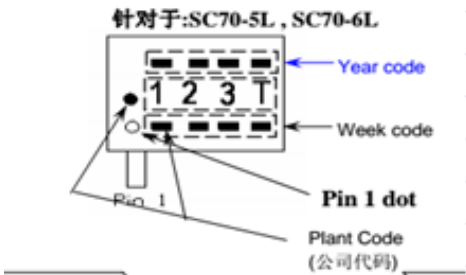
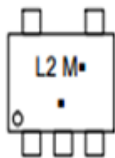
Title of Change:	MiniGates Fab, Assembly Material and Test Change (SC88A/SOT953/SOT553) with datasheet update	
Proposed First Ship date:	6 February 2020	
Contact Information:	Contact your local ON Semiconductor Sales Office or <logic.fpcn@onsemi.com>	
Samples:	<p><i>Samples should be available after completion of qualification.</i></p> <p>Contact your local ON Semiconductor Sales Office or <PCN.Samples@onsemi.com></p> <p>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.</p> <p>Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.</p>	
Type of Notification:	<p>This is an Initial Product/Process Change Notification (IPCN) sent to customers. An IPCN is an advance notification about an upcoming change and contains general information regarding the change details and devices affected. It also contains the preliminary reliability qualification plan.</p> <p>The completed qualification and characterization data will be included in the Final Product/Process Change Notification (FPCN). This IPCN notification will be followed by a Final Product/Process Change Notification (FPCN) at least 90 days prior to implementation of the change. In case of questions, contact <PCN.Support@onsemi.com></p>	
Change Part Identification:	For NC7 parts, marking style will be different. For NL17 and SL17 part, the CS code on the reel label will be changed from US to JP.	
Change Category:	<input checked="" type="checkbox"/> Wafer Fab Change <input checked="" type="checkbox"/> Assembly Change <input checked="" type="checkbox"/> Test Change <input checked="" type="checkbox"/> Other <u>Datasheet</u>	
Change Sub-Category(s):	<input type="checkbox"/> Manufacturing Site Addition <input checked="" type="checkbox"/> Material Change <input checked="" type="checkbox"/> Datasheet/Product Doc change <input checked="" type="checkbox"/> Manufacturing Site Transfer <input type="checkbox"/> Product specific change <input checked="" type="checkbox"/> Shipping/Packaging/Marking <input checked="" type="checkbox"/> Manufacturing Process Change <input type="checkbox"/> Other: _____	
Sites Affected:	ON Semiconductor Sites: ON ISMF, Malaysia ON Leshan, China ON Cebu, Philippines ON S. Portland, Maine	External Foundry/Subcon Sites: Foundry Subcontractor in China

Description and Purpose:

This IPCN is issued to qualify new die source in Japan for TinyLogic® and standardize the assembly and test site to increase the front end and back end capacity and standardizing materials.

NC7xxxP5X Series :

	Before Change Description		After Change Description
LeadFrame	LF SC70 5L Cu A194 STAMPED PPF	LF SC 88A 5L C194 STAMPED	SC88A OP14
Die Attach	DA EPOXY ABLESTICK 2200D	DA EPOXY HE ABLESTIK 84-1LMISR4 5CC	Au Eutectic
Bond Wire	Au	Au	Cu
Mold Compound	MC SUMITOMO G600 HF	MC GREEN PA CK5000A 13MMX3.9G	Henkel GR640 HV-L1
Assembly Site	Subcon China	ON Philippines	ON in China
Die Source	ONsemi US Fab	ONsemi US Fab	External Fab Japan
Plating	Preplated	100% Sn	100% Sn

	From	To
Product marking change		<p>MARKING DIAGRAMS</p> <ul style="list-style-type: none"> L2 = Specific Device Marking M = Date Code* • = Pb-Free Package <p>(Note: Microdot may be in either location)</p> <p>*Date Code orientation and/or position may vary depending upon manufacturing location.</p> 

NL17xxxDFT2G Series:

	Before Change Description	After Change Description
Bond Wire	Au ** and Cu	Cu
Mold Compound	Hitachi GE200F or Henkel GR640 HV-L1	Henkel GR640 HV-L1
Die Source	External Foundry Israel	External Fab Japan

** Only these parts are using Au wire before change

(NL17SG00DFT2G/NL17SG02DFT2G/NL17SG04DFT2G/NL17SG07DFT2G/NL17SG08DFT2G/NL17SG125DFT2G/NL17SG126DFT2G/NL17SG14DFT2G/NL17SG17DFT2G/NL17SG32DFT2G/NL17SG34DFT2G/NL17SG86DFT2G/NL17SGU04DFT2G)

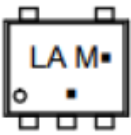

No change in marking.



NL17xxXV5T2G Series:

	Before Change Description	After Change Description
Bond Wire	Au	Cu
Assy Site##	ON Seremban, Malaysia	ON Leshan, China
Die Source	External Foundry Israel	External Fab Japan

Except NL17SV32XV5T2G has no site change, it is currently running in ON Leshan.

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

NL17xxxP5T5G Series:

	Before Change Description	After Change Description
Bond Wire	Au	Cu
Die Source	External Foundry Israel	External Fab Japan

No change in marking.

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.

There will be other changes that represent a cleanup 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.



NL17SG

- Maximum voltage rating changed from 5.5 volts to 4.3 volts.

Existing datasheet

MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _{CC}	DC Supply Voltage	-0.5 to +5.5	V
V _{IN}	DC Input Voltage	-0.5 to +4.6	V
V _{OUT}	DC Output Voltage Output at High or Low State Power-Down Mode (V _{CC} = 0 V)	-0.5 to V _{CC} + 0.5 -0.5 to +4.6	V

MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _{CC}	DC Supply Voltage	-0.5 to +5.5	V
V _{IN}	DC Input Voltage V _{CC} ≥ 0.9 V V _{CC} = 0.9 V	-0.5 to +5.5 -0.5 to +4.6	V
V _{OUT}	DC Output Voltage	-0.5 to V _{CC} + 0.5	V

MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _{CC}	DC Supply Voltage	-0.5 to +5.5	V
V _{IN}	DC Input Voltage	-0.5 to +4.6	V
V _{OUT}	DC Output Voltage	-0.5 to V _{CC} + 0.5	V

MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _{CC}	DC Supply Voltage	-0.5 to +5.5	V
V _{IN}	DC Input Voltage	-0.5 to +5.5	V
V _{OUT}	DC Output Voltage	-0.5 to V _{CC} + 0.5	V

New

MAXIMUM RATINGS

Symbol	Characteristics	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) Tri-State Mode (Note 1) Power-Down Mode (V _{CC} = 0 V)	-0.5 to V _{CC} + 0.5 -0.5 to +4.3 -0.5 to +4.3	V

- Electrostatic Discharge/Latchup adjusted to align with JEDEC Standard.

Existing datasheet

V _{ESD}	ESD Withstand Voltage	Human Body Model (Note 2) Machine Model (Note 3)	>1500 >100	V
I _{LATCHUP}	Latchup Performance Above V _{CC} and Below GND at 125°C (Note 4)		±100	mA
V _{ESD}	ESD Withstand Voltage	Human Body Model (Note 2) Machine Model (Note 3)	>2000 >100	V
I _{LATCHUP}	Latch-up Performance above V _{CC} and below GND at 125°C (Note 4)		±75	mA
V _{ESD}	ESD Withstand Voltage Human Body Mode (Note 2) Machine Model (Note 3)		>3000 >200	V
I _{LATCHUP}	Latchup Performance Above V _{CC} and Below GND at 125°C (Note 4)		±100	mA
V _{ESD}	ESD Withstand Voltage	Human Body Model (Note 2) Machine Model (Note 3)	>2000 >150	V
I _{LATCHUP}	Latchup Performance Above V _{CC} and Below GND at 125°C (Note 4)		±100	mA

New

V _{ESD}	ESD Withstand Voltage (Note 3)	Human Body Model Charged Device Model	2000 1000	V
I _{LATCHUP}	Latchup Performance (Note 4)		±100	mA

- High-Level Output Voltage adjusted to remove limits at 0.9V
- Low-Level Output Voltage adjusted to remove limits at 0.9V

Existing datasheet

V _{OH}	High-Level Output Voltage	V _{IH} = V _{IH} or V _{IL}	I _{OH} = -20 μA	0.9	0.75	0.75	V
V _{OH}	High-Level Output Voltage	V _{IH} = V _{IH} or V _{IL}	I _{OH} = -0.3 mA	1.1 to 1.3	0.75xV _{CC}	0.75xV _{CC}	
			I _{OH} = -1.7 mA	1.4 to 1.6	0.75xV _{CC}	0.75xV _{CC}	
			I _{OH} = -3.0 mA	1.65 to 1.95	V _{CC} -0.45	V _{CC} -0.45	
			I _{OH} = -4.0 mA	2.3 to 2.7	2.0	2.0	
			I _{OH} = -8.0 mA	3.0 to 3.6	2.48	2.48	
			I _{OH} = -8.0 mA	3.0 to 3.6	2.48	2.48	
V _{OL}	Low-Level Output Voltage	V _{IH} = V _{IH} or V _{IL}	I _{OL} = 20 μA	0.9	0.1	0.1	
			I _{OL} = 0.3 mA	1.1 to 1.3	0.25xV _{CC}	0.25xV _{CC}	
			I _{OL} = 1.7 mA	1.4 to 1.6	0.25xV _{CC}	0.25xV _{CC}	
			I _{OL} = 3.0 mA	1.65 to 1.95	0.45	0.45	
			I _{OL} = 4.0 mA	2.3 to 2.7	0.4	0.4	
			I _{OL} = 8.0 mA	3.0 to 3.6	0.4	0.4	

New

V _{OH}	High-Level Output Voltage	V _{IH} = V _{IH} or V _{IL}	I _{OH} = -20 μA	0.9	0.75xV _{CC}	0.75xV _{CC}	V
V _{OH}	High-Level Output Voltage	V _{IH} = V _{IH} or V _{IL}	I _{OH} = -0.3 mA	1.1 to 1.3	0.75xV _{CC}	0.75xV _{CC}	
			I _{OH} = -1.7 mA	1.4 to 1.6	0.75xV _{CC}	0.75xV _{CC}	
			I _{OH} = -3.0 mA	1.65 to 1.95	V _{CC} -0.45	V _{CC} -0.45	
			I _{OH} = -4.0 mA	2.3 to 2.7	2.0	2.0	
			I _{OH} = -8.0 mA	3.0 to 3.6	2.48	2.48	
			I _{OH} = -8.0 mA	3.0 to 3.6	2.48	2.48	
V _{OL}	Low-Level Output Voltage	V _{IH} = V _{IH} or V _{IL}	I _{OL} = 20 μA	0.9			
			I _{OL} = 0.3 mA	1.1 to 1.3	0.25xV _{CC}	0.25xV _{CC}	
			I _{OL} = 1.7 mA	1.4 to 1.6	0.25xV _{CC}	0.25xV _{CC}	
			I _{OL} = 3.0 mA	1.65 to 1.95	0.45	0.45	
			I _{OL} = 4.0 mA	2.3 to 2.7	0.4	0.4	
			I _{OL} = 8.0 mA	3.0 to 3.6	0.4	0.4	

- Removed Limits at 0.9 Volts for Positive Input Threshold Voltage, Negative Threshold Voltage and Hysteresis Voltage.
- Removed minimum limits from Positive Input Threshold Voltage specification.
- Removed maximum limits from Negative Threshold Voltage specification.
- Corrected limits to align with die process.

Existing datasheet

Symbol	Parameter	Condition	V _{CC} (V)	T _A = 25°C			-55°C ≤ T _A ≤ 125°C		Unit
				Min	Typ	Max	Min	Max	
V _{IP}	Positive-Going Input Threshold Voltage		0.9	0.64	0.7	0.86	0.62	0.87	V
			1.1	0.73	0.81	0.95	0.71	1	
			1.4	0.86	0.94	1.16	0.84	1.2	
			1.65	0.95	1.06	1.25	0.94	1.3	
			2.3	1.22	1.36	1.6	1.18	1.65	
			3.0	1.51	1.8	2.05	1.38	2.1	
V _{IT}	Negative-Going Input Threshold Voltage		0.9	0.09	0.23	0.30	0.08	0.33	V
			1.1	0.15	0.33	0.39	0.12	0.43	
			1.4	0.3	0.47	0.54	0.25	0.55	
			1.65	0.35	0.6	0.65	0.3	0.65	
			2.3	0.55	0.85	0.88	0.5	0.88	
			3.0	0.95	1.13	1.18	0.9	1.16	
V _{IH}	Hysteresis Voltage		0.9	0.15	0.5	0.75	0.2	0.8	V
			1.1	0.15	0.5	0.75	0.2	0.8	
			1.4	0.15	0.5	0.75	0.2	0.8	
			1.65	0.15	0.5	0.75	0.2	0.8	
			2.3	0.15	0.5	0.75	0.2	0.8	
			3.0	0.25	0.65	0.85	0.3	0.9	

New

Symbol	Parameter	Conditions	V _{CC} (V)	T _A = 25°C			-55°C ≤ T _A ≤ 125°C		Unit
				Min	Typ	Max	Min	Max	
V _{IP}	Positive Input Threshold Voltage		0.9	-	0.7	-	-	-	V
			1.1 to 1.3	-	0.81	0.95	-	0.95	
			1.4 to 1.6	-	0.94	1.16	-	1.16	
			1.65 - 1.95	-	1.06	1.3	-	1.3	
			2.3 to < 2.7	-	1.36	1.73	-	1.73	
			2.7 to 3.6	-	1.8	2.24	-	2.24	
V _{IT}	Negative Input Threshold Voltage		0.9	-	0.23	-	-	-	V
			1.1 to 1.3	0.15	0.33	-	0.15	-	
			1.4 to 1.6	0.3	0.47	-	0.3	-	
			1.65 - 1.95	0.35	0.6	-	0.35	-	
			2.3 to < 2.7	0.55	0.85	-	0.55	-	
			2.7 to 3.6	0.95	1.13	-	0.95	-	
V _{IH}	Low-Level Input Voltage		0.9	-	0.27	-	-	-	V
			1.1 to 1.3	0.2	0.35	0.8	0.2	0.8	
			1.4 to 1.6	0.25	0.41	0.86	0.25	0.86	
			1.65 - 1.95	0.30	0.46	0.9	0.30	0.9	
			2.3 to < 2.7	0.40	0.56	1.05	0.40	1.05	
			2.7 to 3.6	0.49	0.59	1.1	0.49	1.1	

- Power Off Leakage Current specification added.
- Input Leakage Current specification adjusted to remove crossover with Power-Off Leakage Current specification.

I _{OFF}	Power Off Leakage Current	V _{IN} = 3.6 V or V _{OUT} = 3.6 V	0	-	-	1.0	-	5.0	μA
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I _{IN}	Input Leakage Current	0 ≤ V _{IN} ≤ 3.6 V	0 to 3.6	±0.1		±1.0		μA
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- Propagation Delay specification adjusted to remove limits at 0.9 volts.
- Minimum Limits removed from all Propagation Delay specifications.

Existing datasheet

Symbol	Parameter	Test Condition	V _{CC} (V)	T _A = 25°C			T _A = -55°C to +125°C		Unit
				Min	Typ	Max	Min	Max	
t _{PROP}	Propagation Delay, A or B to Y	C _L = 10 pF, R _L = 1 MΩ	0.9	-	12.2	14.4	-	18.0	ns
			1.1 to 1.3	-	8.8	12.4	-	16.2	
			1.4 to 1.6	-	5.0	8.5	-	10.0	
			1.65 to 1.95	-	3.6	6.2	-	6.7	
			2.3 to 2.7	-	2.7	3.9	-	4.4	
			3.0 to 3.6	-	2.1	3.1	-	3.7	
		C _L = 15 pF, R _L = 1 MΩ	0.9	-	13.0	16.0	-	18.0	ns
			1.1 to 1.3	-	7.8	12.0	-	16.0	
			1.4 to 1.6	-	5.9	9.3	-	11.2	
			1.65 to 1.95	-	4.5	6.9	-	7.1	
			2.3 to 2.7	-	3.0	4.4	-	5.0	
			3.0 to 3.6	-	2.4	3.4	-	3.9	
C _L = 30 pF, R _L = 1 MΩ	0.9	-	14.0	17.2	-	20.0	ns		
	1.1 to 1.3	-	11.0	14.1	-	17.8			
	1.4 to 1.6	-	8.0	12.1	-	15.9			
	1.65 to 1.95	-	6.0	9.2	-	9.6			
	2.3 to 2.7	-	3.9	5.7	-	6.1			
	3.0 to 3.6	-	3.0	4.4	-	4.8			

New

Symbol	Parameter	Test Condition	V _{CC} (V)	T _A = 25°C			T _A = -55°C to +125°C		Unit
				Min	Typ	Max	Min	Max	
t _{PROP}	Propagation Delay, A or B to Y	C _L = 10 pF, R _L = 1 MΩ	0.9	-	12.2	-	-	-	ns
			1.1 to 1.3	-	8.8	12.4	-	16.2	
			1.4 to 1.6	-	5.0	8.5	-	10.0	
			1.65 to 1.95	-	3.6	6.2	-	6.7	
			2.3 to 2.7	-	2.7	3.9	-	4.4	
			3.0 to 3.6	-	2.1	3.1	-	3.7	
		C _L = 15 pF, R _L = 1 MΩ	0.9	-	13.0	-	-	-	ns
			1.1 to 1.3	-	7.8	12.0	-	16.0	
			1.4 to 1.6	-	5.9	9.3	-	11.2	
			1.65 to 1.95	-	4.5	6.9	-	7.1	
			2.3 to 2.7	-	3.0	4.4	-	5.0	
			3.0 to 3.6	-	2.4	3.4	-	3.9	
C _L = 30 pF, R _L = 1 MΩ	0.9	-	14.0	-	-	-	ns		
	1.1 to 1.3	-	11.0	14.1	-	17.8			
	1.4 to 1.6	-	8.0	12.1	-	15.9			
	1.65 to 1.95	-	6.0	9.2	-	9.6			
	2.3 to 2.7	-	3.9	5.7	-	6.1			
	3.0 to 3.6	-	3.0	4.4	-	4.8			

Symbol	Parameter	Test Condition	V _{CC} (V)	T _A = 25 °C			T _A = -55°C to +125°C		Unit
				Min	Typ	Max	Min	Max	
t _{PHL}	Propagation Delay, A to Y	C _L = 10 pF, R _L = 1 MΩ	0.9	-	27.3	-	-	-	ns
			1.1 to 1.3	-	13.0	22.6	1.0	35.9	
			1.4 to 1.6	-	7.5	10.5	1.0	11.3	
			1.65 to 1.95	-	6.0	7.8	1.0	8.2	
			2.3 to 2.7	-	4.3	5.4	1.0	5.8	
			3.0 to 3.6	-	3.5	4.4	1.0	4.6	
		C _L = 15 pF, R _L = 1 MΩ	0.9	-	29.5	-	-	-	ns
			1.1 to 1.3	-	14.3	25.1	1.0	41.8	
			1.4 to 1.6	-	8.0	11.5	1.0	12.6	
			1.65 to 1.95	-	6.3	8.4	1.0	8.7	
			2.3 to 2.7	-	4.6	5.7	1.0	6.1	
			3.0 to 3.6	-	3.7	4.6	1.0	5.0	
		C _L = 30 pF, R _L = 1 MΩ	0.9	-	40.5	-	-	-	ns
			1.1 to 1.3	-	19.6	35.7	1.0	58.1	
			1.4 to 1.6	-	10.7	15.8	1.0	17.6	
1.65 to 1.95	-		7.8	10.7	1.0	11.7			
2.3 to 2.7	-		5.4	6.9	1.0	8.1			
3.0 to 3.6	-		4.3	5.2	1.0	6.1			

Symbol	Parameter	Test Condition	V _{CC} (V)	T _A = 25 °C			T _A = -55°C to +125°C		Unit
				Min	Typ	Max	Min	Max	
t _{PHL}	Propagation Delay, A or B to Y	C _L = 10 pF, R _L = 1 MΩ	0.9	-	12.2	-	-	-	
			1.1 to 1.3	-	8.8	12.4	-	16.2	
			1.4 to 1.6	-	5.0	8.5	-	10.0	
			1.65 to 1.95	-	3.6	6.2	-	6.7	
			2.3 to 2.7	-	2.7	3.9	-	4.4	
			3.0 to 3.6	-	2.1	3.1	-	3.7	
		C _L = 15 pF, R _L = 1 MΩ	0.9	-	13.0	-	-	-	ns
			1.1 to 1.3	-	7.8	12.0	-	16.0	
			1.4 to 1.6	-	5.9	9.3	-	11.2	
			1.65 to 1.95	-	4.5	6.9	-	7.1	
			2.3 to 2.7	-	3.0	4.4	-	5.0	
			3.0 to 3.6	-	2.4	3.4	-	3.9	
		C _L = 30 pF, R _L = 1 MΩ	0.9	-	14.0	-	-	-	ns
			1.1 to 1.3	-	11.0	14.1	-	17.8	
			1.4 to 1.6	-	8.0	12.1	-	15.9	
1.65 to 1.95	-		6.0	9.2	-	9.6			
2.3 to 2.7	-		3.9	5.7	-	6.1			
3.0 to 3.6	-		3.0	4.4	-	4.8			

NL17SV

- Maximum voltage rating changed from 4.6 volts to 4.3 volts to represent new die. (Excluding Automotive Devices)
- Thermal Resistance and Power Dissipation updated.
- Electrostatic Discharge updated to reflect JEDEC standard.

Existing datasheet

MAXIMUM RATINGS

Symbol	Rating	Value	Units
V _{CC}	DC Supply Voltage	-0.5 to +4.6	V
V _I	DC Input Voltage	-0.5 to +4.6	V
V _O	DC Output Voltage	-0.5 to V _{CC} + 0.5	V

New

MAXIMUM RATINGS

Symbol	Characteristics	Value	Unit
V _{CC}	DC Supply Voltage	-0.5 to +4.3	V
V _I	DC Input Voltage	-0.5 to +4.3	V
V _{OUT}	DC Output Voltage	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 +4.3

θ _{JA}	Thermal Resistance (Note 1)	250	°C/W
P _D	Power Dissipation in Still Air at 85°C	250	mW

θ _{JA}	Thermal Resistance (Note 2)	SC-88A	659	°C/W
		SC-74A	855	
		SOT-553	562	
		SOT-953	560	
		UDFN6	352	
P _D	Power Dissipation in Still Air	SC-88A	190	mW
		SC-74A	225	
		SOT-553	222	
		SOT-953	223	
		UDFN6	327	

V _{ESD}	ESD Withstand Voltage	Human Body Model (Note 2)	3000	V
		Machine Model (Note 3)	200	
V _{ESD}	ESD Withstand Voltage	Human Body Model (Note 2)	2000	V
		Machine Model (Note 3)	300	
V _{ESD}	ESD Withstand Voltage	Human Body Model (Note 2)	4000	V
		Machine Model (Note 3)	200	

V _{ESD}	ESD Withstand Voltage (Note 3)	Human Body Model Charged Device Model	2000 1000	V
t _{latchup}	Latchup Performance (Note 4)		±100	mA

- High Level Input Voltage and Low Level Input Voltage limits adjusted at 0.9 Volts.

Existing datasheet

DC CHARACTERISTICS – Digital Section (Voltages Referenced to GND)

Symbol	Parameter	Condition	V _{CC}	T _A = 25°C		T _A = -40 to 85°C		Units
				Min	Max	Min	Max	
V _{IH}	High Level Input Voltage		0.90	0.65 x V _{CC}	0.65 x V _{CC}			V
			1.10 ≤ V _{CC} ≤ 1.30	0.65 x V _{CC}	0.65 x V _{CC}			
			1.40 ≤ V _{CC} ≤ 1.60	0.65 x V _{CC}	0.65 x V _{CC}			
			1.65 ≤ V _{CC} ≤ 1.95	0.65 x V _{CC}	0.65 x V _{CC}			
			2.30 ≤ V _{CC} ≤ 2.70	1.6	1.6			
V _{IL}	Low Level Input Voltage		0.90	0.35 x V _{CC}	0.35 x V _{CC}			V
			1.10 ≤ V _{CC} ≤ 1.30	0.35 x V _{CC}	0.35 x V _{CC}			
			1.40 ≤ V _{CC} ≤ 1.60	0.35 x V _{CC}	0.35 x V _{CC}			
			1.65 ≤ V _{CC} ≤ 1.95	0.35 x V _{CC}	0.35 x V _{CC}			
			2.30 ≤ V _{CC} ≤ 2.70	0.7	0.7			

New

DC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Conditions	V _{CC} (V)	T _A = 25°C		T _A = -55°C to +125°C		Unit
				Min	Max	Min	Max	
V _{IH}	High-Level Input Voltage		0.9	V _{CC}		V _{CC}		V
			1.1 to 1.3	0.7xV _{CC}		0.7xV _{CC}		
			1.4 to 1.6	0.65xV _{CC}		0.65xV _{CC}		
			1.65 to 1.95	0.65xV _{CC}		0.65xV _{CC}		
			2.3 to 2.7	1.6		1.6		
			3.0 to 3.6	2.0		2.0		
V _{IL}	Low-Level Input Voltage		0.9	GND		GND		V
			1.1 to 1.3	0.3xV _{CC}		0.3xV _{CC}		
			1.4 to 1.6	0.35xV _{CC}		0.35xV _{CC}		
			1.65 to 1.95	0.35xV _{CC}		0.35xV _{CC}		
			2.3 to 2.7	0.7		0.7		
			3.0 to 3.6	0.8		0.8		

- High Level Output Voltage and Low Level Output Voltage adjusted to remove Limits at 0.9 Volts.

V _{OH}	High Level Output Voltage	I _{OH} = -100 µA	0.90	V _{CC} - 0.1	V _{CC} - 0.1			V	
			1.10 ≤ V _{CC} ≤ 1.30	V _{CC} - 0.1	V _{CC} - 0.1				
			1.40 ≤ V _{CC} ≤ 1.60	V _{CC} - 0.2	V _{CC} - 0.2				
			1.65 ≤ V _{CC} ≤ 1.95	V _{CC} - 0.2	V _{CC} - 0.2				
			2.30 ≤ V _{CC} ≤ 2.70	V _{CC} - 0.2	V _{CC} - 0.2				
			2.70 ≤ V _{CC} ≤ 3.60	V _{CC} - 0.2	V _{CC} - 0.2				
			I _{OH} = -2.0 mA	1.10 ≤ V _{CC} ≤ 1.30	0.75 x V _{CC}	0.75 x V _{CC}			
			I _{OH} = -4.0 mA	1.40 ≤ V _{CC} ≤ 1.60	0.75 x V _{CC}	0.75 x V _{CC}			
V _{OL}	Low Level Output Voltage	I _{OL} = 100 µA	0.90	0.1	0.1			V	
			1.10 ≤ V _{CC} ≤ 1.30	0.1	0.1				
			1.40 ≤ V _{CC} ≤ 1.60	0.2	0.2				
			1.65 ≤ V _{CC} ≤ 1.95	0.2	0.2				
			2.30 ≤ V _{CC} ≤ 2.70	0.2	0.2				
			2.70 ≤ V _{CC} ≤ 3.60	0.2	0.2				
			I _{OL} = 2.0 mA	1.10 ≤ V _{CC} ≤ 1.30	0.25 x V _{CC}	0.25 x V _{CC}			
			I _{OL} = 4.0 mA	1.40 ≤ V _{CC} ≤ 1.60	0.25 x V _{CC}	0.25 x V _{CC}			

V _{OH}	High Level Output Voltage	I _{OH} = -100 µA	0.90	V _{CC} - 0.1	V _{CC} - 0.1			V	
			1.10 ≤ V _{CC} ≤ 1.30	V _{CC} - 0.1	V _{CC} - 0.1				
			1.40 ≤ V _{CC} ≤ 1.60	V _{CC} - 0.2	V _{CC} - 0.2				
			1.65 ≤ V _{CC} ≤ 1.95	V _{CC} - 0.2	V _{CC} - 0.2				
			2.30 ≤ V _{CC} ≤ 2.70	V _{CC} - 0.2	V _{CC} - 0.2				
			2.70 ≤ V _{CC} ≤ 3.60	V _{CC} - 0.2	V _{CC} - 0.2				
			I _{OH} = -2.0 mA	1.10 ≤ V _{CC} ≤ 1.30	0.75 x V _{CC}	0.75 x V _{CC}			
			I _{OH} = -4.0 mA	1.40 ≤ V _{CC} ≤ 1.60	0.75 x V _{CC}	0.75 x V _{CC}			
V _{OL}	Low Level Output Voltage	I _{OL} = 100 µA	0.90	0.1	0.1			V	
			1.10 ≤ V _{CC} ≤ 1.30	0.1	0.1				
			1.40 ≤ V _{CC} ≤ 1.60	0.2	0.2				
			1.65 ≤ V _{CC} ≤ 1.95	0.2	0.2				
			2.30 ≤ V _{CC} ≤ 2.70	0.2	0.2				
			2.70 ≤ V _{CC} ≤ 3.60	0.2	0.2				
			I _{OL} = 2.0 mA	1.10 ≤ V _{CC} ≤ 1.30	0.25 x V _{CC}	0.25 x V _{CC}			
			I _{OL} = 4.0 mA	1.40 ≤ V _{CC} ≤ 1.60	0.25 x V _{CC}	0.25 x V _{CC}			

- Remove minimum limits from all propagation delay specifications.

Existing datasheet

AC CHARACTERISTICS (Input t_r = t_f = 3.0 nS)

Symbol	Parameter	Condition	-40°C			25°C			85°C			Units	
			Min	Typ	Max	Min	Typ	Max	Min	Typ	Max		
T _{PHL} T _{PLH}	Propagation Delay	C _L = 15 pF, R _L = 1.0 MΩ	0.90	13								nS	
			C _L = 15 pF, R _L = 2.0 kΩ	1.10 ≤ V _{CC} ≤ 1.30	3.0	6.0	15.8	1.0	18.6				nS
			1.40 ≤ V _{CC} ≤ 1.60	1.0	3.2	6.7	1.0	9.7					
T _{PHL} T _{PLH}	Propagation Delay	C _L = 30 pF, R _L = 500 Ω	1.65 ≤ V _{CC} ≤ 1.95	1.0	2.0	6.0	1.0	6.8			nS		
			2.30 ≤ V _{CC} ≤ 2.70	0.8	1.2	4.1	0.7	4.7					
			2.70 ≤ V _{CC} ≤ 3.60	0.7	1.0	3.3	0.6	4.0					

New

AC CHARACTERISTICS (Input t_r = t_f = 3.0 nS)

Symbol	Parameter	Condition	-40°C			25°C			85°C			Units	
			Min	Typ	Max	Min	Typ	Max	Min	Typ	Max		
T _{PHL} T _{PLH}	Propagation Delay	C _L = 15 pF, R _L = 1.0 MΩ	0.90	13								nS	
			C _L = 15 pF, R _L = 2.0 kΩ	1.10 ≤ V _{CC} ≤ 1.30		6.0	15.8		18.6				nS
			1.40 ≤ V _{CC} ≤ 1.60		3.2	6.7		9.7					
T _{PHL} T _{PLH}	Propagation Delay	C _L = 30 pF, R _L = 500 Ω	1.65 ≤ V _{CC} ≤ 1.95		2.0	6.0		6.8			nS		
			2.30 ≤ V _{CC} ≤ 2.70		1.2	4.1		4.7					
			2.70 ≤ V _{CC} ≤ 3.60		1.0	3.3		4.0					

NC7SP

- Adjusted Absolute Maximum Voltage to match new process.

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	Min.	Max.	Unit
V_{CC}	Supply Voltage	-0.5	4.6	V
V_{IN}	DC Input Voltage	-0.5	4.6	V
V_{OUT}	DC Output Voltage			
	HIGH or LOW State ⁽⁴⁾ $V_{CC}=0V$	-0.5	$V_{CC} + 0.5$	V

New

Absolute Maximum Ratings (Note 1)

Supply Voltage (V_{CC})	-0.5V to +4.3V
DC Input Voltage (V_{IN})	-0.5V to +4.3V
DC Output Voltage (V_{OUT})	
HIGH or LOW State (Note 2)	-0.5V to $V_{CC} + 0.5V$
$V_{CC} = 0V$	-0.5V to +4.3V

Symbol	Parameter	Min.	Max.	Unit
V_{CC}	Supply Voltage	-0.5	4.3	V
V_{IN}	DC Input Voltage	-0.5	4.3	V
V_{OUT}	DC Output Voltage			
	HIGH or LOW State ⁽⁴⁾ $V_{CC}=0V$	-0.5	$V_{CC} + 0.5$	V

- Adjusted Power Dissipation to reflect new die.
- Adjusted Thermal Resistance to reflect new die.

Existing datasheet

P_D	Power Dissipation at +85°C	SC70-5	150	mW
		MicroPak™-6	130	
		MicroPak2™-6	120	

θ_{JA}	Thermal Resistance	SC70-5	425	°C/W
		MicroPak™-6	500	
		MicroPak2™-6	580	

New

P_D	Power Dissipation In Still Air	SC-74A	225	mW
		SC70-5	190	
		MicroPak™-6	327	
		MicroPak2™-6	327	

θ_{JA}	Thermal Resistance	SC-74A	555	°C/W
		SC70-5	659	
		MicroPak™-6	382	
		MicroPak2™-6	382	

- High Level Input Voltage and Low Level Input Voltage specification adjusted to remove limits at 0.9 Volts.
- High Level Output Voltage and Low Level Output Voltage specifications adjusted to remove limits at 0.9 Volts.

Existing datasheet

DC Electrical Characteristics

Symbol	Parameter	V _{CC}	Conditions	T _A =25°C		T _A =-40 to 85°C		Units
				Min.	Max.	Min.	Max.	
V _{IH}	HIGH Level Input Voltage	0.90		0.65 × V _{CC}	0.65 × V _{CC}			V
		1.10 ≤ V _{CC} ≤ 1.30		0.65 × V _{CC}	0.65 × V _{CC}			
		1.40 ≤ V _{CC} ≤ 1.60		0.65 × V _{CC}	0.65 × V _{CC}			
		1.65 ≤ V _{CC} ≤ 1.95		0.65 × V _{CC}	0.65 × V _{CC}			
		2.30 ≤ V _{CC} ≤ 2.70		1.6	1.6			
		3.00 ≤ V _{CC} ≤ 3.60		2.1	2.1			
V _{IL}	LOW Level Input Voltage	0.90		0.35 × V _{CC}	0.35 × V _{CC}			V
		1.10 ≤ V _{CC} ≤ 1.30		0.35 × V _{CC}	0.35 × V _{CC}			
		1.40 ≤ V _{CC} ≤ 1.60		0.35 × V _{CC}	0.35 × V _{CC}			
		1.65 ≤ V _{CC} ≤ 1.95		0.35 × V _{CC}	0.35 × V _{CC}			
		2.30 ≤ V _{CC} ≤ 2.70		0.7	0.7			
		3.00 ≤ V _{CC} ≤ 3.60		0.9	0.9			
V _{OIH}	HIGH Level Output Voltage	0.90		V _{CC} - 0.1	V _{CC} - 0.1			V
		1.10 ≤ V _{CC} ≤ 1.30		V _{CC} - 0.1	V _{CC} - 0.1			
		1.40 ≤ V _{CC} ≤ 1.60		V _{CC} - 0.1	V _{CC} - 0.1			
		1.65 ≤ V _{CC} ≤ 1.95	I _{OH} =20µA	V _{CC} - 0.1	V _{CC} - 0.1			
		2.30 ≤ V _{CC} ≤ 2.70		V _{CC} - 0.1	V _{CC} - 0.1			
		3.00 ≤ V _{CC} ≤ 3.60		V _{CC} - 0.1	V _{CC} - 0.1			
		1.10 ≤ V _{CC} ≤ 1.30	I _{OH} =0.5mA	0.75 × V _{CC}	0.75 × V _{CC}			
		1.40 ≤ V _{CC} ≤ 1.60	I _{OH} =1mA	1.07	0.99			
		1.65 ≤ V _{CC} ≤ 1.95	I _{OH} =1.5mA	1.24	1.22			
		2.30 ≤ V _{CC} ≤ 2.70	I _{OH} =2.1mA	1.95	1.87			
		3.00 ≤ V _{CC} ≤ 3.60	I _{OH} =2.6mA	2.61	2.55			
		V _{OL}	LOW Level Output Voltage	0.90		0.1	0.1	
1.10 ≤ V _{CC} ≤ 1.30				0.1	0.1			
1.40 ≤ V _{CC} ≤ 1.60				0.1	0.1			
1.65 ≤ V _{CC} ≤ 1.95	I _{OL} =20µA			0.1	0.1			
2.30 ≤ V _{CC} ≤ 2.70				0.1	0.1			
3.00 ≤ V _{CC} ≤ 3.60				0.1	0.1			
1.10 ≤ V _{CC} ≤ 1.30	I _{OL} =0.5mA			0.30 × V _{CC}	0.30 × V _{CC}			
1.40 ≤ V _{CC} ≤ 1.60	I _{OL} =1mA			0.31	0.37			
1.65 ≤ V _{CC} ≤ 1.95	I _{OL} =1.5mA			0.31	0.35			
2.30 ≤ V _{CC} ≤ 2.70	I _{OL} =2.1mA			0.31	0.33			
3.00 ≤ V _{CC} ≤ 3.60	I _{OL} =2.6mA			0.31	0.33			

New

DC Electrical Characteristics

Symbol	Parameter	V _{CC}	Conditions	T _A =25°C		T _A =-40 to 85°C		Units
				Min.	Max.	Min.	Max.	
V _{IH}	HIGH Level Input Voltage	0.90		V _{CC}	V _{CC}			V
		1.10 ≤ V _{CC} ≤ 1.30		0.65 × V _{CC}	0.65 × V _{CC}			
		1.40 ≤ V _{CC} ≤ 1.60		0.65 × V _{CC}	0.65 × V _{CC}			
		1.65 ≤ V _{CC} ≤ 1.95		0.65 × V _{CC}	0.65 × V _{CC}			
		2.30 ≤ V _{CC} ≤ 2.70		1.6	1.6			
		3.00 ≤ V _{CC} ≤ 3.60		2.1	2.1			
V _{IL}	LOW Level Input Voltage	0.90		GND	GND			V
		1.10 ≤ V _{CC} ≤ 1.30		0.35 × V _{CC}	0.35 × V _{CC}			
		1.40 ≤ V _{CC} ≤ 1.60		0.35 × V _{CC}	0.35 × V _{CC}			
		1.65 ≤ V _{CC} ≤ 1.95		0.35 × V _{CC}	0.35 × V _{CC}			
		2.30 ≤ V _{CC} ≤ 2.70		0.7	0.7			
		3.00 ≤ V _{CC} ≤ 3.60		0.9	0.9			
V _{OIH}	HIGH Level Output Voltage	0.90		V _{CC} - 0.1	V _{CC} - 0.1			V
		1.10 ≤ V _{CC} ≤ 1.30		V _{CC} - 0.1	V _{CC} - 0.1			
		1.40 ≤ V _{CC} ≤ 1.60		V _{CC} - 0.1	V _{CC} - 0.1			
		1.65 ≤ V _{CC} ≤ 1.95	I _{OH} =20µA	V _{CC} - 0.1	V _{CC} - 0.1			
		2.30 ≤ V _{CC} ≤ 2.70		V _{CC} - 0.1	V _{CC} - 0.1			
		3.00 ≤ V _{CC} ≤ 3.60		V _{CC} - 0.1	V _{CC} - 0.1			
		1.10 ≤ V _{CC} ≤ 1.30	I _{OH} =0.5mA	0.75 × V _{CC}	0.75 × V _{CC}			
		1.40 ≤ V _{CC} ≤ 1.60	I _{OH} =1mA	1.07	0.99			
		1.65 ≤ V _{CC} ≤ 1.95	I _{OH} =1.5mA	1.24	1.22			
		2.30 ≤ V _{CC} ≤ 2.70	I _{OH} =2.1mA	1.95	1.87			
		3.00 ≤ V _{CC} ≤ 3.60	I _{OH} =2.6mA	2.61	2.55			
		V _{OL}	LOW Level Output Voltage	0.90		0.1	0.1	
1.10 ≤ V _{CC} ≤ 1.30				0.1	0.1			
1.40 ≤ V _{CC} ≤ 1.60				0.1	0.1			
1.65 ≤ V _{CC} ≤ 1.95	I _{OL} =20µA			0.1	0.1			
2.30 ≤ V _{CC} ≤ 2.70				0.1	0.1			
3.00 ≤ V _{CC} ≤ 3.60				0.1	0.1			
1.10 ≤ V _{CC} ≤ 1.30	I _{OL} =0.5mA			0.30 × V _{CC}	0.30 × V _{CC}			
1.40 ≤ V _{CC} ≤ 1.60	I _{OL} =1mA			0.31	0.37			
1.65 ≤ V _{CC} ≤ 1.95	I _{OL} =1.5mA			0.31	0.35			
2.30 ≤ V _{CC} ≤ 2.70	I _{OL} =2.1mA			0.31	0.33			
3.00 ≤ V _{CC} ≤ 3.60	I _{OL} =2.6mA			0.31	0.33			

Existing datasheet

DC Electrical Characteristics

Symbol	Parameter	V _{CC} (V)	T _A = -25°C		T _A = -40°C to +85°C		Units	Conditions
			Min	Max	Min	Max		
V _{IH}	HIGH Level Input Voltage	0.90		0.65 × V _{CC}	0.65 × V _{CC}		V	
		1.10 ≤ V _{CC} ≤ 1.30		0.65 × V _{CC}	0.65 × V _{CC}			
		1.40 ≤ V _{CC} ≤ 1.60		0.65 × V _{CC}	0.65 × V _{CC}			
		1.65 ≤ V _{CC} ≤ 1.95		0.65 × V _{CC}	0.65 × V _{CC}			
		2.30 ≤ V _{CC} ≤ 2.70		1.6	1.6			
		3.00 ≤ V _{CC} ≤ 3.60		2.1	2.1			
V _{IL}	LOW Level Input Voltage	0.90		0.35 × V _{CC}	0.35 × V _{CC}		V	
		1.10 ≤ V _{CC} ≤ 1.30		0.35 × V _{CC}	0.35 × V _{CC}			
		1.40 ≤ V _{CC} ≤ 1.60		0.35 × V _{CC}	0.35 × V _{CC}			
		1.65 ≤ V _{CC} ≤ 1.95		0.35 × V _{CC}	0.35 × V _{CC}			
		2.30 ≤ V _{CC} ≤ 2.70		0.7	0.7			
		3.00 ≤ V _{CC} ≤ 3.60		0.9	0.9			
V _{OL}	LOW Level Output Voltage	0.90		0.1	0.1		V	
		1.10 ≤ V _{CC} ≤ 1.30		0.1	0.1			
		1.40 ≤ V _{CC} ≤ 1.60		0.1	0.1			
		1.65 ≤ V _{CC} ≤ 1.95		0.1	0.1			
		2.30 ≤ V _{CC} ≤ 2.70		0.1	0.1			
		3.00 ≤ V _{CC} ≤ 3.60		0.1	0.1			
		1.10 ≤ V _{CC} ≤ 1.30		0.30 × V _{CC}	0.30 × V _{CC}			
		1.40 ≤ V _{CC} ≤ 1.60		0.31	0.37			
		1.65 ≤ V _{CC} ≤ 1.95		0.31	0.35			
		2.30 ≤ V _{CC} ≤ 2.70		0.31	0.33			
		3.00 ≤ V _{CC} ≤ 3.60		0.31	0.33			

New

DC Electrical Characteristics

Symbol	Parameter	V _{CC} (V)	T _A = -25°C		T _A = -40°C to +85°C		Units	Conditions
			Min	Max	Min	Max		
V _{IH}	HIGH Level Input Voltage	0.90		V _{CC}	V _{CC}		V	
		1.10 ≤ V _{CC} ≤ 1.30		0.65 × V _{CC}	0.65 × V _{CC}			
		1.40 ≤ V _{CC} ≤ 1.60		0.65 × V _{CC}	0.65 × V _{CC}			
		1.65 ≤ V _{CC} ≤ 1.95		0.65 × V _{CC}	0.65 × V _{CC}			
		2.30 ≤ V _{CC} ≤ 2.70		1.6	1.6			
		3.00 ≤ V _{CC} ≤ 3.60		2.1	2.1			
V _{IL}	LOW Level Input Voltage	0.90		GND	GND		V	
		1.10 ≤ V _{CC} ≤ 1.30		0.35 × V _{CC}	0.35 × V _{CC}			
		1.40 ≤ V _{CC} ≤ 1.60		0.35 × V _{CC}	0.35 × V _{CC}			
		1.65 ≤ V _{CC} ≤ 1.95		0.35 × V _{CC}	0.35 × V _{CC}			
		2.30 ≤ V _{CC} ≤ 2.70		0.7	0.7			
		3.00 ≤ V _{CC} ≤ 3.60		0.9	0.9			
V _{OL}	LOW Level Output Voltage	0.90		0.1	0.1		V	
		1.10 ≤ V _{CC} ≤ 1.30		0.1	0.1			
		1.40 ≤ V _{CC} ≤ 1.60		0.1	0.1			
		1.65 ≤ V _{CC} ≤ 1.95		0.1	0.1			
		2.30 ≤ V _{CC} ≤ 2.70		0.1	0.1			
		3.00 ≤ V _{CC} ≤ 3.60		0.1	0.1			
		1.10 ≤ V _{CC} ≤ 1.30		0.30 × V _{CC}	0.30 × V _{CC}			
		1.40 ≤ V _{CC} ≤ 1.60		0.31	0.37			
		1.65 ≤ V _{CC} ≤ 1.95		0.31	0.35			
		2.30 ≤ V _{CC} ≤ 2.70		0.31	0.33			
		3.00 ≤ V _{CC} ≤ 3.60		0.31	0.33			

- Positive Threshold Voltage adjusted to remove lower limits and remove limits at 0.90 Volts.
- Negative Threshold Voltage adjusted to remove upper limits and remove limits at 0.90 Volts.
- Hysteresis Voltage adjusted to remove limits at 0.90 Volts.

DC Electrical Characteristics

Symbol	Parameter	Conditions	V _{CC} (V)	T _A =+25°C		T _A =-40°C to +85°C		Units	
				Min.	Max.	Min.	Max.		
V _{th}	Positive Threshold Voltage		0.90	0.30	0.60	0.30	0.60	V	
				1.10	0.40	1.00	0.40		1.00
				1.40	0.50	1.20	0.50		1.20
				1.65	0.70	1.50	0.70		1.50
				2.30	1.00	1.90	1.00		1.90
3.00	1.50	2.60	1.50	2.60					
V _{th}	Negative Threshold Voltage		0.90	0.10	0.60	0.10	0.60	V	
				1.10	0.15	0.70	0.15		0.70
				1.40	0.20	0.80	0.20		0.80
				1.65	0.25	0.90	0.25		0.90
				2.30	0.40	1.15	0.40		1.15
3.00	0.6	1.50	0.60	1.50					
V _h	Hysteresis Voltage		0.90	0.07	0.50	0.07	0.50	V	
				1.10	0.08	0.60	0.08		0.60
				1.40	0.09	0.80	0.09		0.80
				1.65	0.10	1.00	0.10		1.00
				2.30	0.25	1.10	0.25		1.10
3.00	0.60	1.80	0.60	1.80					

DC Electrical Characteristics

Symbol	Parameter	Conditions	V _{CC} (V)	T _A =+25°C		T _A =-40°C to +85°C		Units	
				Min.	Max.	Min.	Max.		
V _{th}	Positive Threshold Voltage		0.90					V	
				1.10		1.00			1.00
				1.40		1.20			1.20
				1.65		1.50			1.50
				2.30		1.90			1.90
3.00		2.60		2.60					
V _{th}	Negative Threshold Voltage		0.90					V	
				1.10	0.15		0.15		
				1.40	0.20		0.20		
				1.65	0.25		0.25		
				2.30	0.40		0.40		
3.00	0.6		0.60						
V _h	Hysteresis Voltage		0.90					V	
				1.10	0.08	0.60	0.08		0.60
				1.40	0.09	0.80	0.09		0.80
				1.65	0.10	1.00	0.10		1.00
				2.30	0.25	1.10	0.25		1.10
3.00	0.60	1.80	0.60	1.80					

- Removed Minimum limits from all propagation delays and Output enable Time and Output Disable Time specifications.

Existing datasheet

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 _{PLZ}	Propagation Delay	0.90		24				ns	C _L = 10 pF R _D = 5000Ω	Figures 1.2	
			1.10 ≤ V _{CC} ≤ 1.30	4.0	9	18.7	3.5				30.9
			1.40 ≤ V _{CC} ≤ 1.60	2.0	6	12.4	1.5				13.9
			1.65 ≤ V _{CC} ≤ 1.95	1.5	5	9.6	1.0				12.1
			2.30 ≤ V _{CC} ≤ 2.70	1.0	4	9.0	0.8				10.0
3.00 ≤ V _{CC} ≤ 3.60	1.0	3	8.7	0.5	9.0						
t _{PLZ}	Propagation Delay	0.90		27				ns	C _L = 15 pF R _D = 5000Ω	Figures 1.2	
			1.10 ≤ V _{CC} ≤ 1.30	5.0	10	20.2	4.5				33.9
			1.40 ≤ V _{CC} ≤ 1.60	3.0	7	13.3	2.5				16.0
			1.65 ≤ V _{CC} ≤ 1.95	2.0	5	10.3	2.0				12.6
			2.30 ≤ V _{CC} ≤ 2.70	1.5	4	9.4	1.0				10.2
3.00 ≤ V _{CC} ≤ 3.60	1.0	3	9.1	0.5	9.7						
t _{PLZ}	Propagation Delay	0.90		34				ns	C _L = 30 pF R _D = 5000Ω	Figures 1.2	
			1.10 ≤ V _{CC} ≤ 1.30	6.0	12	24.0	5.0				43.0
			1.40 ≤ V _{CC} ≤ 1.60	4.0	8	16.0	3.0				18.0
			1.65 ≤ V _{CC} ≤ 1.95	2.0	6	12.0	2.0				14.0
			2.30 ≤ V _{CC} ≤ 2.70	1.0	5	11.0	1.0				12.0
3.00 ≤ V _{CC} ≤ 3.60	0.8	4	10.0	0.5	11.0						

New

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 _{PLZ}	Propagation Delay	0.90		24				ns	C _L = 10 pF R _D = 5000Ω	Figures 1.2	
			1.10 ≤ V _{CC} ≤ 1.30		9	18.7					30.9
			1.40 ≤ V _{CC} ≤ 1.60		6	12.4					13.9
			1.65 ≤ V _{CC} ≤ 1.95		5	9.6					12.1
			2.30 ≤ V _{CC} ≤ 2.70		4	9.0					10.0
3.00 ≤ V _{CC} ≤ 3.60		3	8.7		9.0						
t _{PLZ}	Propagation Delay	0.90		27				ns	C _L = 15 pF R _D = 5000Ω	Figures 1.2	
			1.10 ≤ V _{CC} ≤ 1.30		10	20.2					33.9
			1.40 ≤ V _{CC} ≤ 1.60		7	13.3					16.0
			1.65 ≤ V _{CC} ≤ 1.95		5	10.3					12.6
			2.30 ≤ V _{CC} ≤ 2.70		4	9.4					10.2
3.00 ≤ V _{CC} ≤ 3.60		3	9.1		9.7						
t _{PLZ}	Propagation Delay	0.90		34				ns	C _L = 30 pF R _D = 5000Ω	Figures 1.2	
			1.10 ≤ V _{CC} ≤ 1.30		12	24.0					43.0
			1.40 ≤ V _{CC} ≤ 1.60		8	16.0					18.0
			1.65 ≤ V _{CC} ≤ 1.95		6	12.0					14.0
			2.30 ≤ V _{CC} ≤ 2.70		5	11.0					12.0
3.00 ≤ V _{CC} ≤ 3.60		4	10.0		11.0						

AC Electrical Characteristics (Continued)

Symbol	Parameter	V _{CC}	Conditions	T _A =+25°C		T _A =-40 to +85°C		Units	Figure		
				Min.	Typ.	Min.	Typ.			Min.	
t _{enL} , t _{enH}	Propagation Delay	0.90	C _L =30pF, R _D =1MΩ		34			ns	Figure 5 Figure 6		
				1.10 ≤ V _{CC} ≤ 1.30	5.5	12.0	23.4			5.0	51.1
				1.40 ≤ V _{CC} ≤ 1.60	4.0	8.0	13.8			3.0	17.7
				1.65 ≤ V _{CC} ≤ 1.95	2.0	6.0	10.6			2.0	14.0
				2.30 ≤ V _{CC} ≤ 2.70	1.0	5.0	7.8			1.0	9.9
3.00 ≤ V _{CC} ≤ 3.60	0.8	4.0	6.4	0.5	8.9						
t _{ozL} , t _{ozH}	Output Enable Time	0.90	C _L =30pF, R _D =5000Ω		37			ns	Figure 5 Figure 6		
				1.10 ≤ V _{CC} ≤ 1.30	6.0	13.0	24.4			5.0	51.9
				1.40 ≤ V _{CC} ≤ 1.60	4.0	8.0	14.5			3.0	17.9
				1.65 ≤ V _{CC} ≤ 1.95	2.0	6.0	11.7			2.0	14.7
				2.30 ≤ V _{CC} ≤ 2.70	1.0	5.0	9.1			1.0	11.1
3.00 ≤ V _{CC} ≤ 3.60	0.8	4.0	8.1	0.5	10.1						
t _{ovL} , t _{ovH}	Output Disable Time	0.90	C _L =30pF, R _D =5000Ω		36			ns	Figure 5 Figure 6		
				1.10 ≤ V _{CC} ≤ 1.30	6.0	13.0	24.8			5.0	53.5
				1.40 ≤ V _{CC} ≤ 1.60	4.0	8.0	17.1			3.0	21.1
				1.65 ≤ V _{CC} ≤ 1.95	2.0	6.0	16.5			2.0	20.5
				2.30 ≤ V _{CC} ≤ 2.70	1.0	5.0	15.2			1.0	16.7
3.00 ≤ V _{CC} ≤ 3.60	0.8	4.0	14.8	0.5	16.3						

AC Electrical Characteristics (Continued)

Symbol	Parameter	V _{CC}	Conditions	T _A =+25°C		T _A =-40 to +85°C		Units	Figure		
				Min.	Typ.	Max.	Min.			Max.	
t _{enL} , t _{enH}	Propagation Delay	0.90	C _L =30pF, R _D =1MΩ		34			ns	Figure 5 Figure 6		
				1.10 ≤ V _{CC} ≤ 1.30		12.0	23.4				51.1
				1.40 ≤ V _{CC} ≤ 1.60		8.0	13.8				17.7
				1.65 ≤ V _{CC} ≤ 1.95		6.0	10.6				14.0
				2.30 ≤ V _{CC} ≤ 2.70		5.0	7.8				9.9
3.00 ≤ V _{CC} ≤ 3.60		4.0	6.4		8.9						
t _{ozL} , t _{ozH}	Output Enable Time	0.90	C _L =30pF, R _D =5000Ω		37			ns	Figure 5 Figure 6		
				1.10 ≤ V _{CC} ≤ 1.30		13.0	24.4				51.9
				1.40 ≤ V _{CC} ≤ 1.60		8.0	14.5				17.9
				1.65 ≤ V _{CC} ≤ 1.95		6.0	11.7				14.7
				2.30 ≤ V _{CC} ≤ 2.70		5.0	9.1				11.1
3.00 ≤ V _{CC} ≤ 3.60		4.0	8.1		10.1						
t _{ovL} , t _{ovH}	Output Disable Time	0.90	C _L =30pF, R _D =5000Ω		36			ns	Figure 5 Figure 6		
				1.10 ≤ V _{CC} ≤ 1.30		13.0	24.8				53.5
				1.40 ≤ V _{CC} ≤ 1.60		8.0	17.1				21.1
				1.65 ≤ V _{CC} ≤ 1.95		6.0	16.5				20.5
				2.30 ≤ V _{CC} ≤ 2.70		5.0	15.2				16.7
3.00 ≤ V _{CC} ≤ 3.60		4.0	14.8		16.3						

- Maximum limits adjusted for the NC7SP125 and NC7SP126 on some propagation delays, Output Enable times and Output Disable Times.
- Minimum limits removed from all propagation delays, Output Enable Times and Output Disable Times.

Existing datasheet

AC Electrical Characteristics

Symbol	Parameter	V _{CC}	Conditions	T _A =+25°C		T _A =-40 to +85°C		Units	Figure
				Min.	Typ.	Min.	Max.		
t _{PHL} , t _{PLH}	Propagation Delay	0.90	C _L =10pF, R _D =1MΩ		26			ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		4.0	10.0	19.1	3.5	39.6	
		1.40 ≤ V _{CC} ≤ 1.60		2.0	6.0	11.2	1.5	14.5	
		1.65 ≤ V _{CC} ≤ 1.95		1.5	5.0	8.6	1.0	11.6	
		2.30 ≤ V _{CC} ≤ 2.70		1.0	4.0	6.3	0.8	8.2	
3.00 ≤ V _{CC} ≤ 3.60	1.0	3.0	5.3	0.5	7.2				
t _{OL} , t _{OLH}	Output Enable Time	0.90	C _L =10pF, R _D =5000Ω		29			ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		4.0	8.0	17.5	3.5	40.4	
		1.40 ≤ V _{CC} ≤ 1.60		2.0	6.0	11.9	1.5	14.8	
		1.65 ≤ V _{CC} ≤ 1.95		1.5	5.0	9.7	1.0	12.3	
		2.30 ≤ V _{CC} ≤ 2.70		1.0	4.0	7.7	0.8	10.5	
3.00 ≤ V _{CC} ≤ 3.60	1.0	3.0	6.9	0.5	8.6				
t _{PHZ} , t _{PLZ}	Output Disable Time	0.90	C _L =10pF, R _D =5000Ω		28			ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		4.0	8.0	20.5	3.5	42.0	
		1.40 ≤ V _{CC} ≤ 1.60		2.0	6.0	15.3	1.5	18.0	
		1.65 ≤ V _{CC} ≤ 1.95		1.5	5.0	14.7	1.0	17.8	
		2.30 ≤ V _{CC} ≤ 2.70		1.0	4.0	13.7	0.8	15.0	
3.00 ≤ V _{CC} ≤ 3.60	1.0	3.0	13.5	0.5	14.8				
t _{PHL} , t _{PLH}	Propagation Delay	0.90	C _L =15pF, R _D =1MΩ		28			ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		5.0	10.0	20.5	4.5	42.5	
		1.40 ≤ V _{CC} ≤ 1.60		3.0	7.0	11.8	2.5	15.4	
		1.65 ≤ V _{CC} ≤ 1.95		2.0	5.0	9.1	2.0	12.2	
		2.30 ≤ V _{CC} ≤ 2.70		1.5	4.0	6.6	1.0	8.6	
3.00 ≤ V _{CC} ≤ 3.60	1.0	3.0	5.6	0.5	7.5				
t _{OL} , t _{OLH}	Output Enable Time	0.90	C _L =15pF, R _D =5000Ω		31			ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		5.0	11.0	18.2	4.5	43.3	
		1.40 ≤ V _{CC} ≤ 1.60		3.0	7.0	12.5	2.5	15.5	
		1.65 ≤ V _{CC} ≤ 1.95		2.0	5.0	10.2	2.0	12.9	
		2.30 ≤ V _{CC} ≤ 2.70		1.5	4.0	8.0	1.0	9.9	
3.00 ≤ V _{CC} ≤ 3.60	1.0	3.0	7.2	0.5	8.9				
t _{PHZ} , t _{PLZ}	Output Disable Time	0.90	C _L =15pF, R _D =5000Ω		30			ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		5.0	11.0	21.6	4.5	44.9	
		1.40 ≤ V _{CC} ≤ 1.60		3.0	7.0	15.9	2.5	18.8	
		1.65 ≤ V _{CC} ≤ 1.95		2.0	5.0	15.2	2.0	18.2	
		2.30 ≤ V _{CC} ≤ 2.70		1.5	4.0	14.1	1.0	15.4	
3.00 ≤ V _{CC} ≤ 3.60	1.0	3.0	13.9	0.5	15.1				

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AC Electrical Characteristics (Continued)

Symbol	Parameter	V _{CC}	Conditions	T _A =+25°C		T _A =-40 to +85°C		Units	Figure
				Min.	Typ.	Min.	Typ.		
t _{PHL} , t _{PLH}	Propagation Delay	0.90	C _L =30pF, R _D =1MΩ		34			ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		5.5	12.0	23.4	5.0	51.1	
		1.40 ≤ V _{CC} ≤ 1.60		4.0	8.0	13.8	3.0	17.7	
		1.65 ≤ V _{CC} ≤ 1.95		2.0	6.0	10.6	2.0	14.0	
		2.30 ≤ V _{CC} ≤ 2.70		1.0	5.0	7.6	1.0	9.9	
3.00 ≤ V _{CC} ≤ 3.60	0.8	4.0	6.4	0.5	8.9				
t _{OL} , t _{OLH}	Output Enable Time	0.90	C _L =30pF, R _D =5000Ω		37			ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		6.0	13.0	24.4	5.0	51.9	
		1.40 ≤ V _{CC} ≤ 1.60		4.0	8.0	14.5	3.0	17.9	
		1.65 ≤ V _{CC} ≤ 1.95		2.0	6.0	11.7	2.0	14.7	
		2.30 ≤ V _{CC} ≤ 2.70		1.0	5.0	9.1	1.0	11.1	
3.00 ≤ V _{CC} ≤ 3.60	0.8	4.0	8.1	0.5	10.1				
t _{PHZ} , t _{PLZ}	Output Disable Time	0.90	C _L =30pF, R _D =5000Ω		36			ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		6.0	13.0	24.8	5.0	53.5	
		1.40 ≤ V _{CC} ≤ 1.60		4.0	8.0	17.1	3.0	21.1	
		1.65 ≤ V _{CC} ≤ 1.95		2.0	6.0	16.5	2.0	20.5	
		2.30 ≤ V _{CC} ≤ 2.70		1.0	5.0	15.2	1.0	16.7	
3.00 ≤ V _{CC} ≤ 3.60	0.8	4.0	14.8	0.5	16.3				

New

AC Electrical Characteristics

Symbol	Parameter	V _{CC}	Conditions	T _A =+25°C		T _A =-40 to +85°C		Units	Figure
				Min.	Typ.	Min.	Max.		
t _{PHL} , t _{PLH}	Propagation Delay	0.90	C _L =10pF, R _D =1MΩ		26			ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		10.0	26		39.6		
		1.40 ≤ V _{CC} ≤ 1.60		6.0	11.2		14.5		
		1.65 ≤ V _{CC} ≤ 1.95		5.0	8.6		11.6		
		2.30 ≤ V _{CC} ≤ 2.70		4.0	6.3		8.2		
3.00 ≤ V _{CC} ≤ 3.60	3.0	5.3		7.2					
t _{OL} , t _{OLH}	Output Enable Time	0.90	C _L =10pF, R _D =5000Ω		29			ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		8.0	26		40.4		
		1.40 ≤ V _{CC} ≤ 1.60		6.0	11.9		14.8		
		1.65 ≤ V _{CC} ≤ 1.95		5.0	9.7		12.3		
		2.30 ≤ V _{CC} ≤ 2.70		4.0	7.7		10.5		
3.00 ≤ V _{CC} ≤ 3.60	3.0	6.9		8.6					
t _{PHZ} , t _{PLZ}	Output Disable Time	0.90	C _L =10pF, R _D =5000Ω		28			ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		8.0	20.5		42.0		
		1.40 ≤ V _{CC} ≤ 1.60		6.0	15.3		18.0		
		1.65 ≤ V _{CC} ≤ 1.95		5.0	14.7		17.8		
		2.30 ≤ V _{CC} ≤ 2.70		4.0	13.7		15.0		
3.00 ≤ V _{CC} ≤ 3.60	3.0	13.5		14.8					
t _{PHL} , t _{PLH}	Propagation Delay	0.90	C _L =15pF, R _D =1MΩ		28			ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		10.0	27		42.5		
		1.40 ≤ V _{CC} ≤ 1.60		7.0	11.8		15.4		
		1.65 ≤ V _{CC} ≤ 1.95		5.0	9.1		12.2		
		2.30 ≤ V _{CC} ≤ 2.70		4.0	6.6		8.6		
3.00 ≤ V _{CC} ≤ 3.60	3.0	5.6		7.5					
t _{OL} , t _{OLH}	Output Enable Time	0.90	C _L =15pF, R _D =5000Ω		31			ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		11.0	27		43.3		
		1.40 ≤ V _{CC} ≤ 1.60		7.0	12.5		15.5		
		1.65 ≤ V _{CC} ≤ 1.95		5.0	10.2		12.9		
		2.30 ≤ V _{CC} ≤ 2.70		4.0	8.0		9.9		
3.00 ≤ V _{CC} ≤ 3.60	3.0	7.2		8.9					
t _{PHZ} , t _{PLZ}	Output Disable Time	0.90	C _L =15pF, R _D =5000Ω		30			ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		11.0	21.6		44.9		
		1.40 ≤ V _{CC} ≤ 1.60		7.0	15.9		18.8		
		1.65 ≤ V _{CC} ≤ 1.95		5.0	15.2		18.2		
		2.30 ≤ V _{CC} ≤ 2.70		4.0	14.1		15.4		
3.00 ≤ V _{CC} ≤ 3.60	3.0	13.9		15.1					

Continued on following page...

AC Electrical Characteristics (Continued)

Symbol	Parameter	V _{CC}	Conditions	T _A =+25°C		T _A =-40 to +85°C		Units	Figure
				Min.	Typ.	Min.	Typ.		
t _{PHL} , t _{PLH}	Propagation Delay	0.90	C _L =30pF, R _D =1MΩ		34			ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		12.0	30		51.1		
		1.40 ≤ V _{CC} ≤ 1.60		8.0	13.8		17.7		
		1.65 ≤ V _{CC} ≤ 1.95		6.0	10.6		14.0		
		2.30 ≤ V _{CC} ≤ 2.70		5.0	7.6		9.9		
3.00 ≤ V _{CC} ≤ 3.60	4.0	6.4		8.9					
t _{OL} , t _{OLH}	Output Enable Time	0.90	C _L =30pF, R _D =5000Ω		37			ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		13.0	30		51.9		
		1.40 ≤ V _{CC} ≤ 1.60		8.0	14.5		17.9		
		1.65 ≤ V _{CC} ≤ 1.95		6.0	11.7		14.7		
		2.30 ≤ V _{CC} ≤ 2.70		5.0	9.1		11.1		
3.00 ≤ V _{CC} ≤ 3.60	4.0	8.1		10.1					
t _{PHZ} , t _{PLZ}	Output Disable Time	0.90	C _L =30pF, R _D =5000Ω		36			ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		13.0	24.8		53.5		
		1.40 ≤ V _{CC} ≤ 1.60		8.0	17.1		21.1		
		1.65 ≤ V _{CC} ≤ 1.95		6.0	16.5		20.5		
		2.30 ≤ V _{CC} ≤ 2.70		5.0	15.2		16.7		
3.00 ≤ V _{CC} ≤ 3.60	4.0	14.8		16.3					

NC7SV

- Adjusted Absolute Maximum Voltage to match new process.

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	Min.	Max.	Unit	
V_{CC}	Supply Voltage	-0.5	4.6	V	
V_{IN}	DC Input Voltage	-0.5	4.6	V	
V_{OUT}	DC Output Voltage	HIGH or LOW State ⁽⁴⁾	-0.5	$V_{CC} + 0.5$	V
			$V_{CC} = 0V$	-0.5	4.6

New

Absolute Maximum Ratings^(Note 1)

Supply Voltage (V_{CC})	-0.5V to +4.3V
DC Input Voltage (V_{IN})	-0.5V to +4.3V
DC Output Voltage (V_{OUT}) HIGH or LOW State (Note 2)	-0.5V to $V_{CC} + 0.5V$
$V_{CC} = 0V$	-0.5V to 4.3V

Symbol	Parameter	Min.	Max.	Unit	
V_{CC}	Supply Voltage	-0.5	4.3	V	
V_{IN}	DC Input Voltage	-0.5	4.3	V	
V_{OUT}	DC Output Voltage	HIGH or LOW State ⁽⁴⁾	-0.5	$V_{CC} + 0.5$	V
			$V_{CC} = 0V$	-0.5	4.3

- Adjusted Power Dissipation to reflect new die.
- Adjusted Thermal Resistance to reflect new die.

Existing datasheet

P_D	Power Dissipation at +85°C	SC70-5	MicroPak™-6	MicroPak2™-6	Unit
		150	130	120	mW

θ_{JA}	Thermal Resistance	SC70-5	MicroPak™-6	MicroPak2™-6	Unit
		425	500	560	°C/W

New

P_D	Power Dissipation In Still Air	SC-74A	SC70-5	MicroPak™-6	MicroPak2™-6	Unit
		225	190	327	327	mW

θ_{JA}	Thermal Resistance	SC-74A	SC70-5	MicroPak™-6	MicroPak2™-6	Unit
		555	659	382	382	°C/W



- Positive Threshold Voltage adjusted to remove lower limits and remove limits at 0.90 Volts.
- Negative Threshold Voltage adjusted to remove upper limits and remove limits at 0.90 Volts.
- Hysteresis Voltage adjusted to remove limits at 0.90 Volts.

Existing datasheet

Symbol	Parameter	V _{CC}	Conditions	T _A =25°C		T _A =-40 to 85°C		Units
				Min.	Max.	Min.	Max.	
V _P	Positive Threshold Voltage	0.90		0.30	0.70	0.30	0.70	V
		1.10		0.40	1.00	0.40	1.00	
		1.40		0.50	1.25	0.50	1.40	
		1.65		0.70	1.50	0.70	1.50	
		2.30		1.00	1.80	1.00	1.80	
		2.70		1.50	2.20	1.50	2.20	
V _N	Negative Threshold Voltage	0.90		0.10	0.60	0.10	0.60	V
		1.10		0.15	0.70	0.15	0.70	
		1.40		0.20	0.80	0.20	0.80	
		1.65		0.25	0.90	0.25	0.90	
		2.30		0.40	1.15	0.40	1.15	
		2.70		0.60	1.50	0.60	1.50	
V _H	Hysteresis Voltage	0.90		0.07	0.50	0.07	0.50	V
		1.10		0.08	0.60	0.08	0.60	
		1.40		0.09	0.80	0.09	0.80	
		1.65		0.15	1.00	0.15	1.00	
		2.30		0.25	1.10	0.25	1.10	
		2.70		0.60	1.20	0.60	1.20	

New

Symbol	Parameter	V _{CC}	Conditions	T _A =25°C		T _A =-40 to 85°C		Units	
				Min.	Max.	Min.	Max.		
V _P	Positive Threshold Voltage	0.90						V	
		1.10			1.00		1.00		
		1.40			1.25		1.40		
		1.65			1.50		1.50		
		2.30			1.80		1.80		
		2.70			2.20		2.20		
V _N	Negative Threshold Voltage	0.90						V	
		1.10			0.15		0.15		
		1.40			0.20		0.20		
		1.65			0.25		0.25		
		2.30			0.40		0.40		
		2.70			0.60		0.60		
V _H	Hysteresis Voltage	0.90						V	
		1.10			0.08	0.60	0.08		0.60
		1.40			0.09	0.80	0.09		0.80
		1.65			0.15	1.00	0.15		1.00
		2.30			0.25	1.10	0.25		1.10
		2.70			0.60	1.20	0.60		1.20

- Removed Minimum limits from all propagation delays and Output enable Time and Output Disable Time specifications.

Existing datasheet

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 _{PLH} , t _{PLL}	Propagation Delay	0.90		13					ns	C _L = 15 pF, R _L = 1 MΩ C _L = 15 pF, R _L = 2 kΩ C _L = 30 pF R _L = 500Ω	Figures 1, 2
		1.10 ≤ V _{CC} ≤ 1.30	3.0	6.0	9.8	1.9	14.9				
		1.40 ≤ V _{CC} ≤ 1.60	1.0	3.5	5.3	0.8	5.7				
		1.65 ≤ V _{CC} ≤ 1.95	0.9	3.0	4.3	0.8	4.6				
		2.30 ≤ V _{CC} ≤ 2.70	0.8	2.0	2.8	0.7	3.0				
		2.70 ≤ V _{CC} ≤ 3.60	0.5	1.0	2.6	0.5	2.8				
t _{PDH} , t _{PDZ}	Output Enable Time	0.90		14					ns	C _L = 30 pF R _O = 1kΩ S _I = GND for t _{PDH} S _I = V _I for t _{PDZ} V _I = 2 × V _{CC}	Figures 1, 2
		1.10 ≤ V _{CC} ≤ 1.30	3.0	6.0	9.7	2.0	16.4				
		1.40 ≤ V _{CC} ≤ 1.60	1.2	4.0	6.0	1.0	7.5				
		1.65 ≤ V _{CC} ≤ 1.95	1.0	3.0	4.5	0.9	5.0				
		2.30 ≤ V _{CC} ≤ 2.70	0.8	2.0	3.0	0.7	3.4				
		2.70 ≤ V _{CC} ≤ 3.60	0.5	1.2	2.6	0.4	2.9				
t _{PHZ} , t _{PLZ}	Output Disable Time	0.90		14					ns	C _L = 30 pF R _O = 1kΩ S _I = GND for t _{PHZ} S _I = V _I for t _{PLZ} V _I = 2 × V _{CC}	Figures 1, 2
		1.10 ≤ V _{CC} ≤ 1.30	2.0	5.0	9.5	2.0	14.0				
		1.40 ≤ V _{CC} ≤ 1.60	1.2	3.0	5.5	1.1	7.0				
		1.65 ≤ V _{CC} ≤ 1.95	1.0	2.0	5.6	0.8	5.8				
		2.30 ≤ V _{CC} ≤ 2.70	0.8	1.5	4.2	0.5	5.0				
		2.70 ≤ V _{CC} ≤ 3.60	0.5	1.0	3.9	0.4	4.2				

New

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 _{PLH} , t _{PLL}	Propagation Delay	0.90		13					ns	C _L = 15 pF, R _L = 1 MΩ C _L = 15 pF, R _L = 2 kΩ C _L = 30 pF R _L = 500Ω	Figures 1, 2
		1.10 ≤ V _{CC} ≤ 1.30		6.0	9.8		14.9				
		1.40 ≤ V _{CC} ≤ 1.60		3.5	5.3		5.7				
		1.65 ≤ V _{CC} ≤ 1.95		3.0	4.3		4.6				
		2.30 ≤ V _{CC} ≤ 2.70		2.0	2.8		3.0				
		2.70 ≤ V _{CC} ≤ 3.60		1.0	2.6		2.8				
t _{PDH} , t _{PDZ}	Output Enable Time	0.90		14					ns	C _L = 30 pF R _O = 1kΩ S _I = GND for t _{PDH} S _I = V _I for t _{PDZ} V _I = 2 × V _{CC}	Figures 1, 2
		1.10 ≤ V _{CC} ≤ 1.30		6.0	9.7		16.4				
		1.40 ≤ V _{CC} ≤ 1.60		4.0	6.0		7.5				
		1.65 ≤ V _{CC} ≤ 1.95		3.0	4.5		5.0				
		2.30 ≤ V _{CC} ≤ 2.70		2.0	3.0		3.4				
		2.70 ≤ V _{CC} ≤ 3.60		1.2	2.6		2.9				
t _{PHZ} , t _{PLZ}	Output Disable Time	0.90		14					ns	C _L = 30 pF R _O = 1kΩ S _I = GND for t _{PHZ} S _I = V _I for t _{PLZ} V _I = 2 × V _{CC}	Figures 1, 2
		1.10 ≤ V _{CC} ≤ 1.30		5.0	9.5		14.0				
		1.40 ≤ V _{CC} ≤ 1.60		3.0	5.5		7.0				
		1.65 ≤ V _{CC} ≤ 1.95		2.0	5.6		5.8				
		2.30 ≤ V _{CC} ≤ 2.70		1.5	4.2		5.0				
		2.70 ≤ V _{CC} ≤ 3.60		1.0	3.9		4.2				

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 _{PLL}	Propagation Delay	0.90		12					ns	C _L = 15 pF, R _L = 1 MΩ C _L = 15 pF, R _L = 2 kΩ C _L = 30 pF R _L = 500Ω	Figures 1, 2
		1.10 ≤ V _{CC} ≤ 1.30	2.8	5.9	10.0	1.0	14.9				
		1.40 ≤ V _{CC} ≤ 1.60	1.0	3.2	6.1	0.9	7.0				
		1.65 ≤ V _{CC} ≤ 1.95	1.0	2.0	5.2	0.7	6.2				
		2.30 ≤ V _{CC} ≤ 2.70	0.8	1.8	3.7	0.6	4.4				
		2.70 ≤ V _{CC} ≤ 3.60	0.7	1.5	3.3	0.5	3.8				

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 _{PLL}	Propagation Delay	0.90		12					ns	C _L = 15 pF, R _L = 1 MΩ C _L = 15 pF, R _L = 2 kΩ C _L = 30 pF R _L = 500Ω	Figures 1, 2
		1.10 ≤ V _{CC} ≤ 1.30		5.9	10.0		14.9				
		1.40 ≤ V _{CC} ≤ 1.60		3.2	6.1		7.0				
		1.65 ≤ V _{CC} ≤ 1.95		2.0	5.2		6.2				
		2.30 ≤ V _{CC} ≤ 2.70		1.8	3.7		4.4				
		2.70 ≤ V _{CC} ≤ 3.60		1.5	3.3		3.8				

Symbol	Parameter	V _{CC}	Conditions	T _A =25°C			T _A =-40 to 85°C			Units	Figure
				Min.	Typ.	Max.	Min.	Max.			
t _{PHZ} , t _{PLZ}	Propagation Delay	0.90	C _L =15pF, R _L =R _O =1kΩ		13				ns	Figure 5 Figure 6	
		1.10 ≤ V _{CC} ≤ 1.30	C _L =30pF, R _L =R _O =1kΩ	3.0	6.0	15.0	1.0	18.6			
		1.40 ≤ V _{CC} ≤ 1.60	C _L =30pF, R _L =R _O =1kΩ	1.0	3.2	8.7	1.0	9.7			
		1.65 ≤ V _{CC} ≤ 1.95	C _L =30pF, R _L =R _O =1kΩ	1.0	2.0	6.0	1.0	6.8			
		2.30 ≤ V _{CC} ≤ 2.70	C _L =30pF, R _L =R _O =1kΩ	0.8	1.2	3.6	0.7	4.7			
		2.70 ≤ V _{CC} ≤ 3.60	C _L =30pF, R _L =R _O =1kΩ	0.7	1.0	3.3	0.6	4.0			

Symbol	Parameter	V _{CC}	Conditions	T _A =25°C			T _A =-40 to 85°C			Units	Figure
				Min.	Typ.	Max.	Min.	Max.			
t _{PHZ} , t _{PLZ}	Propagation Delay	0.90	C _L =15pF, R _L =R _O =1kΩ		13				ns	Figure 5 Figure 6	
		1.10 ≤ V _{CC} ≤ 1.30	C _L =30pF, R _L =R _O =1kΩ		6.0	15.0		18.6			
		1.40 ≤ V _{CC} ≤ 1.60	C _L =30pF, R _L =R _O =1kΩ		3.2	8.7		9.7			
		1.65 ≤ V _{CC} ≤ 1.95	C _L =30pF, R _L =R _O =1kΩ		2.0	6.0		6.8			
		2.30 ≤ V _{CC} ≤ 2.70	C _L =30pF, R _L =R _O =1kΩ		1.2	3.6		4.7			
		2.70 ≤ V _{CC} ≤ 3.60	C _L =30pF, R _L =R _O =1kΩ		1.0	3.3		4.0			

**Qualification Plan:**QV DEVICE Name: NC7SP125P5XRMS 51765PACKAGE SC88A

Test	Specification	Condition	Interval	Results
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/804
HTSL	JESD22-A103	Ta=150°C	2016 hrs	0/234
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/297
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	192 hrs	0/273
UHASt	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/234
HTOL	JESD22-A108	Ta=125°C, 100 % max rated Vcc x 1.2	1008 hrs	0/252
ELFR	JESD22-A108	Ta=125°C, 100 % max rated Vcc x 1.2	48 hrs	0/1600
RSH	JESD22- B106	Ta = 265C, 10 sec		0/90

QV DEVICE Name: NL17SG14P5T5GRMS 56472PACKAGE SOT953

Test	Specification	Condition	Interval	Results
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/720
HTSL	JESD22-A103	Ta=150°C	2016 hrs	0/249
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/234
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	192 hrs	0/252
uHASt	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/234
HTOL	JESD22-A108	Ta=125°C, 100 % max rated Vcc x 1.2	1008 hrs	0/252
ELFR	JESD22-A108	Ta=125°C, 100 % max rated Vcc x 1.2	48 hrs	0/1600
RSH	JESD22- B106	Ta = 265C, 10 sec		0/90

QV DEVICE Name: NL17SV16XV5T2GRMS 51763PACKAGE SOT553

Test	Specification	Condition	Interval	Results
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/753
HTSL	JESD22-A103	Ta=150°C	2016 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	192 hrs	0/249
UHASt	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/252
HTOL	JESD22-A108	Ta=125°C, 100 % max rated Vcc x 1.2	2016 hrs	0/252
ELFR	JESD22-A108	Ta=125°C, 100 % max rated Vcc x 1.2	48 hrs	0/1600
RSH	JESD22- B106	Ta = 265C, 10 sec		0/90



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
NC7SP00P5X	NC7SP125P5X
NC7SP02P5X	NC7SP125P5X
NC7SP04P5X	NC7SP125P5X
NC7SP05P5X	NC7SP125P5X
NC7SP08P5X	NC7SP125P5X
NC7SP125P5X	NC7SP125P5X
NC7SP126P5X	NC7SP125P5X
NC7SP14P5X	NC7SP125P5X
NC7SP17P5X	NC7SP125P5X
NC7SP32P5X	NC7SP125P5X
NC7SP34P5X	NC7SP125P5X
NC7SP38P5X	NC7SP125P5X
NC7SP86P5X	NC7SP125P5X
NC7SPU04P5X	NC7SP125P5X
NC7SV00P5X	NC7SP125P5X
NC7SV02P5X	NC7SP125P5X
NC7SV04P5X	NC7SP125P5X
NC7SV05P5X	NC7SP125P5X
NC7SV08P5X	NC7SP125P5X
NC7SV125P5X	NC7SP125P5X
NC7SV126P5X	NC7SP125P5X
NC7SV14P5X	NC7SP125P5X
NC7SV17P5X	NC7SP125P5X
NC7SV32P5X	NC7SP125P5X
NC7SV34P5X	NC7SP125P5X
NC7SV86P5X	NC7SP125P5X
NC7SVL04P5X	NC7SP125P5X
NC7SVL08P5X	NC7SP125P5X
NC7SVL32P5X	NC7SP125P5X
NC7SVU04P5X	NC7SP125P5X
NL17SG00DFT2G	NC7SP125P5X



NL17SG00P5T5G	NL17SG14P5T5G
NL17SG02DFT2G	NC7SP125P5X
NL17SG02P5T5G	NL17SG14P5T5G
NL17SG04DFT2G	NC7SP125P5X
NL17SG04P5T5G	NL17SG14P5T5G
NL17SG07DFT2G	NC7SP125P5X
NL17SG07P5T5G	NL17SG14P5T5G
NL17SG08DFT2G	NC7SP125P5X
NL17SG08P5T5G	NL17SG14P5T5G
NL17SG125DFT2G	NC7SP125P5X
NL17SG125P5T5G	NL17SG14P5T5G
NL17SG126DFT2G	NC7SP125P5X
NL17SG126P5T5G	NL17SG14P5T5G
NL17SG126P5T6G	NL17SG14P5T5G
NL17SG14DFT2G	NC7SP125P5X
NL17SG14P5T5G	NL17SG14P5T5G
NL17SG17DFT2G	NC7SP125P5X
NL17SG17P5T5G	NL17SG14P5T5G
NL17SG32DFT2G	NC7SP125P5X
NL17SG32P5T5G	NL17SG14P5T5G
NL17SG34DFT2G	NC7SP125P5X
NL17SG34P5T5G	NL17SG14P5T5G
NL17SG86DFT2G	NC7SP125P5X
NL17SG86P5T5G	NL17SG14P5T5G
NL17SGU04DFT2G	NC7SP125P5X
NL17SGU04P5T5G	NL17SG14P5T5G
NL17SV00XV5T2G	NL17SV16XV5T2G
NL17SV02XV5T2G	NL17SV16XV5T2G
NL17SV04XV5T2G	NL17SV16XV5T2G
NL17SV08XV5T2G	NL17SV16XV5T2G
NL17SV16XV5T2G	NL17SV16XV5T2G
NL17SV32XV5T2G	NL17SV16XV5T2G

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。



初回製品 / プロセス変更通知

文書番号# : IPCN22735X

発行日 : 6 August 2019

変更件名:	データシート更新を伴う MiniGates ウェハー工場、組立材料および検査変更 (SC88A/SOT953/SOT553)	
初回出荷予定日:	6 February 2020	
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、この変更の初回通知、初回 PCN 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。	
通知種別:	これは、お客様宛の初回製品 / プロセス変更通知 (IPCN) です。IPCN は、近日中に実施される変更に関する事前通知であり、変更の詳細および影響を受けるデバイスについての一般情報が記載されます。また、暫定的な信頼性認証計画も記載されます。 最終的な認定データおよび特性データは最終製品 / プロセス変更通知 (FPCN) に含まれます。この IPCN は、変更実施から少なくとも 90 日前に発行される最終製品 / プロセス変更通知 (FPCN) に先だって通知されます。ご不明な点がありましたら、<PCN.Support@onsemi.com> にお問い合わせください。	
変更部品の識別:	NC7 製品においては、マーキングスタイルは異なるものになります。NL17 製品および SL17 製品では、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:	<input checked="" type="checkbox"/> ウェハファブの変更 <input checked="" type="checkbox"/> アセンブリの変更 <input checked="" type="checkbox"/> 試験の変更 <input checked="" type="checkbox"/> その他 <u>データシート</u>	
変更サブカテゴリ:	<input type="checkbox"/> 製造拠点の追加 <input checked="" type="checkbox"/> 材料の変更 <input checked="" type="checkbox"/> データシート/製品資料の変更 <input checked="" type="checkbox"/> 製造拠点の移転 <input type="checkbox"/> 製品仕様の変更 <input checked="" type="checkbox"/> 出荷/パッケージング/表記 <input checked="" type="checkbox"/> 製造プロセスの変更 <input type="checkbox"/> その他: _____	
影響を受ける拠点:	オン・セミコンダクター拠点: ON ISMF, Malaysia ON Leshan, China ON Cebu, Philippines ON S. Portland, Maine	外部製造工場 / 下請業者拠点: Foundry Subcontractor in China



説明および目的:

この IPCN はフロントエンドおよびバックエンドの生産能力を高めるため、また材料を標準化するために、TinyLogic®用に日本における新規のダイ供給拠点を認定し、組立および検査拠点を標準化することを目的として発行されたものです。

NC7xxxP5X シリーズ:

	変更前の表記		変更後の表記
リードフレーム	LF SC70 5L Cu A194 STAMPED PPF	LF SC 88A 5L C194 STAMPED	SC88A OP14
ダイ接着剤	DA EPOXY ABLESTICK 2200D	DA EPOXY HE ABLESTIK 84-1LMISR4 5CC	Au Eutectic
ボンドワイヤー	Au	Au	Cu
モールド・コンパウンド	MC SUMITOMO G600 HF	MC GREEN PA CK5000A 13MMX3.9G	Henkel GR640 HV-L1
組立拠点	Subcon China	ON Philippines	ON in China
ダイ供給	ONsemi US Fab	ONsemi US Fab	External Fab (日本)
めっき	Preplated	100% Sn	100% Sn

	変更前	変更後
製品マーキング変更	<p>针对于:SC70-5L, SC70-6L</p> <p>Above marking is for subcon China, ON Philippines is without the plant code dot.</p>	<p>MARKING DIAGRAMS</p> <ul style="list-style-type: none"> - L2 = Specific Device Marking - M = Date Code* - • = Pb-Free Package <p>(Note: Microdot may be in either location)</p> <p>*Date Code orientation and/or position may vary depending upon manufacturing location.</p>

NL17xxxDFT2G Series:

	変更前の表記	変更後の表記
ボンドワイヤー	Au ** and Cu	Cu
モールド・コンパウンド	Hitachi GE200F or Henkel GR640 HV-L1	Henkel GR640 HV-L1
ダイ供給	External Foundry (イスラエル)	External Fab(日本)

** これらの製品のみ、変更前は Au ワイヤを使用しています

(NL17SG00DFT2G/NL17SG02DFT2G/NL17SG04DFT2G/NL17SG07DFT2G/NL17SG08DFT2G/NL17SG125DFT2G/NL17SG126DFT2G/NL17SG14DFT2G/NL17SG17DFT2G/NL17SG32DFT2G/NL17SG34DFT2G/NL17SG86DFT2G/NL17SGU04DFT2G)

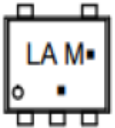

マーキングに変更はありません。



NL17xxXV5T2G シリーズ:

	変更前の表記	変更後の表記
ボンドワイヤー	Au	Cu
組み立て拠点	ON Seremban, Malaysia	ON Leshan, China
ダイ供給	External Foundry (イスラエル)	External Fab (日本)

ただし、NL17SV32XV5T2G は拠点の変更はなく、現在オン乐山で実施されています。

	変更前	変更後
製品表示変更	 <p>LA = Device Code, M = Date Code (orientation at 0 degree), Dot(.)=Lead Free Package</p>	 <p>LA = Device Code, M = Date Code (orientation at 90 degree), Dot(.)=Lead Free Package</p>

NL17xxxP5T5G シリーズ:

	変更前の表記	変更後の表記
ボンドワイヤー	Au	Cu
ダイ供給	External Foundry (イスラエル)	External Fab (日本)

マーキングに変更はありません。

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。

- 変更箇所は赤色の丸で囲まれています。
- 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。

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。

- スベ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。



NL17SG

- 最大定格電圧が 5.5V から 4.3V に変更。

Existing datasheet

MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _{CC}	DC Supply Voltage	-0.5 to +5.5	V
V _{IN}	DC Input Voltage	-0.5 to +4.6	V
V _{OUT}	DC Output Voltage Output at High or Low State Power-Down Mode (V _{CC} = 0 V)	-0.5 to V _{CC} + 0.5 -0.5 to +4.6	V

MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _{CC}	DC Supply Voltage	-0.5 to +5.5	V
V _{IN}	DC Input Voltage V _{CC} ≥ 0.9 V V _{CC} < 0.9 V	-0.5 to +5.5 -0.5 to +4.6	V
V _{OUT}	DC Output Voltage	-0.5 to V _{CC} + 0.5	V

MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _{CC}	DC Supply Voltage	-0.5 to +5.5	V
V _{IN}	DC Input Voltage	-0.5 to +4.6	V
V _{OUT}	DC Output Voltage	-0.5 to V _{CC} + 0.5	V

MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _{CC}	DC Supply Voltage	-0.5 to +5.5	V
V _{IN}	DC Input Voltage	-0.5 to +5.5	V
V _{OUT}	DC Output Voltage	-0.5 to V _{CC} + 0.5	V

New

MAXIMUM RATINGS

Symbol	Characteristics	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) Tri-State Mode (Note 1) Power-Down Mode (V _{CC} = 0 V)	-0.5 to V _{CC} + 0.5 -0.5 to +4.3 -0.5 to +4.3	V

- JEDEC 規格に合わせるために静電放電/ラッチアップを調整。

Existing datasheet

V _{ESD}	ESD Withstand Voltage	Human Body Model (Note 2) Machine Model (Note 3)	>1500 >100	V
I _{LATCHUP}	Latchup Performance Above V _{CC} and Below GND at 125°C (Note 4)		±100	mA
V _{ESD}	ESD Withstand Voltage	Human Body Model (Note 2) Machine Model (Note 3)	>2000 >100	V
I _{LATCHUP}	Latchup Performance Above V _{CC} and below GND at 125°C (Note 4)		±75	mA
V _{ESD}	ESD Withstand Voltage Human Body Mode (Note 2) Machine Model (Note 3)		>3000 >200	V
I _{LATCHUP}	Latchup Performance Above V _{CC} and Below GND at 125°C (Note 4)		±100	mA
V _{ESD}	ESD Withstand Voltage	Human Body Model (Note 2) Machine Model (Note 3)	>2000 >150	V
I _{LATCHUP}	Latchup Performance Above V _{CC} and Below GND at 125°C (Note 4)		±100	mA

New

V _{ESD}	ESD Withstand Voltage (Note 3)	Human Body Model Charged Device Model	2000 1000	V
I _{LATCHUP}	Latchup Performance (Note 4)		±100	mA

- H レベル出力電圧の 0.9V における規格を削除
- L レベル出力電圧の 0.9V における規格を削除

Existing datasheet

V _{OH}	High-Level Output Voltage	V _{IN} = V _{IH} or V _{IL}	I _{OH} = -20 μA	0.9	0.75	0.75	V
V _{OH}	High-Level Output Voltage	V _{IN} = V _{IH} or V _{IL}	I _{OH} = -0.3 mA	1.1 to 1.3	0.75xV _{CC}	0.75xV _{CC}	
			I _{OH} = -1.7 mA	1.4 to 1.6	0.75xV _{CC}	0.75xV _{CC}	
			I _{OH} = -3.0 mA	1.65 to 1.95	V _{CC} -0.45	V _{CC} -0.45	
			I _{OH} = -4.0 mA	2.3 to 2.7	2.0	2.0	
			I _{OH} = -8.0 mA	3.0 to 3.6	2.48	2.48	
			I _{OH} = -20 μA	0.9	0.1	0.1	
V _{OL}	Low-Level Output Voltage	V _{IN} = V _{IH} or V _{IL}	I _{OL} = 20 μA	1.1 to 1.3	0.25xV _{CC}	0.25xV _{CC}	
			I _{OL} = 0.3 mA	1.4 to 1.6	0.25xV _{CC}	0.25xV _{CC}	
			I _{OL} = 1.7 mA	1.65 to 1.95	0.45	0.45	
			I _{OL} = 3.0 mA	2.3 to 2.7	0.4	0.4	
			I _{OL} = 4.0 mA	3.0 to 3.6	0.4	0.4	
			I _{OL} = 8.0 mA	3.0 to 3.6	0.4	0.4	

New

V _{OH}	High-Level Output Voltage	V _{IN} = V _{IH} or V _{IL}	I _{OH} = -20 μA	0.9			V
V _{OH}	High-Level Output Voltage	V _{IN} = V _{IH} or V _{IL}	I _{OH} = -0.3 mA	1.1 to 1.3	0.75xV _{CC}	0.75xV _{CC}	
			I _{OH} = -1.7 mA	1.4 to 1.6	0.75xV _{CC}	0.75xV _{CC}	
			I _{OH} = -3.0 mA	1.65 to 1.95	V _{CC} -0.45	V _{CC} -0.45	
			I _{OH} = -4.0 mA	2.3 to 2.7	2.0	2.0	
			I _{OH} = -8.0 mA	3.0 to 3.6	2.48	2.48	
			I _{OH} = -20 μA	0.9			
V _{OL}	Low-Level Output Voltage	V _{IN} = V _{IH} or V _{IL}	I _{OL} = 20 μA	1.1 to 1.3	0.25xV _{CC}	0.25xV _{CC}	
			I _{OL} = 0.3 mA	1.4 to 1.6	0.25xV _{CC}	0.25xV _{CC}	
			I _{OL} = 1.7 mA	1.65 to 1.95	0.45	0.45	
			I _{OL} = 3.0 mA	2.3 to 2.7	0.4	0.4	
			I _{OL} = 4.0 mA	3.0 to 3.6	0.4	0.4	
			I _{OL} = 8.0 mA	3.0 to 3.6	0.4	0.4	



- 入力の正のしきい値電圧、負のしきい値電圧、ヒステリシス電圧の 0.9V における規格を削除。
- 入力の正のしきい値電圧の仕様から下限値を削除。
- 負のしきい値電圧の仕様から上限値を削除。
- ダイプロセスに対応して規格の修正。

Existing datasheet

Symbol	Parameter	Condition	V _{CC} (V)	T _A = 25°C			-55°C ≤ T _A ≤ 125°C		Unit
				Min	Typ	Max	Min	Max	
V _{I+}	Positive-Going Input Threshold Voltage		0.9	0.64	0.7	0.86	0.62	0.87	V
			1.1	0.73	0.81	0.95	0.71	1	
			1.4	0.86	0.94	1.16	0.84	1.2	
			1.65	0.95	1.06	1.25	0.94	1.3	
			2.3	1.22	1.36	1.6	1.18	1.65	
			3.0	1.51	1.8	2.05	1.38	2.1	
V _{I-}	Negative-Going Input Threshold Voltage		0.9	0.09	0.23	0.30	0.08	0.33	V
			1.1	0.15	0.33	0.39	0.12	0.43	
			1.4	0.3	0.47	0.54	0.25	0.55	
			1.65	0.35	0.6	0.65	0.3	0.65	
			2.3	0.55	0.85	0.88	0.5	0.88	
			3.0	0.95	1.13	1.16	0.9	1.16	
V _H	Hysteresis Voltage		0.9	0.15	0.5	0.75	0.2	0.8	V
			1.1	0.15	0.5	0.75	0.2	0.8	
			1.4	0.15	0.5	0.75	0.2	0.8	
			1.65	0.15	0.5	0.75	0.2	0.8	
			2.3	0.15	0.5	0.75	0.2	0.8	
			3.0	0.25	0.65	0.85	0.3	0.9	

New

Symbol	Parameter	Conditions	V _{CC} (V)	T _A = 25°C			-55°C ≤ T _A ≤ 125°C		Unit
				Min	Typ	Max	Min	Max	
V _{I+}	Positive Input Threshold Voltage		0.9	-	0.7	-	-	-	V
			1.1 to 1.3	-	0.81	0.95	-	0.95	
			1.4 to 1.6	-	0.94	1.16	-	1.16	
			1.65 - 1.95	-	1.06	1.3	-	1.3	
			2.3 to < 2.7	-	1.36	1.73	-	1.73	
			2.7 to 3.6	-	1.8	2.24	-	2.24	
V _{I-}	Negative Input Threshold Voltage		0.9	-	0.23	-	-	-	V
			1.1 to 1.3	0.15	0.33	-	0.15	-	
			1.4 to 1.6	0.3	0.47	-	0.3	-	
			1.65 - 1.95	0.35	0.6	-	0.35	-	
			2.3 to < 2.7	0.55	0.85	-	0.55	-	
			2.7 to 3.6	0.95	1.13	-	0.95	-	
V _H	Low-Level Input Voltage		0.9	-	0.27	-	-	-	V
			1.1 to 1.3	0.2	0.35	0.8	0.2	0.8	
			1.4 to 1.6	0.25	0.41	0.86	0.25	0.86	
			1.65 - 1.95	0.30	0.46	0.9	0.30	0.9	
			2.3 to < 2.7	0.40	0.56	1.05	0.40	1.05	
			2.7 to 3.6	0.49	0.59	1.1	0.49	1.1	

- 電源オフリーク電流仕様を追加。
- 電源オフリーク電流仕様とのクロスオーバーを除去するために入力リーク電流仕様を調整。

I _{OFF}	Power Off Leakage Current	V _{IN} = 3.6 V or V _{OUT} = 3.6 V	0	-	-	1.0	-	5.0	μA
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I _{IN}	Input Leakage Current	0 ≤ V _{IN} ≤ 3.6 V	0 to 3.6	±0.1	±1.0	μA
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- 伝播遅延仕様の 0.9V における規格を削除。
- すべての伝播遅延仕様から下限値を削除。

Existing datasheet

Symbol	Parameter	Test Condition	V _{CC} (V)	T _A = 25°C			-55°C ≤ T _A ≤ 125°C		Unit
				Min	Typ	Max	Min	Max	
t _{PHL}	Propagation Delay, A or B to Y	C _L = 10 pF, R _L = 1 MΩ	0.9	-	12.2	14.4	-	18.0	ns
			1.1 to 1.3	-	8.8	12.4	-	16.2	
			1.4 to 1.6	-	5.0	8.5	-	10.0	
			1.65 to 1.95	-	3.6	6.2	-	6.7	
			2.3 to 2.7	-	2.7	3.9	-	4.4	
			3.0 to 3.6	-	2.1	3.1	-	3.7	
		C _L = 15 pF, R _L = 1 MΩ	0.9	-	13.0	16.0	-	18.0	ns
			1.1 to 1.3	-	7.8	12.0	-	16.0	
			1.4 to 1.6	-	5.9	9.3	-	11.2	
			1.65 to 1.95	-	4.5	6.9	-	7.1	
			2.3 to 2.7	-	3.0	4.4	-	5.0	
			3.0 to 3.6	-	2.4	3.4	-	3.9	
C _L = 30 pF, R _L = 1 MΩ	0.9	-	14.0	17.2	-	20.0	ns		
	1.1 to 1.3	-	11.0	14.1	-	17.8			
	1.4 to 1.6	-	8.0	12.1	-	15.9			
	1.65 to 1.95	-	6.0	9.2	-	9.6			
	2.3 to 2.7	-	3.9	5.7	-	6.1			
	3.0 to 3.6	-	3.0	4.4	-	4.8			

New

Symbol	Parameter	Test Condition	V _{CC} (V)	T _A = 25°C			-55°C ≤ T _A ≤ 125°C		Unit
				Min	Typ	Max	Min	Max	
t _{PHL}	Propagation Delay, A or B to Y	C _L = 10 pF, R _L = 1 MΩ	0.9	-	12.2	-	-	-	ns
			1.1 to 1.3	-	8.8	12.4	-	16.2	
			1.4 to 1.6	-	5.0	8.5	-	10.0	
			1.65 to 1.95	-	3.6	6.2	-	6.7	
			2.3 to 2.7	-	2.7	3.9	-	4.4	
			3.0 to 3.6	-	2.1	3.1	-	3.7	
		C _L = 15 pF, R _L = 1 MΩ	0.9	-	13.0	-	-	-	ns
			1.1 to 1.3	-	7.8	12.0	-	16.0	
			1.4 to 1.6	-	5.9	9.3	-	11.2	
			1.65 to 1.95	-	4.5	6.9	-	7.1	
			2.3 to 2.7	-	3.0	4.4	-	5.0	
			3.0 to 3.6	-	2.4	3.4	-	3.9	
C _L = 30 pF, R _L = 1 MΩ	0.9	-	14.0	-	-	-	ns		
	1.1 to 1.3	-	11.0	14.1	-	17.8			
	1.4 to 1.6	-	8.0	12.1	-	15.9			
	1.65 to 1.95	-	6.0	9.2	-	9.6			
	2.3 to 2.7	-	3.9	5.7	-	6.1			
	3.0 to 3.6	-	3.0	4.4	-	4.8			

Symbol	Parameter	Test Condition	T _A = 25 °C			T _A = -55°C to +125°C		Unit	
			V _{CC} (V)	Min	Typ	Max	Min		Max
t _{PHL}	Propagation Delay, A to Y	C _L = 10 pF, R _L = 1 MΩ	0.9	-	27.3	-	-	-	ns
			1.1 to 1.3	-	13.0	22.6	1.0	35.9	
			1.4 to 1.6	-	7.5	10.5	1.0	11.3	
			1.65 to 1.95	-	6.0	7.8	1.0	8.2	
			2.3 to 2.7	-	4.3	5.4	1.0	5.8	
			3.0 to 3.6	-	3.5	4.4	1.0	4.6	
		C _L = 15 pF, R _L = 1 MΩ	0.9	-	29.5	-	-	-	ns
			1.1 to 1.3	-	14.3	25.1	1.0	41.8	
			1.4 to 1.6	-	8.0	11.5	1.0	12.6	
			1.65 to 1.95	-	6.3	8.4	1.0	8.7	
			2.3 to 2.7	-	4.6	5.7	1.0	6.1	
			3.0 to 3.6	-	3.7	4.6	1.0	5.0	
		C _L = 30 pF, R _L = 1 MΩ	0.9	-	40.5	-	-	-	ns
			1.1 to 1.3	-	19.6	35.7	1.0	58.1	
			1.4 to 1.6	-	10.7	15.8	1.0	17.6	
			1.65 to 1.95	-	7.8	10.7	1.0	11.7	
			2.3 to 2.7	-	5.4	6.9	1.0	8.1	
			3.0 to 3.6	-	4.3	5.2	1.0	6.1	

Symbol	Parameter	Test Condition	V _{CC} (V)	T _A = 25° C			T _A = -55°C to +125°C		Unit
				Min	Typ	Max	Min	Max	
t _{PHL}	Propagation Delay, A or B to Y	C _L = 10 pF, R _L = 1 MΩ	0.9	-	12.2	-	-	-	
			1.1 to 1.3	-	8.8	12.4	-	16.2	
			1.4 to 1.6	-	5.0	8.5	-	10.0	
			1.65 to 1.95	-	3.6	6.2	-	6.7	
			2.3 to 2.7	-	2.7	3.9	-	4.4	
			3.0 to 3.6	-	2.1	3.1	-	3.7	
		C _L = 15 pF, R _L = 1 MΩ	0.9	-	13.0	-	-	-	ns
			1.1 to 1.3	-	7.8	12.0	-	16.0	
			1.4 to 1.6	-	5.9	9.3	-	11.2	
			1.65 to 1.95	-	4.5	6.9	-	7.1	
			2.3 to 2.7	-	3.0	4.4	-	5.0	
			3.0 to 3.6	-	2.4	3.4	-	3.9	
		C _L = 30 pF, R _L = 1 MΩ	0.9	-	14.0	-	-	-	ns
			1.1 to 1.3	-	11.0	14.1	-	17.8	
			1.4 to 1.6	-	8.0	12.1	-	15.9	
			1.65 to 1.95	-	6.0	9.2	-	9.6	
			2.3 to 2.7	-	3.9	5.7	-	6.1	
			3.0 to 3.6	-	3.0	4.4	-	4.8	

NL17SV

- 新規のダイを示すために最大定格電圧を 4.6V から 4.3V に変更(車載品番を除く)
- 熱抵抗と消費電力を更新。
- JEDEC 規格を反映するために静電放電を更新。

Existing datasheet

MAXIMUM RATINGS

Symbol	Rating	Value	Units
V _{CC}	DC Supply Voltage	-0.5 to +4.6	V
V _I	DC Input Voltage	-0.5 to +4.6	V
V _O	DC Output Voltage	-0.5 to V _{CC} + 0.5	V

θ _{JA}	Thermal Resistance (Note 1)	250	°C/W
P _D	Power Dissipation in Still Air at 85°C	250	mW

V _{ESD}	ESD Withstand Voltage Human Body Model (Note 2) Machine Model (Note 3)	3000 200	V
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V _{ESD}	ESD Withstand Voltage Human Body Model (Note 2) Machine Model (Note 3)	2000 300	V
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V _{ESD}	ESD Withstand Voltage Human Body Model (Note 2) Machine Model (Note 3)	4000 200	V
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New

MAXIMUM RATINGS

Symbol	Characteristics	Value	Unit
V _{CC}	DC Supply Voltage	-0.5 to +4.3	V
V _I	DC Input Voltage	-0.5 to +4.3	V
V _{OUT}	DC Output Voltage 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 +4.3 -0.5 to +4.3	V

θ _{JA}	Thermal Resistance (Note 2)	SC-88A SC-74A SOT-553 SOT-953 UDFN6	659 555 562 560 382	°C/W
P _D	Power Dissipation in Still Air	SC-88A SC-74A SOT-553 SOT-953 UDFN6	190 225 222 223 327	mW

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



- Hレベル入力電圧とLレベル入力電圧の0.9Vにおける規格を調整。

Existing datasheet

DC CHARACTERISTICS – Digital Section (voltages Referenced to GND)

Symbol	Parameter	Condition	V _{CC}	T _A = 25°C			T _A = -40 to 85°C			Units
				Min	Max		Min	Max		
V _{IH}	High Level Input Voltage		0.90 1.10 ≤ V _{CC} ≤ 1.30 1.40 ≤ V _{CC} ≤ 1.60 1.65 ≤ V _{CC} ≤ 1.95 2.30 ≤ V _{CC} ≤ 2.70 2.70 ≤ V _{CC} ≤ 3.60	0.65 × V _{CC}			0.65 × V _{CC}			V
				0.65 × V _{CC}			0.65 × V _{CC}			
				0.65 × V _{CC}			0.65 × V _{CC}			
				1.6			1.6			
				2.0			2.0			
V _{IL}	Low Level Input Voltage		0.90 1.10 ≤ V _{CC} ≤ 1.30 1.40 ≤ V _{CC} ≤ 1.60 1.65 ≤ V _{CC} ≤ 1.95 2.30 ≤ V _{CC} ≤ 2.70 2.70 ≤ V _{CC} ≤ 3.60	0.35 × V _{CC}			0.35 × V _{CC}			V
				0.35 × V _{CC}			0.35 × V _{CC}			
				0.35 × V _{CC}			0.35 × V _{CC}			
				0.7			0.7			
				0.8			0.8			

New

DC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Conditions	V _{CC} (V)	T _A = 25°C			T _A = -55°C to +125°C			Unit
				Min	Max		Min	Max		
V _{IH}	High-Level Input Voltage		0.9 1.1 to 1.3 1.4 to 1.6 1.65 to 1.95 2.3 to 2.7 3.0 to 3.6	V _{CC}			V _{CC}			V
				0.7 × V _{CC}			0.7 × V _{CC}			
				0.65 × V _{CC}			0.65 × V _{CC}			
				1.6			1.6			
				2.0			2.0			
				2.0			2.0			
V _{IL}	Low-Level Input Voltage		0.9 1.1 to 1.3 1.4 to 1.6 1.65 to 1.95 2.3 to 2.7 3.0 to 3.6	GND			GND			V
				0.3 × V _{CC}			0.3 × V _{CC}			
				0.35 × V _{CC}			0.35 × V _{CC}			
				0.7			0.7			
				0.8			0.8			
				0.8			0.8			

- Hレベル出力電圧とLレベル出力電圧の0.9Vにおける規格を削除。

V _{OH}	High Level Output Voltage	I _{OH} = -100 μA	0.90 1.10 ≤ V _{CC} ≤ 1.30 1.40 ≤ V _{CC} ≤ 1.60 1.65 ≤ V _{CC} ≤ 1.95 2.30 ≤ V _{CC} ≤ 2.70 2.70 ≤ V _{CC} ≤ 3.60	V _{CC} - 0.1	V _{CC} - 0.1	V
				I _{OH} = -2.0 mA	1.10 ≤ V _{CC} ≤ 1.30	
I _{OH} = -4.0 mA	1.40 ≤ V _{CC} ≤ 1.60	0.75 × V _{CC}	0.75 × V _{CC}			
I _{OH} = -6.0 mA	1.65 ≤ V _{CC} ≤ 1.95	1.25	1.25			
I _{OH} = -12 mA	2.30 ≤ V _{CC} ≤ 2.70	2.0	2.0			
I _{OH} = -18 mA	2.70 ≤ V _{CC} ≤ 3.60	1.8	1.8			
I _{OH} = -24 mA	2.70 ≤ V _{CC} ≤ 3.60	2.2	2.2			
V _{OL}	Low Level Output Voltage	I _{OL} = 100 μA	0.90 1.10 ≤ V _{CC} ≤ 1.30 1.40 ≤ V _{CC} ≤ 1.60 1.65 ≤ V _{CC} ≤ 1.95 2.30 ≤ V _{CC} ≤ 2.70 2.70 ≤ V _{CC} ≤ 3.60	0.1	0.1	V
		I _{OL} = 2.0 mA	1.10 ≤ V _{CC} ≤ 1.30	0.25 × V _{CC}	0.25 × V _{CC}	
		I _{OL} = 4.0 mA	1.40 ≤ V _{CC} ≤ 1.60	0.25 × V _{CC}	0.25 × V _{CC}	
		I _{OL} = 6.0 mA	1.65 ≤ V _{CC} ≤ 1.95	0.3	0.3	
		I _{OL} = 12 mA	2.30 ≤ V _{CC} ≤ 2.70	0.4	0.4	
		I _{OL} = 18 mA	2.70 ≤ V _{CC} ≤ 3.60	0.4	0.4	
		I _{OL} = 18 mA	2.30 ≤ V _{CC} ≤ 2.70	0.6	0.6	
		I _{OL} = 24 mA	2.70 ≤ V _{CC} ≤ 3.60	0.4	0.4	
		I _{OL} = 24 mA	2.70 ≤ V _{CC} ≤ 3.60	0.55	0.55	

V _{OH}	High Level Output Voltage	I _{OH} = -100 μA	0.90 1.10 ≤ V _{CC} ≤ 1.30 1.40 ≤ V _{CC} ≤ 1.60 1.65 ≤ V _{CC} ≤ 1.95 2.30 ≤ V _{CC} ≤ 2.70 2.70 ≤ V _{CC} ≤ 3.60	V _{CC} - 0.1	V _{CC} - 0.1	V
				I _{OH} = -2.0 mA	1.10 ≤ V _{CC} ≤ 1.30	
I _{OH} = -4.0 mA	1.40 ≤ V _{CC} ≤ 1.60	0.75 × V _{CC}	0.75 × V _{CC}			
I _{OH} = -6.0 mA	1.65 ≤ V _{CC} ≤ 1.95	1.25	1.25			
I _{OH} = -12 mA	2.30 ≤ V _{CC} ≤ 2.70	2.0	2.0			
I _{OH} = -18 mA	2.70 ≤ V _{CC} ≤ 3.60	1.8	1.8			
I _{OH} = -24 mA	2.70 ≤ V _{CC} ≤ 3.60	2.2	2.2			
V _{OL}	Low Level Output Voltage	I _{OL} = 100 μA	0.90 1.10 ≤ V _{CC} ≤ 1.30 1.40 ≤ V _{CC} ≤ 1.60 1.65 ≤ V _{CC} ≤ 1.95 2.30 ≤ V _{CC} ≤ 2.70 2.70 ≤ V _{CC} ≤ 3.60	0.1	0.1	V
		I _{OL} = 2.0 mA	1.10 ≤ V _{CC} ≤ 1.30	0.25 × V _{CC}	0.25 × V _{CC}	
		I _{OL} = 4.0 mA	1.40 ≤ V _{CC} ≤ 1.60	0.25 × V _{CC}	0.25 × V _{CC}	
		I _{OL} = 6.0 mA	1.65 ≤ V _{CC} ≤ 1.95	0.3	0.3	
		I _{OL} = 12 mA	2.30 ≤ V _{CC} ≤ 2.70	0.4	0.4	
		I _{OL} = 18 mA	2.70 ≤ V _{CC} ≤ 3.60	0.4	0.4	
		I _{OL} = 18 mA	2.30 ≤ V _{CC} ≤ 2.70	0.6	0.6	
		I _{OL} = 24 mA	2.70 ≤ V _{CC} ≤ 3.60	0.4	0.4	
		I _{OL} = 24 mA	2.70 ≤ V _{CC} ≤ 3.60	0.55	0.55	

- すべての伝播遅延仕様から下限値を削除。

Existing datasheet

AC CHARACTERISTICS (input t_r = t_f = 3.0 nS)

Symbol	Parameter	Condition	-40°C			25°C			85°C			Units
			Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	
T _{PHL} T _{PLH}	Propagation Delay	C _L = 15 pF, R _L = 1.0 MΩ	0.90			13						nS
			1.10 ≤ V _{CC} ≤ 1.30	3.0	6.0	15.8	1.0	18.6				nS
			1.40 ≤ V _{CC} ≤ 1.60	1.0	3.2	8.7	1.0	9.7				nS
T _{PHL} T _{PLH}	Propagation Delay	C _L = 15 pF, R _L = 2.0 kΩ	1.10 ≤ V _{CC} ≤ 1.30	1.0	2.0	6.0	1.0	6.8				nS
			1.40 ≤ V _{CC} ≤ 1.60	0.8	1.2	4.1	0.7	4.7				nS
			2.30 ≤ V _{CC} ≤ 2.70	0.7	1.0	3.3	0.6	4.0				nS

New

AC CHARACTERISTICS (input t_r = t_f = 3.0 nS)

Symbol	Parameter	Condition	-40°C			25°C			85°C			Units
			Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	
T _{PHL} T _{PLH}	Propagation Delay	C _L = 15 pF, R _L = 1.0 MΩ	0.90			13						nS
			1.10 ≤ V _{CC} ≤ 1.30				6.0	15.8			18.6	nS
			1.40 ≤ V _{CC} ≤ 1.60				3.2	8.7			9.7	nS
T _{PHL} T _{PLH}	Propagation Delay	C _L = 30 pF, R _L = 500 Ω	1.10 ≤ V _{CC} ≤ 1.30			2.0	6.0			6.8	nS	
			1.40 ≤ V _{CC} ≤ 1.60			1.2	4.1			4.7	nS	
			2.30 ≤ V _{CC} ≤ 2.70			1.0	3.3			4.0	nS	

NC7SP

- 新規プロセスに合わせて絶対最大電圧を調整。

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

Absolute Maximum Ratings (Note 1)

Supply Voltage (V_{CC})	-0.5V to +4.3V
DC Input Voltage (V_{IN})	-0.5V to +4.3V
DC Output Voltage (V_{OUT})	
HIGH or LOW State (Note 2)	-0.5V to $V_{CC} + 0.5V$
$V_{CC} = 0V$	-0.5V to 4.3V

Symbol	Parameter	Min.	Max.	Unit	
V_{CC}	Supply Voltage	-0.5	4.6	V	
V_{IN}	DC Input Voltage	-0.5	4.6	V	
V_{OUT}	DC Output Voltage	HIGH or LOW State ⁽¹⁾	-0.5	$V_{CC} + 0.5$	V
		$V_{CC} = 0V$	-0.5	4.6	V

Symbol	Parameter	Min.	Max.	Unit	
V_{CC}	Supply Voltage	-0.5	4.3	V	
V_{IN}	DC Input Voltage	-0.5	4.3	V	
V_{OUT}	DC Output Voltage	HIGH or LOW State ⁽¹⁾	-0.5	$V_{CC} + 0.5$	V
		$V_{CC} = 0V$	-0.5	4.3	V

- 新規のダイを反映するために消費電力を調整。
- 新規のダイを反映するために熱抵抗を調整。

Existing datasheet

P_D	Power Dissipation at +85°C	SC70-5	150	mW
		MicroPak™-6	130	
		MicroPak2™-6	120	

New

P_D	Power Dissipation In Still Air	SC-74A	225	mW
		SC70-5	190	
		MicroPak™-6	327	
		MicroPak2™-6	327	

θ_{JA}	Thermal Resistance	SC70-5	425	°C/W
		MicroPak™-6	500	
		MicroPak2™-6	560	

θ_{JA}	Thermal Resistance	SC-74A	555	°C/W
		SC70-5	659	
		MicroPak™-6	382	
		MicroPak2™-6	382	



- Hレベル入力電圧とLレベル入力電圧の仕様から 0.9V における規格を削除。
- Hレベル出力電圧とLレベル出力電圧の仕様から 0.9V における規格を削除。

Existing datasheet

DC Electrical Characteristics

Symbol	Parameter	V _{CC}	Conditions	T _A =25°C		T _A =-40 to 85°C		Units
				Min.	Max.	Min.	Max.	
V _{IH}	HIGH Level Input Voltage	0.90		0.65 × V _{CC}	0.65 × V _{CC}			V
		1.10 ≤ V _{CC} ≤ 1.30		0.65 × V _{CC}	0.65 × V _{CC}			
		1.40 ≤ V _{CC} ≤ 1.60		0.65 × V _{CC}	0.65 × V _{CC}			
		1.65 ≤ V _{CC} ≤ 1.95		0.65 × V _{CC}	0.65 × V _{CC}			
		2.30 ≤ V _{CC} ≤ 2.70		1.6	1.6			
		3.00 ≤ V _{CC} ≤ 3.60		2.1	2.1			
V _{IL}	LOW Level Input Voltage	0.90		0.35 × V _{CC}	0.35 × V _{CC}			V
		1.10 ≤ V _{CC} ≤ 1.30		0.35 × V _{CC}	0.35 × V _{CC}			
		1.40 ≤ V _{CC} ≤ 1.60		0.35 × V _{CC}	0.35 × V _{CC}			
		1.65 ≤ V _{CC} ≤ 1.95		0.35 × V _{CC}	0.35 × V _{CC}			
		2.30 ≤ V _{CC} ≤ 2.70		0.7	0.7			
		3.00 ≤ V _{CC} ≤ 3.60		0.9	0.9			
V _{OH}	HIGH Level Output Voltage	0.90		V _{CC} - 0.1	V _{CC} - 0.1			V
		1.10 ≤ V _{CC} ≤ 1.30		V _{CC} - 0.1	V _{CC} - 0.1			
		1.40 ≤ V _{CC} ≤ 1.60		V _{CC} - 0.1	V _{CC} - 0.1			
		1.65 ≤ V _{CC} ≤ 1.95		V _{CC} - 0.1	V _{CC} - 0.1			
		2.30 ≤ V _{CC} ≤ 2.70		V _{CC} - 0.1	V _{CC} - 0.1			
		3.00 ≤ V _{CC} ≤ 3.60		V _{CC} - 0.1	V _{CC} - 0.1			
		1.10 ≤ V _{CC} ≤ 1.30	I _{OH} =0.5mA	0.75 × V _{CC}	0.75 × V _{CC}			
		1.40 ≤ V _{CC} ≤ 1.60	I _{OH} =1mA	1.07	0.99			
		1.65 ≤ V _{CC} ≤ 1.95	I _{OH} =1.5mA	1.24	1.22			
		2.30 ≤ V _{CC} ≤ 2.70	I _{OH} =2.1mA	1.95	1.87			
		3.00 ≤ V _{CC} ≤ 3.60	I _{OH} =2.6mA	2.61	2.55			
		V _{OL}	LOW Level Output Voltage	0.90		0.1	0.1	
1.10 ≤ V _{CC} ≤ 1.30				0.1	0.1			
1.40 ≤ V _{CC} ≤ 1.60				0.1	0.1			
1.65 ≤ V _{CC} ≤ 1.95				0.1	0.1			
2.30 ≤ V _{CC} ≤ 2.70				0.1	0.1			
3.00 ≤ V _{CC} ≤ 3.60				0.1	0.1			
1.10 ≤ V _{CC} ≤ 1.30	I _{OL} =0.5mA			0.30 × V _{CC}	0.30 × V _{CC}			
1.40 ≤ V _{CC} ≤ 1.60	I _{OL} =1mA			0.31	0.37			
1.65 ≤ V _{CC} ≤ 1.95	I _{OL} =1.5mA			0.31	0.35			
2.30 ≤ V _{CC} ≤ 2.70	I _{OL} =2.1mA			0.31	0.33			
3.00 ≤ V _{CC} ≤ 3.60	I _{OL} =2.6mA			0.31	0.33			

New

DC Electrical Characteristics

Symbol	Parameter	V _{CC}	Conditions	T _A =25°C		T _A =-40 to 85°C		Units
				Min.	Max.	Min.	Max.	
V _{IH}	HIGH Level Input Voltage	0.90		V _{CC}	V _{CC}			V
		1.10 ≤ V _{CC} ≤ 1.30		0.65 × V _{CC}	0.65 × V _{CC}			
		1.40 ≤ V _{CC} ≤ 1.60		0.65 × V _{CC}	0.65 × V _{CC}			
		1.65 ≤ V _{CC} ≤ 1.95		0.65 × V _{CC}	0.65 × V _{CC}			
		2.30 ≤ V _{CC} ≤ 2.70		1.6	1.6			
		3.00 ≤ V _{CC} ≤ 3.60		2.1	2.1			
V _{IL}	LOW Level Input Voltage	0.90		GND	GND			V
		1.10 ≤ V _{CC} ≤ 1.30		0.35 × V _{CC}	0.35 × V _{CC}			
		1.40 ≤ V _{CC} ≤ 1.60		0.35 × V _{CC}	0.35 × V _{CC}			
		1.65 ≤ V _{CC} ≤ 1.95		0.35 × V _{CC}	0.35 × V _{CC}			
		2.30 ≤ V _{CC} ≤ 2.70		0.7	0.7			
		3.00 ≤ V _{CC} ≤ 3.60		0.9	0.9			
V _{OH}	HIGH Level Output Voltage	0.90		V _{CC} - 0.1	V _{CC} - 0.1			V
		1.10 ≤ V _{CC} ≤ 1.30		V _{CC} - 0.1	V _{CC} - 0.1			
		1.40 ≤ V _{CC} ≤ 1.60		V _{CC} - 0.1	V _{CC} - 0.1			
		1.65 ≤ V _{CC} ≤ 1.95		V _{CC} - 0.1	V _{CC} - 0.1			
		2.30 ≤ V _{CC} ≤ 2.70		V _{CC} - 0.1	V _{CC} - 0.1			
		3.00 ≤ V _{CC} ≤ 3.60		V _{CC} - 0.1	V _{CC} - 0.1			
		1.10 ≤ V _{CC} ≤ 1.30	I _{OH} =0.5mA	0.75 × V _{CC}	0.75 × V _{CC}			
		1.40 ≤ V _{CC} ≤ 1.60	I _{OH} =1mA	1.07	0.99			
		1.65 ≤ V _{CC} ≤ 1.95	I _{OH} =1.5mA	1.24	1.22			
		2.30 ≤ V _{CC} ≤ 2.70	I _{OH} =2.1mA	1.95	1.87			
		3.00 ≤ V _{CC} ≤ 3.60	I _{OH} =2.6mA	2.61	2.55			
		V _{OL}	LOW Level Output Voltage	0.90		0.1	0.1	
1.10 ≤ V _{CC} ≤ 1.30				0.1	0.1			
1.40 ≤ V _{CC} ≤ 1.60				0.1	0.1			
1.65 ≤ V _{CC} ≤ 1.95				0.1	0.1			
2.30 ≤ V _{CC} ≤ 2.70				0.1	0.1			
3.00 ≤ V _{CC} ≤ 3.60				0.1	0.1			
1.10 ≤ V _{CC} ≤ 1.30	I _{OL} =0.5mA			0.30 × V _{CC}	0.30 × V _{CC}			
1.40 ≤ V _{CC} ≤ 1.60	I _{OL} =1mA			0.31	0.37			
1.65 ≤ V _{CC} ≤ 1.95	I _{OL} =1.5mA			0.31	0.35			
2.30 ≤ V _{CC} ≤ 2.70	I _{OL} =2.1mA			0.31	0.33			
3.00 ≤ V _{CC} ≤ 3.60	I _{OL} =2.6mA			0.31	0.33			

Existing datasheet

DC Electrical Characteristics

Symbol	Parameter	V _{CC} (V)	T _A = -25°C		T _A = -40°C to -85°C		Units	Conditions	
			Min	Max	Min	Max			
V _{IH}	HIGH Level Input Voltage	0.90	0.65 × V _{CC}	0.65 × V _{CC}			V		
		1.10 ≤ V _{CC} ≤ 1.30	0.65 × V _{CC}	0.65 × V _{CC}					
		1.40 ≤ V _{CC} ≤ 1.60	0.65 × V _{CC}	0.65 × V _{CC}					
		1.65 ≤ V _{CC} ≤ 1.95	0.65 × V _{CC}	0.65 × V _{CC}					
		2.30 ≤ V _{CC} ≤ 2.70	1.6	1.6					
		3.00 ≤ V _{CC} ≤ 3.60	2.1	2.1					
V _{IL}	LOW Level Input Voltage	0.90	0.35 × V _{CC}	0.35 × V _{CC}			V		
		1.10 ≤ V _{CC} ≤ 1.30	0.35 × V _{CC}	0.35 × V _{CC}					
		1.40 ≤ V _{CC} ≤ 1.60	0.35 × V _{CC}	0.35 × V _{CC}					
		1.65 ≤ V _{CC} ≤ 1.95	0.35 × V _{CC}	0.35 × V _{CC}					
		2.30 ≤ V _{CC} ≤ 2.70	0.7	0.7					
		3.00 ≤ V _{CC} ≤ 3.60	0.9	0.9					
V _{OL}	LOW Level Output Voltage	0.90	0.1	0.1			V	I _{OL} = 20 μA	
		1.10 ≤ V _{CC} ≤ 1.30	0.1	0.1					
		1.40 ≤ V _{CC} ≤ 1.60	0.1	0.1					
		1.65 ≤ V _{CC} ≤ 1.95	0.1	0.1					
		2.30 ≤ V _{CC} ≤ 2.70	0.1	0.1					
		3.00 ≤ V _{CC} ≤ 3.60	0.1	0.1					
		1.10 ≤ V _{CC} ≤ 1.30	I _{OL} = 0.5 mA	0.30 × V _{CC}	0.30 × V _{CC}				
		1.40 ≤ V _{CC} ≤ 1.60	I _{OL} = 1 mA	0.31	0.37				
		1.65 ≤ V _{CC} ≤ 1.95	I _{OL} = 1.5 mA	0.31	0.35				
		2.30 ≤ V _{CC} ≤ 2.70	I _{OL} = 2.1 mA	0.31	0.33				
		3.00 ≤ V _{CC} ≤ 3.60	I _{OL} = 2.6 mA	0.31	0.33				

New

DC Electrical Characteristics

Symbol	Parameter	V _{CC} (V)	T _A = -25°C		T _A = -40°C to -85°C		Units	Conditions	
			Min	Max	Min	Max			
V _{IH}	HIGH Level Input Voltage	0.90	V _{CC}	V _{CC}			V		
		1.10 ≤ V _{CC} ≤ 1.30	0.65 × V _{CC}	0.65 × V _{CC}					
		1.40 ≤ V _{CC} ≤ 1.60	0.65 × V _{CC}	0.65 × V _{CC}					
		1.65 ≤ V _{CC} ≤ 1.95	0.65 × V _{CC}	0.65 × V _{CC}					
		2.30 ≤ V _{CC} ≤ 2.70	1.6	1.6					
		3.00 ≤ V _{CC} ≤ 3.60	2.1	2.1					
V _{IL}	LOW Level Input Voltage	0.90	GND	GND			V		
		1.10 ≤ V _{CC} ≤ 1.30	0.35 × V _{CC}	0.35 × V _{CC}					
		1.40 ≤ V _{CC} ≤ 1.60	0.35 × V _{CC}	0.35 × V _{CC}					
		1.65 ≤ V _{CC} ≤ 1.95	0.35 × V _{CC}	0.35 × V _{CC}					
		2.30 ≤ V _{CC} ≤ 2.70	0.7	0.7					
		3.00 ≤ V _{CC} ≤ 3.60	0.9	0.9					
V _{OL}	LOW Level Output Voltage	0.90	0.1	0.1			V	I _{OL} = 20 μA	
		1.10 ≤ V _{CC} ≤ 1.30	0.1	0.1					
		1.40 ≤ V _{CC} ≤ 1.60	0.1	0.1					
		1.65 ≤ V _{CC} ≤ 1.95	0.1	0.1					
		2.30 ≤ V _{CC} ≤ 2.70	0.1	0.1					
		3.00 ≤ V _{CC} ≤ 3.60	0.1	0.1					
		1.10 ≤ V _{CC} ≤ 1.30	I _{OL} = 0.5 mA	0.30 × V _{CC}	0.30 × V _{CC}				
		1.40 ≤ V _{CC} ≤ 1.60	I _{OL} = 1 mA	0.31	0.37				
		1.65 ≤ V _{CC} ≤ 1.95	I _{OL} = 1.5 mA	0.31	0.35				
		2.30 ≤ V _{CC} ≤ 2.70	I _{OL} = 2.1 mA	0.31	0.33				
		3.00 ≤ V _{CC} ≤ 3.60	I _{OL} = 2.6 mA	0.31	0.33				

- 正のしきい値電圧から下限値と 0.90V における規格を削除。
- 負のしきい値電圧から上限値と 0.90V における規格を削除。
- ヒステリシス電圧の 0.90V における規格を削除。

DC Electrical Characteristics

Symbol	Parameter	Conditions	V _{CC} (V)	T _A =+25°C		T _A =-40°C to +85°C		Units
				Min.	Max.	Min.	Max.	
V _{IH}	Positive Threshold Voltage		0.90	0.30	0.60	0.30	0.60	V
			1.10	0.40	1.00	0.40	1.00	
			1.40	0.50	1.20	0.50	1.20	
			1.65	0.70	1.50	0.70	1.50	
			2.30	1.00	1.90	1.00	1.90	
3.00	1.50	2.60	1.50	2.60				
V _{IL}	Negative Threshold Voltage		0.90	0.10	0.60	0.10	0.60	V
			1.10	0.15	0.70	0.15	0.70	
			1.40	0.20	0.80	0.20	0.80	
			1.65	0.25	0.90	0.25	0.90	
			2.30	0.40	1.15	0.40	1.15	
3.00	0.6	1.50	0.60	1.50				
V _H	Hysteresis Voltage		0.90	0.07	0.50	0.07	0.50	V
			1.10	0.08	0.60	0.08	0.60	
			1.40	0.09	0.80	0.09	0.80	
			1.65	0.10	1.00	0.10	1.00	
			2.30	0.25	1.10	0.25	1.10	
3.00	0.60	1.80	0.60	1.80				

DC Electrical Characteristics

Symbol	Parameter	Conditions	V _{CC} (V)	T _A =+25°C		T _A =-40°C to +85°C		Units
				Min.	Max.	Min.	Max.	
V _{IH}	Positive Threshold Voltage		0.90					V
			1.10		1.00		1.00	
			1.40		1.20		1.20	
			1.65		1.50		1.50	
			2.30		1.90		1.90	
3.00		2.60		2.60				
V _{IL}	Negative Threshold Voltage		0.90					V
			1.10	0.15		0.15		
			1.40	0.20		0.20		
			1.65	0.25		0.25		
			2.30	0.40		0.40		
3.00	0.6		0.60					
V _H	Hysteresis Voltage		0.90					V
			1.10	0.08	0.60	0.08	0.60	
			1.40	0.09	0.80	0.09	0.80	
			1.65	0.10	1.00	0.10	1.00	
			2.30	0.25	1.10	0.25	1.10	
3.00	0.60	1.80	0.60	1.80				

- すべての伝播遅延と出カインエール時間と出カデセイル時間の仕様から下限値を削除。

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 _{PLZ}	Propagation Delay	0.90		24					ns	C _L = 10 pF R _U = 5000Ω R _O = 5000Ω	Figures 1, 2
		1.10 ≤ V _{CC} ≤ 1.30	4.0	9	18.7	3.5	30.9				
		1.40 ≤ V _{CC} ≤ 1.60	2.0	6	12.4	1.5	13.9				
		1.65 ≤ V _{CC} ≤ 1.95	1.5	5	9.6	1.0	12.1				
		2.30 ≤ V _{CC} ≤ 2.70	1.0	4	9.0	0.8	10.0				
3.00 ≤ V _{CC} ≤ 3.60	1.0	3	8.7	0.5	9.0						
t _{FLZ}	Propagation Delay	0.90		27				ns	C _L = 15 pF R _U = 5000Ω R _O = 5000Ω	Figures 1, 2	
		1.10 ≤ V _{CC} ≤ 1.30	5.0	10	20.2	4.5	33.9				
		1.40 ≤ V _{CC} ≤ 1.60	3.0	7	13.3	2.5	16.6				
		1.65 ≤ V _{CC} ≤ 1.95	2.0	5	10.3	2.0	12.6				
		2.30 ≤ V _{CC} ≤ 2.70	1.5	4	9.4	1.0	10.2				
3.00 ≤ V _{CC} ≤ 3.60	1.0	3	9.1	0.5	9.7						
t _{HLZ}	Propagation Delay	0.90		34				ns	C _L = 30 pF R _U = 5000Ω R _O = 5000Ω	Figures 1, 2	
		1.10 ≤ V _{CC} ≤ 1.30	6.0	12	24.0	5.0	43.0				
		1.40 ≤ V _{CC} ≤ 1.60	4.0	8	16.0	3.0	18.0				
		1.65 ≤ V _{CC} ≤ 1.95	2.0	6	12.0	2.0	14.0				
		2.30 ≤ V _{CC} ≤ 2.70	1.0	5	11.0	1.0	12.0				
3.00 ≤ V _{CC} ≤ 3.60	0.8	4	10.0	0.5	11.0						

New

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 _{PLZ}	Propagation Delay	0.90		24				ns	C _L = 10 pF R _U = 5000Ω R _O = 5000Ω	Figures 1, 2	
		1.10 ≤ V _{CC} ≤ 1.30			9	18.7	30.9				
		1.40 ≤ V _{CC} ≤ 1.60			6	12.4	13.9				
		1.65 ≤ V _{CC} ≤ 1.95			5	9.6	12.1				
		2.30 ≤ V _{CC} ≤ 2.70			4	9.0	10.0				
3.00 ≤ V _{CC} ≤ 3.60			3	8.7	9.0						
t _{FLZ}	Propagation Delay	0.90		27				ns	C _L = 15 pF R _U = 5000Ω R _O = 5000Ω	Figures 1, 2	
		1.10 ≤ V _{CC} ≤ 1.30			10	20.2	33.9				
		1.40 ≤ V _{CC} ≤ 1.60			7	13.3	16.6				
		1.65 ≤ V _{CC} ≤ 1.95			5	10.3	12.6				
		2.30 ≤ V _{CC} ≤ 2.70			4	9.4	10.2				
3.00 ≤ V _{CC} ≤ 3.60			3	9.1	9.7						
t _{HLZ}	Propagation Delay	0.90		34				ns	C _L = 30 pF R _U = 5000Ω R _O = 5000Ω	Figures 1, 2	
		1.10 ≤ V _{CC} ≤ 1.30			12	24.0	43.0				
		1.40 ≤ V _{CC} ≤ 1.60			8	16.0	18.0				
		1.65 ≤ V _{CC} ≤ 1.95			6	12.0	14.0				
		2.30 ≤ V _{CC} ≤ 2.70			5	11.0	12.0				
3.00 ≤ V _{CC} ≤ 3.60			4	10.0	11.0						

AC Electrical Characteristics (Continued)

Symbol	Parameter	V _{CC}	Conditions	T _A =+25°C			T _A =-40 to +85°C			Units	Figure
				Min.	Typ.	Min.	Typ.	Min.			
t _{enL} , t _{enH}	Propagation Delay	0.90	C _L = 30pF, R _U = 1MΩ		34				ns	Figure 5 Figure 6	
		1.10 ≤ V _{CC} ≤ 1.30		5.5	12.0	23.4	5.0	51.1			
		1.40 ≤ V _{CC} ≤ 1.60		4.0	8.0	13.8	3.0	17.7			
		1.65 ≤ V _{CC} ≤ 1.95		2.0	6.0	10.6	2.0	14.0			
		2.30 ≤ V _{CC} ≤ 2.70		1.0	5.0	7.6	1.0	9.9			
3.00 ≤ V _{CC} ≤ 3.60	0.8	4.0	6.4	0.5	8.9						
t _{ozL} , t _{ozH}	Output Enable Time	0.90	C _L = 30pF, R _U = 5000Ω, R _O = 5000Ω		37				ns	Figure 5 Figure 6	
		1.10 ≤ V _{CC} ≤ 1.30		6.0	13.0	24.4	5.0	51.9			
		1.40 ≤ V _{CC} ≤ 1.60		4.0	8.0	14.5	3.0	17.9			
		1.65 ≤ V _{CC} ≤ 1.95		2.0	6.0	11.7	2.0	14.7			
		2.30 ≤ V _{CC} ≤ 2.70		1.0	5.0	9.1	1.0	11.1			
3.00 ≤ V _{CC} ≤ 3.60	0.8	4.0	8.1	0.5	10.1						
t _{ovL} , t _{ovH}	Output Disable Time	0.90	C _L = 30pF, R _U = 5000Ω, R _O = 5000Ω		36				ns	Figure 5 Figure 6	
		1.10 ≤ V _{CC} ≤ 1.30		6.0	13.0	24.8	5.0	53.5			
		1.40 ≤ V _{CC} ≤ 1.60		4.0	8.0	17.1	3.0	21.1			
		1.65 ≤ V _{CC} ≤ 1.95		2.0	6.0	16.5	2.0	20.5			
		2.30 ≤ V _{CC} ≤ 2.70		1.0	5.0	15.2	1.0	16.7			
3.00 ≤ V _{CC} ≤ 3.60	0.8	4.0	14.8	0.5	16.3						

AC Electrical Characteristics (Continued)

Symbol	Parameter	V _{CC}	Conditions	T _A =+25°C			T _A =-40 to +85°C			Units	Figure
				Min.	Typ.	Max.	Min.	Max.			
t _{enL} , t _{enH}	Propagation Delay	0.90	C _L = 30pF, R _U = 1MΩ		34				ns	Figure 5 Figure 6	
		1.10 ≤ V _{CC} ≤ 1.30				12.0	23.4	51.1			
		1.40 ≤ V _{CC} ≤ 1.60				8.0	13.8	17.7			
		1.65 ≤ V _{CC} ≤ 1.95				6.0	10.6	14.0			
		2.30 ≤ V _{CC} ≤ 2.70				5.0	7.6	9.9			
3.00 ≤ V _{CC} ≤ 3.60			4.0	6.4	8.9						
t _{ozL} , t _{ozH}	Output Enable Time	0.90	C _L = 30pF, R _U = 5000Ω, R _O = 5000Ω		37				ns	Figure 5 Figure 6	
		1.10 ≤ V _{CC} ≤ 1.30				13.0	24.4	51.9			
		1.40 ≤ V _{CC} ≤ 1.60				8.0	14.5	17.9			
		1.65 ≤ V _{CC} ≤ 1.95				6.0	11.7	14.7			
		2.30 ≤ V _{CC} ≤ 2.70				5.0	9.1	11.1			
3.00 ≤ V _{CC} ≤ 3.60			4.0	8.1	10.1						
t _{ovL} , t _{ovH}	Output Disable Time	0.90	C _L = 30pF, R _U = 5000Ω, R _O = 5000Ω		36				ns	Figure 5 Figure 6	
		1.10 ≤ V _{CC} ≤ 1.30				13.0	24.8	53.5			
		1.40 ≤ V _{CC} ≤ 1.60				8.0	17.1	21.1			
		1.65 ≤ V _{CC} ≤ 1.95				6.0	16.5	20.5			
		2.30 ≤ V _{CC} ≤ 2.70				5.0	15.2	16.7			
3.00 ≤ V _{CC} ≤ 3.60			4.0	14.8	16.3						



- NC7SP125 および NC7SP126 で一部の伝播遅延と出カインープル時間と出力デセイル時間の上限值を調整。
- すべての伝播遅延と出カインープル時間と出力デセイル時間から下限値を削除。

Existing datasheet

AC Electrical Characteristics

Symbol	Parameter	V _{CC}	Conditions	T _A =+25°C			T _A =-40 to +85°C			Units	Figure
				Min.	Typ.	Max.	Min.	Max.			
t _{PHL} , t _{PLH}	Propagation Delay	0.90	C _L =10pF, R _L =1MΩ	26						ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		4.0	10.0	19.1	3.5	39.6			
		1.40 ≤ V _{CC} ≤ 1.60		2.0	6.0	11.2	1.5	14.5			
		1.65 ≤ V _{CC} ≤ 1.95		1.5	5.0	8.6	1.0	11.6			
		2.30 ≤ V _{CC} ≤ 2.70		1.0	4.0	6.3	0.8	8.2			
		3.00 ≤ V _{CC} ≤ 3.60		1.0	3.0	5.3	0.5	7.2			
t _{OLZ} , t _{OLH}	Output Enable Time	0.90	C _L =10pF, R _D =5000Ω	29						ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		4.0	8.0	17.5	3.5	40.4			
		1.40 ≤ V _{CC} ≤ 1.60		2.0	6.0	11.9	1.5	14.8			
		1.65 ≤ V _{CC} ≤ 1.95		1.5	5.0	9.7	1.0	12.3			
		2.30 ≤ V _{CC} ≤ 2.70		1.0	4.0	7.7	0.8	10.5			
		3.00 ≤ V _{CC} ≤ 3.60		1.0	3.0	6.9	0.5	8.6			
t _{OLZ} , t _{OLH}	Output Disable Time	0.90	C _L =10pF, R _D =5000Ω	28						ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		4.0	8.0	20.5	3.5	42.0			
		1.40 ≤ V _{CC} ≤ 1.60		2.0	6.0	15.3	1.5	18.0			
		1.65 ≤ V _{CC} ≤ 1.95		1.5	5.0	14.7	1.0	17.8			
		2.30 ≤ V _{CC} ≤ 2.70		1.0	4.0	13.7	0.8	15.0			
		3.00 ≤ V _{CC} ≤ 3.60		1.0	3.0	13.5	0.5	14.8			
t _{PHL} , t _{PLH}	Propagation Delay	0.90	C _L =15pF, R _L =1MΩ	28						ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		5.0	10.0	20.5	4.5	42.5			
		1.40 ≤ V _{CC} ≤ 1.60		3.0	7.0	11.8	2.5	15.4			
		1.65 ≤ V _{CC} ≤ 1.95		2.0	5.0	9.1	2.0	12.2			
		2.30 ≤ V _{CC} ≤ 2.70		1.5	4.0	6.6	1.0	8.6			
		3.00 ≤ V _{CC} ≤ 3.60		1.0	3.0	5.6	0.5	7.5			
t _{OLZ} , t _{OLH}	Output Enable Time	0.90	C _L =15pF, R _D =5000Ω	31						ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		5.0	11.0	18.2	4.5	43.3			
		1.40 ≤ V _{CC} ≤ 1.60		3.0	7.0	12.5	2.5	15.5			
		1.65 ≤ V _{CC} ≤ 1.95		2.0	5.0	10.2	2.0	12.9			
		2.30 ≤ V _{CC} ≤ 2.70		1.5	4.0	8.0	1.0	9.9			
		3.00 ≤ V _{CC} ≤ 3.60		1.0	3.0	7.2	0.5	8.9			
t _{OLZ} , t _{OLH}	Output Disable Time	0.90	C _L =15pF, R _D =5000Ω	30						ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		5.0	11.0	21.6	4.5	44.9			
		1.40 ≤ V _{CC} ≤ 1.60		3.0	7.0	15.9	2.5	18.8			
		1.65 ≤ V _{CC} ≤ 1.95		2.0	5.0	15.2	2.0	18.2			
		2.30 ≤ V _{CC} ≤ 2.70		1.5	4.0	14.1	1.0	15.4			
		3.00 ≤ V _{CC} ≤ 3.60		1.0	3.0	13.9	0.5	15.1			

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New

AC Electrical Characteristics

Symbol	Parameter	V _{CC}	Conditions	T _A =+25°C			T _A =-40 to +85°C			Units	Figure
				Min.	Typ.	Max.	Min.	Max.			
t _{PHL} , t _{PLH}	Propagation Delay	0.90	C _L =10pF, R _L =1MΩ	26						ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		10.0	26		39.6				
		1.40 ≤ V _{CC} ≤ 1.60		6.0	11.2		14.5				
		1.65 ≤ V _{CC} ≤ 1.95		5.0	8.6		11.6				
		2.30 ≤ V _{CC} ≤ 2.70		4.0	6.3		8.2				
		3.00 ≤ V _{CC} ≤ 3.60		3.0	5.3		7.2				
t _{OLZ} , t _{OLH}	Output Enable Time	0.90	C _L =10pF, R _D =5000Ω	29						ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		8.0	26		40.4				
		1.40 ≤ V _{CC} ≤ 1.60		6.0	11.9		14.8				
		1.65 ≤ V _{CC} ≤ 1.95		5.0	9.7		12.3				
		2.30 ≤ V _{CC} ≤ 2.70		4.0	7.7		10.5				
		3.00 ≤ V _{CC} ≤ 3.60		3.0	6.9		8.6				
t _{OLZ} , t _{OLH}	Output Disable Time	0.90	C _L =10pF, R _D =5000Ω	28						ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		8.0	20.5		42.0				
		1.40 ≤ V _{CC} ≤ 1.60		6.0	15.3		18.0				
		1.65 ≤ V _{CC} ≤ 1.95		5.0	14.7		17.8				
		2.30 ≤ V _{CC} ≤ 2.70		4.0	13.7		15.0				
		3.00 ≤ V _{CC} ≤ 3.60		3.0	13.5		14.8				
t _{PHL} , t _{PLH}	Propagation Delay	0.90	C _L =15pF, R _L =1MΩ	28						ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		10.0	27		42.5				
		1.40 ≤ V _{CC} ≤ 1.60		7.0	11.8		15.4				
		1.65 ≤ V _{CC} ≤ 1.95		5.0	9.1		12.2				
		2.30 ≤ V _{CC} ≤ 2.70		4.0	6.6		8.6				
		3.00 ≤ V _{CC} ≤ 3.60		3.0	5.6		7.5				
t _{OLZ} , t _{OLH}	Output Enable Time	0.90	C _L =15pF, R _D =5000Ω	31						ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		11.0	27		43.3				
		1.40 ≤ V _{CC} ≤ 1.60		7.0	12.5		15.5				
		1.65 ≤ V _{CC} ≤ 1.95		5.0	10.2		12.9				
		2.30 ≤ V _{CC} ≤ 2.70		4.0	8.0		9.9				
		3.00 ≤ V _{CC} ≤ 3.60		3.0	7.2		8.9				
t _{OLZ} , t _{OLH}	Output Disable Time	0.90	C _L =15pF, R _D =5000Ω	30						ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		11.0	21.6		44.9				
		1.40 ≤ V _{CC} ≤ 1.60		7.0	15.9		18.8				
		1.65 ≤ V _{CC} ≤ 1.95		5.0	15.2		18.2				
		2.30 ≤ V _{CC} ≤ 2.70		4.0	14.1		15.4				
		3.00 ≤ V _{CC} ≤ 3.60		3.0	13.9		15.1				

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AC Electrical Characteristics (Continued)

Symbol	Parameter	V _{CC}	Conditions	T _A =+25°C			T _A =-40 to +85°C			Units	Figure
				Min.	Typ.	Min.	Typ.	Min.			
t _{PHL} , t _{PLH}	Propagation Delay	0.90	C _L =30pF, R _L =1MΩ	34						ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		5.5	12.0	23.4	5.0	51.1			
		1.40 ≤ V _{CC} ≤ 1.60		4.0	8.0	13.8	3.0	17.7			
		1.65 ≤ V _{CC} ≤ 1.95		2.0	6.0	10.6	2.0	14.0			
		2.30 ≤ V _{CC} ≤ 2.70		1.0	5.0	7.6	1.0	9.9			
		3.00 ≤ V _{CC} ≤ 3.60		0.8	4.0	6.4	0.5	8.9			
t _{OLZ} , t _{OLH}	Output Enable Time	0.90	C _L =30pF, R _D =5000Ω	37						ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		6.0	13.0	24.4	5.0	51.9			
		1.40 ≤ V _{CC} ≤ 1.60		4.0	8.0	14.5	3.0	17.9			
		1.65 ≤ V _{CC} ≤ 1.95		2.0	6.0	11.7	2.0	14.7			
		2.30 ≤ V _{CC} ≤ 2.70		1.0	5.0	9.1	1.0	11.1			
		3.00 ≤ V _{CC} ≤ 3.60		0.8	4.0	8.1	0.5	10.1			
t _{OLZ} , t _{OLH}	Output Disable Time	0.90	C _L =30pF, R _D =5000Ω	36						ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		6.0	13.0	24.8	5.0	53.5			
		1.40 ≤ V _{CC} ≤ 1.60		4.0	8.0	17.1	3.0	21.1			
		1.65 ≤ V _{CC} ≤ 1.95		2.0	6.0	16.5	2.0	20.5			
		2.30 ≤ V _{CC} ≤ 2.70		1.0	5.0	15.2	1.0	16.7			
		3.00 ≤ V _{CC} ≤ 3.60		0.8	4.0	14.8	0.5	16.3			

AC Electrical Characteristics (Continued)

Symbol	Parameter	V _{CC}	Conditions	T _A =+25°C			T _A =-40 to +85°C			Units	Figure
				Min.	Typ.	Min.	Typ.	Min.			
t _{PHL} , t _{PLH}	Propagation Delay	0.90	C _L =30pF, R _L =1MΩ	34						ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		12.0	30		51.1				
		1.40 ≤ V _{CC} ≤ 1.60		8.0	13.8		17.7				
		1.65 ≤ V _{CC} ≤ 1.95		6.0	10.6		14.0				
		2.30 ≤ V _{CC} ≤ 2.70		5.0	7.6		9.9				
		3.00 ≤ V _{CC} ≤ 3.60		4.0	6.4		8.9				
t _{OLZ} , t _{OLH}	Output Enable Time	0.90	C _L =30pF, R _D =5000Ω	37						ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		13.0	30		51.9				
		1.40 ≤ V _{CC} ≤ 1.60		8.0	14.5		17.9				
		1.65 ≤ V _{CC} ≤ 1.95		6.0	11.7		14.7				
		2.30 ≤ V _{CC} ≤ 2.70		5.0	9.1		11.1				
		3.00 ≤ V _{CC} ≤ 3.60		4.0	8.1		10.1				
t _{OLZ} , t _{OLH}	Output Disable Time	0.90	C _L =30pF, R _D =5000Ω	36						ns	Figure 5 Figure 6
		1.10 ≤ V _{CC} ≤ 1.30		13.0	24.8		53.5				
		1.40 ≤ V _{CC} ≤ 1.60		8.0	17.1		21.1				
		1.65 ≤ V _{CC} ≤ 1.95		6.0	16.5		20.5				
		2.30 ≤ V _{CC} ≤ 2.70		5.0	15.2		16.7				
		3.00 ≤ V _{CC} ≤ 3.60		4.0	14.8		16.3				



NC7SV

- 新規プロセスに合わせて絶対最大電圧を調整。

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	Min.	Max.	Unit	
V_{CC}	Supply Voltage	-0.5	4.6	V	
V_{IN}	DC Input Voltage	-0.5	4.6	V	
V_{OUT}	DC Output Voltage	HIGH or LOW State ⁽¹⁾	-0.5	$V_{CC} + 0.5$	V
		$V_{CC}=0V$	-0.5	4.6	V

New

Absolute Maximum Ratings (Note 1)

Supply Voltage (V_{CC})	-0.5V to +4.3V
DC Input Voltage (V_{IN})	-0.5V to +4.3V
DC Output Voltage (V_{OUT})	
HIGH or LOW State (Note 2)	-0.5V to $V_{CC} + 0.5V$
$V_{CC} = 0V$	-0.5V to 4.3V

Symbol	Parameter	Min.	Max.	Unit	
V_{CC}	Supply Voltage	-0.5	4.3	V	
V_{IN}	DC Input Voltage	-0.5	4.3	V	
V_{OUT}	DC Output Voltage	HIGH or LOW State ⁽¹⁾	-0.5	$V_{CC} + 0.5$	V
		$V_{CC}=0V$	-0.5	4.3	V

- 新規のダイを反映するために消費電力を調整。
- 新規のダイを反映するために熱抵抗を調整。

Existing datasheet

P_D	Power Dissipation at +85°C	SC70-5	150	mW
		MicroPak™-6	130	
		MicroPak2™-6	120	

θ_{JA}	Thermal Resistance	SC70-5	425	°C/W
		MicroPak™-6	500	
		MicroPak2™-6	560	

New

P_D	Power Dissipation In Still Air	SC-74A	225	mW
		SC70-5	190	
		MicroPak™-6	327	
		MicroPak2™-6	327	

θ_{JA}	Thermal Resistance	SC-74A	555	°C/W
		SC70-5	659	
		MicroPak™-6	382	
		MicroPak2™-6	382	



- Hレベル入力電圧とLレベル入力電圧の仕様で0.9Vにおける規格を調整。
- Hレベル出力電圧とLレベル出力電圧の仕様から0.9Vにおける規格を削除。

Existing datasheet

DC Electrical Characteristics

Symbol	Parameter	V _{CC}	Conditions	T _A =25°C		T _A =-40 to 85°C		Units
				Min.	Max.	Min.	Max.	
V _{ih}	HIGH Level Input Voltage	0.90		0.5 × V _{CC}	0.5 × V _{CC}	0.5 × V _{CC}	0.5 × V _{CC}	V
		1.10 ≤ V _{CC} ≤ 1.30		0.5 × V _{CC}	0.5 × V _{CC}	0.5 × V _{CC}	0.5 × V _{CC}	
		1.40 ≤ V _{CC} ≤ 1.60		0.5 × V _{CC}	0.5 × V _{CC}	0.5 × V _{CC}	0.5 × V _{CC}	
		1.65 ≤ V _{CC} ≤ 1.95		0.5 × V _{CC}	0.5 × V _{CC}	0.5 × V _{CC}	0.5 × V _{CC}	
		2.30 ≤ V _{CC} ≤ 2.70		1.6	1.6	1.6	1.6	
		2.70 ≤ V _{CC} ≤ 3.60		2.0	2.0	2.0	2.0	
V _{il}	LOW Level Input Voltage	0.90		35 × V _{CC}	35 × V _{CC}	35 × V _{CC}	35 × V _{CC}	V
		1.10 ≤ V _{CC} ≤ 1.30		35 × V _{CC}	35 × V _{CC}	35 × V _{CC}	35 × V _{CC}	
		1.40 ≤ V _{CC} ≤ 1.60		35 × V _{CC}	35 × V _{CC}	35 × V _{CC}	35 × V _{CC}	
		1.65 ≤ V _{CC} ≤ 1.95		35 × V _{CC}	35 × V _{CC}	35 × V _{CC}	35 × V _{CC}	
		2.30 ≤ V _{CC} ≤ 2.70		0.7	0.7	0.7	0.7	
		2.70 ≤ V _{CC} ≤ 3.60		0.8	0.8	0.8	0.8	

New

DC Electrical Characteristics

Symbol	Parameter	V _{CC}	Conditions	T _A =25°C		T _A =-40 to 85°C		Units
				Min.	Max.	Min.	Max.	
V _{ih}	HIGH Level Input Voltage	0.90		V _{CC}	V _{CC}	V _{CC}	V _{CC}	V
		1.10 ≤ V _{CC} ≤ 1.30		0.5 × V _{CC}	0.5 × V _{CC}	0.5 × V _{CC}	0.5 × V _{CC}	
		1.40 ≤ V _{CC} ≤ 1.60		0.5 × V _{CC}	0.5 × V _{CC}	0.5 × V _{CC}	0.5 × V _{CC}	
		1.65 ≤ V _{CC} ≤ 1.95		0.5 × V _{CC}	0.5 × V _{CC}	0.5 × V _{CC}	0.5 × V _{CC}	
		2.30 ≤ V _{CC} ≤ 2.70		1.6	1.6	1.6	1.6	
		2.70 ≤ V _{CC} ≤ 3.60		2.0	2.0	2.0	2.0	
V _{il}	LOW Level Input Voltage	0.90		GND	GND	GND	GND	V
		1.10 ≤ V _{CC} ≤ 1.30		35 × V _{CC}	35 × V _{CC}	35 × V _{CC}	35 × V _{CC}	
		1.40 ≤ V _{CC} ≤ 1.60		35 × V _{CC}	35 × V _{CC}	35 × V _{CC}	35 × V _{CC}	
		1.65 ≤ V _{CC} ≤ 1.95		35 × V _{CC}	35 × V _{CC}	35 × V _{CC}	35 × V _{CC}	
		2.30 ≤ V _{CC} ≤ 2.70		0.7	0.7	0.7	0.7	
		2.70 ≤ V _{CC} ≤ 3.60		0.8	0.8	0.8	0.8	

Existing datasheet

Symbol	Parameter	V _{CC}	Conditions	T _A =25°C		T _A =-40 to 85°C		Units	
				Min.	Max.	Min.	Max.		
V _{oh}	HIGH Level Output Voltage	0.90		V _{CC} -0.1	V _{CC} -0.1	V _{CC} -0.1	V _{CC} -0.1	V	
		1.10 ≤ V _{CC} ≤ 1.30		V _{CC} -0.1	V _{CC} -0.1	V _{CC} -0.1	V _{CC} -0.1		
		1.40 ≤ V _{CC} ≤ 1.60		V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2		
		1.65 ≤ V _{CC} ≤ 1.95		V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2		
		2.30 ≤ V _{CC} ≤ 2.70		V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2		
		2.70 ≤ V _{CC} ≤ 3.60		V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2		
		1.10 ≤ V _{CC} ≤ 1.30		I _{OH} =-2mA	75 × V _{CC}	75 × V _{CC}	75 × V _{CC}		75 × V _{CC}
		1.40 ≤ V _{CC} ≤ 1.60		I _{OH} =-4mA	1.25	1.25	1.25		1.25
		1.65 ≤ V _{CC} ≤ 1.95		I _{OH} =-6mA	2.00	2.00	2.00		2.00
		2.30 ≤ V _{CC} ≤ 2.70		I _{OH} =-12mA	1.8	1.8	1.8		1.8
		2.70 ≤ V _{CC} ≤ 3.60		I _{OH} =-18mA	2.2	2.2	2.2		2.2
		2.70 ≤ V _{CC} ≤ 3.60		I _{OH} =-24mA	1.7	1.7	1.7		1.7

New

Symbol	Parameter	V _{CC}	Conditions	T _A =25°C		T _A =-40 to 85°C		Units	
				Min.	Max.	Min.	Max.		
V _{oh}	HIGH Level Output Voltage	0.90		V _{CC} -0.1	V _{CC} -0.1	V _{CC} -0.1	V _{CC} -0.1	V	
		1.10 ≤ V _{CC} ≤ 1.30		V _{CC} -0.1	V _{CC} -0.1	V _{CC} -0.1	V _{CC} -0.1		
		1.40 ≤ V _{CC} ≤ 1.60		V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2		
		1.65 ≤ V _{CC} ≤ 1.95		V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2		
		2.30 ≤ V _{CC} ≤ 2.70		V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2		
		2.70 ≤ V _{CC} ≤ 3.60		V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2		
		1.10 ≤ V _{CC} ≤ 1.30		I _{OH} =-2mA	75 × V _{CC}	75 × V _{CC}	75 × V _{CC}		75 × V _{CC}
		1.40 ≤ V _{CC} ≤ 1.60		I _{OH} =-4mA	1.25	1.25	1.25		1.25
		1.65 ≤ V _{CC} ≤ 1.95		I _{OH} =-6mA	2.00	2.00	2.00		2.00
		2.30 ≤ V _{CC} ≤ 2.70		I _{OH} =-12mA	1.8	1.8	1.8		1.8
		2.70 ≤ V _{CC} ≤ 3.60		I _{OH} =-18mA	2.2	2.2	2.2		2.2
		2.70 ≤ V _{CC} ≤ 3.60		I _{OH} =-24mA	1.7	1.7	1.7		1.7

Symbol	Parameter	V _{CC}	Conditions	T _A =25°C		T _A =-40 to 85°C		Units	
				Min.	Max.	Min.	Max.		
V _{ol}	LOW Level Output Voltage	0.90		0.1	0.1	0.1	0.1	V	
		1.10 ≤ V _{CC} ≤ 1.30		0.1	0.1	0.1	0.1		
		1.40 ≤ V _{CC} ≤ 1.60		0.2	0.2	0.2	0.2		
		1.65 ≤ V _{CC} ≤ 1.95		0.2	0.2	0.2	0.2		
		2.30 ≤ V _{CC} ≤ 2.70		0.2	0.2	0.2	0.2		
		2.70 ≤ V _{CC} ≤ 3.60		0.2	0.2	0.2	0.2		
		1.10 ≤ V _{CC} ≤ 1.30		I _{OL} =2mA	0.25 × V _{CC}	0.25 × V _{CC}	0.25 × V _{CC}		0.25 × V _{CC}
		1.40 ≤ V _{CC} ≤ 1.60		I _{OL} =4mA	0.3	0.3	0.3		0.3
		1.65 ≤ V _{CC} ≤ 1.95		I _{OL} =6mA	0.4	0.4	0.4		0.4
		2.30 ≤ V _{CC} ≤ 2.70		I _{OL} =12mA	0.4	0.4	0.4		0.4
		2.70 ≤ V _{CC} ≤ 3.60		I _{OL} =18mA	0.6	0.6	0.6		0.6
		2.70 ≤ V _{CC} ≤ 3.60		I _{OL} =24mA	0.4	0.4	0.4		0.4

Symbol	Parameter	V _{CC}	Conditions	T _A =25°C		T _A =-40 to 85°C		Units	
				Min.	Max.	Min.	Max.		
V _{ol}	LOW Level Output Voltage	0.90		0.1	0.1	0.1	0.1	V	
		1.10 ≤ V _{CC} ≤ 1.30		0.1	0.1	0.1	0.1		
		1.40 ≤ V _{CC} ≤ 1.60		0.2	0.2	0.2	0.2		
		1.65 ≤ V _{CC} ≤ 1.95		0.2	0.2	0.2	0.2		
		2.30 ≤ V _{CC} ≤ 2.70		0.2	0.2	0.2	0.2		
		2.70 ≤ V _{CC} ≤ 3.60		0.2	0.2	0.2	0.2		
		1.10 ≤ V _{CC} ≤ 1.30		I _{OL} =2mA	0.25 × V _{CC}	0.25 × V _{CC}	0.25 × V _{CC}		0.25 × V _{CC}
		1.40 ≤ V _{CC} ≤ 1.60		I _{OL} =4mA	0.3	0.3	0.3		0.3
		1.65 ≤ V _{CC} ≤ 1.95		I _{OL} =6mA	0.4	0.4	0.4		0.4
		2.30 ≤ V _{CC} ≤ 2.70		I _{OL} =12mA	0.4	0.4	0.4		0.4
		2.70 ≤ V _{CC} ≤ 3.60		I _{OL} =18mA	0.6	0.6	0.6		0.6
		2.70 ≤ V _{CC} ≤ 3.60		I _{OL} =24mA	0.4	0.4	0.4		0.4

Symbol	Parameter	V _{CC} (V)	T _A = -25°C		T _A = -40°C to +85°C		Units	Conditions
			Min	Max	Min	Max		
V _{OH}	HIGH Level Output Voltage	0.90	V _{CC} -0.1	V _{CC} -0.1	V _{CC} -0.1	V _{CC} -0.1	V	I _{OH} = -100 μA
		1.10 ≤ V _{CC} ≤ 1.30	V _{CC} -0.1	V _{CC} -0.1	V _{CC} -0.1	V _{CC} -0.1		
		1.40 ≤ V _{CC} ≤ 1.60	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2		
		1.65 ≤ V _{CC} ≤ 1.95	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2		
		2.30 ≤ V _{CC} ≤ 2.70	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2		
		2.70 ≤ V _{CC} ≤ 3.60	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2		
		1.10 ≤ V _{CC} ≤ 1.30	0.75 × V _{CC}	0.75 × V _{CC}	0.75 × V _{CC}	0.75 × V _{CC}		
		1.40 ≤ V _{CC} ≤ 1.60	0.75 × V _{CC}	0.75 × V _{CC}	0.75 × V _{CC}	0.75 × V _{CC}		
		1.65 ≤ V _{CC} ≤ 1.95	1.25	1.25	1.25	1.25		
		2.30 ≤ V _{CC} ≤ 2.70	2.0	2.0	2.0	2.0		
		2.70 ≤ V _{CC} ≤ 3.60	1.8	1.8	1.8	1.8		
		2.70 ≤ V _{CC} ≤ 3.60	2.2	2.2	2.2	2.2		
V _{OL}	LOW Level Output Voltage	0.90	0.1	0.1	0.1	0.1	V	I _{OL} = 100 μA
		1.10 ≤ V _{CC} ≤ 1.30	0.1	0.1	0.1	0.1		
		1.40 ≤ V _{CC} ≤ 1.60	0.2	0.2	0.2	0.2		
		1.65 ≤ V _{CC} ≤ 1.95	0.2	0.2	0.2	0.2		
		2.30 ≤ V _{CC} ≤ 2.70	0.2	0.2	0.2	0.2		
		2.70 ≤ V _{CC} ≤ 3.60	0.2	0.2	0.2	0.2		
		1.10 ≤ V _{CC} ≤ 1.30	0.25 × V _{CC}	0.25 × V _{CC}	0.25 × V _{CC}	0.25 × V _{CC}		
		1.40 ≤ V _{CC} ≤ 1.60	0.25 × V _{CC}	0.25 × V _{CC}	0.25 × V _{CC}	0.25 × V _{CC}		
		1.65 ≤ V _{CC} ≤ 1.95	0.3	0.3	0.3	0.3		
		2.30 ≤ V _{CC} ≤ 2.70	0.4	0.4	0.4	0.4		
		2.70 ≤ V _{CC} ≤ 3.60	0.4	0.4	0.4	0.4		
		2.70 ≤ V _{CC} ≤ 3.60	0.6	0.6	0.6	0.6		

Symbol	Parameter	V _{CC} (V)	T _A = -25°C		T _A = -40°C to +85°C		Units	Conditions
			Min	Max	Min	Max		
V _{OH}	HIGH Level Output Voltage	0.90	V _{CC} -0.1	V _{CC} -0.1	V _{CC} -0.1	V _{CC} -0.1	V	I _{OH} = -100 μA
		1.10 ≤ V _{CC} ≤ 1.30	V _{CC} -0.1	V _{CC} -0.1	V _{CC} -0.1	V _{CC} -0.1		
		1.40 ≤ V _{CC} ≤ 1.60	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2		
		1.65 ≤ V _{CC} ≤ 1.95	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2		
		2.30 ≤ V _{CC} ≤ 2.70	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2		
		2.70 ≤ V _{CC} ≤ 3.60	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2	V _{CC} -0.2		
		1.10 ≤ V _{CC} ≤ 1.30	0.75 × V _{CC}	0.75 × V _{CC}	0.75 × V _{CC}	0.75 × V _{CC}		
		1.40 ≤ V _{CC} ≤ 1.60	0.75 × V _{CC}	0.75 × V _{CC}	0.75 × V _{CC}	0.75 × V _{CC}		
		1.65 ≤ V _{CC} ≤ 1.95	1.25	1.25	1.25	1.25		
		2.30 ≤ V _{CC} ≤ 2.70	2.0	2.0	2.0	2.0		
		2.70 ≤ V _{CC} ≤ 3.60	1.8	1.8	1.8	1.8		
		2.70 ≤ V _{CC} ≤ 3.60	2.2	2.2	2.2	2.2		
V _{OL}	LOW Level Output Voltage	0.90	0.1	0.1	0.1	0.1	V	I _{OL} = 100 μA
		1.10 ≤ V _{CC} ≤ 1.30	0.1	0.1	0.1	0.1		
		1.40 ≤ V _{CC} ≤ 1.60	0.2	0.2	0.2	0.2		
		1.65 ≤ V _{CC} ≤ 1.95	0.2	0.2	0.2	0.2		
		2.30 ≤ V _{CC} ≤ 2.70	0.2	0.2	0.2	0.2		
		2.70 ≤ V _{CC} ≤ 3.60	0.2	0.2	0.2	0.2		
		1.10 ≤ V _{CC} ≤ 1.30	0.25 × V _{CC}	0.25 × V _{CC}	0.25 × V _{CC}	0.25 × V _{CC}		
		1.40 ≤ V _{CC} ≤ 1.60	0.25 × V _{CC}	0.25 × V _{CC}	0.25 × V			

- 正のしきい値電圧から下限値と 0.90V における規格を削除。
- 負のしきい値電圧から上限値と 0.90V における規格を削除。
- ヒステリシス電圧の 0.90V における規格を削除。

Existing datasheet

Symbol	Parameter	V _{CC}	Conditions	T _A =25°C		T _A =-40 to 85°C		Units
				Min.	Max.	Min.	Max.	
V _I	Positive Threshold Voltage	0.90		0.30	0.70	0.30	0.70	V
		1.10		0.40	1.00	0.40	1.00	
		1.40		0.50	1.25	0.50	1.40	
		1.65		0.70	1.50	0.70	1.50	
		2.30		1.00	1.80	1.00	1.80	
		2.70		1.50	2.20	1.50	2.20	
V _I	Negative Threshold Voltage	0.90		0.10	0.60	0.10	0.60	V
		1.10		0.15	0.70	0.15	0.70	
		1.40		0.20	0.80	0.20	0.80	
		1.65		0.25	0.90	0.25	0.90	
		2.30		0.40	1.15	0.40	1.15	
		2.70		0.60	1.50	0.60	1.50	
V _H	Hysteresis Voltage	0.90		0.07	0.50	0.07	0.50	V
		1.10		0.08	0.60	0.08	0.60	
		1.40		0.09	0.80	0.09	0.80	
		1.65		0.15	1.00	0.15	1.00	
		2.30		0.25	1.10	0.25	1.10	
		2.70		0.60	1.20	0.60	1.20	

New

Symbol	Parameter	V _{CC}	Conditions	T _A =25°C		T _A =-40 to 85°C		Units
				Min.	Max.	Min.	Max.	
V _I	Positive Threshold Voltage	0.90						V
		1.10			1.00		1.00	
		1.40			1.25		1.40	
		1.65			1.50		1.50	
		2.30			1.80		1.80	
		2.70			2.20		2.20	
V _I	Negative Threshold Voltage	0.90						V
		1.10		0.15		0.15		
		1.40		0.20		0.20		
		1.65		0.25		0.25		
		2.30		0.40		0.40		
		2.70		0.60		0.60		
V _H	Hysteresis Voltage	0.90						V
		1.10		0.08	0.60	0.08	0.60	
		1.40		0.09	0.80	0.09	0.80	
		1.65		0.15	1.00	0.15	1.00	
		2.30		0.25	1.10	0.25	1.10	
		2.70		0.60	1.20	0.60	1.20	

- すべての伝播遅延と出カインエール時間と出カデセイブル時間の仕様から下限値を削除。

Existing datasheet

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 _{PLH}	Propagation Delay	0.90		13				ns	C _L = 15 pF, R _L = 1 MΩ	Figures 1, 2
		1.10 ≤ V _{CC} ≤ 1.30	3.0	6.0	9.8	1.9	14.9			
		1.40 ≤ V _{CC} ≤ 1.60	1.0	3.5	5.3	0.8	5.7			
		1.65 ≤ V _{CC} ≤ 1.95	0.9	3.0	4.3	0.8	4.8			
		2.30 ≤ V _{CC} < 2.70	0.8	2.0	2.8	0.7	3.0			
		2.70 ≤ V _{CC} ≤ 3.60	0.5	1.0	2.6	0.5	2.8			
t _{PDH}	Enable Time	0.90		14				ns	C _L = 30 pF, R _D = 1kΩ, S ₁ = GND for t _{PDH} , V _I = 2 × V _{CC}	Figures 1, 2
		1.10 ≤ V _{CC} ≤ 1.30	3.0	6.0	9.7	2.0	16.4			
		1.40 ≤ V _{CC} ≤ 1.60	1.2	4.0	6.0	1.0	7.5			
		1.65 ≤ V _{CC} ≤ 1.95	1.0	3.0	4.5	0.9	5.0			
		2.30 ≤ V _{CC} < 2.70	0.8	2.0	3.0	0.7	3.4			
		2.70 ≤ V _{CC} ≤ 3.60	0.5	1.2	2.6	0.4	2.9			
t _{PLZ}	Disable Time	0.90		14				ns	C _L = 30 pF, R _D = 1kΩ, S ₁ = GND for t _{PLZ} , V _I = 2 × V _{CC}	Figures 1, 2
		1.10 ≤ V _{CC} ≤ 1.30	2.0	5.0	9.5	2.0	14.0			
		1.40 ≤ V _{CC} ≤ 1.60	1.2	3.0	5.5	1.1	7.0			
		1.65 ≤ V _{CC} ≤ 1.95	1.0	2.0	5.6	0.8	5.8			
		2.30 ≤ V _{CC} < 2.70	0.8	1.5	4.2	0.5	5.0			
		2.70 ≤ V _{CC} ≤ 3.60	0.5	1.0	3.9	0.4	4.2			

New

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 _{PLH}	Propagation Delay	0.90		13				ns	C _L = 15 pF, R _L = 1 MΩ, C _L = 15 pF, R _L = 2 kΩ	Figures 1, 2
		1.10 ≤ V _{CC} ≤ 1.30		6.0	9.8		14.9			
		1.40 ≤ V _{CC} ≤ 1.60		3.5	5.3		5.7			
		1.65 ≤ V _{CC} ≤ 1.95		3.0	4.3		4.6			
		2.30 ≤ V _{CC} < 2.70		2.0	2.8		3.0			
		2.70 ≤ V _{CC} ≤ 3.60		1.0	2.6		2.8			
t _{PDH}	Enable Time	0.90		14				ns	C _L = 30 pF, R _D = 1kΩ, S ₁ = GND for t _{PDH} , V _I = 2 × V _{CC}	Figures 1, 2
		1.10 ≤ V _{CC} ≤ 1.30		6.0	9.7		16.4			
		1.40 ≤ V _{CC} ≤ 1.60		4.0	6.0		7.5			
		1.65 ≤ V _{CC} ≤ 1.95		3.0	4.5		5.0			
		2.30 ≤ V _{CC} < 2.70		2.0	3.0		3.4			
		2.70 ≤ V _{CC} ≤ 3.60		1.2	2.6		2.9			
t _{PLZ}	Disable Time	0.90		14				ns	C _L = 30 pF, R _D = 1kΩ, S ₁ = GND for t _{PLZ} , V _I = 2 × V _{CC}	Figures 1, 2
		1.10 ≤ V _{CC} ≤ 1.30		5.0	9.5		14.0			
		1.40 ≤ V _{CC} ≤ 1.60		3.0	5.5		7.0			
		1.65 ≤ V _{CC} ≤ 1.95		2.0	5.6		5.8			
		2.30 ≤ V _{CC} < 2.70		1.5	4.2		5.0			
		2.70 ≤ V _{CC} ≤ 3.60		1.0	3.9		4.2			

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 _{PLH}	Propagation Delay	0.90		12				ns	C _L = 15 pF, R _L = 1 MΩ, C _L = 15 pF, R _L = 2 kΩ	Figures 1, 2
		1.10 ≤ V _{CC} ≤ 1.30	2.0	5.9	10.0	1.0	14.9			
		1.40 ≤ V _{CC} ≤ 1.60	1.0	3.2	6.1	0.9	7.0			
		1.65 ≤ V _{CC} ≤ 1.95	1.0	2.0	5.2	0.7	6.2			
		2.30 ≤ V _{CC} < 2.70	0.8	1.8	3.7	0.6	4.4			
		2.70 ≤ V _{CC} ≤ 3.60	0.7	1.5	3.3	0.5	3.8			

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 _{PLH}	Propagation Delay	0.90		12				ns	C _L = 15 pF, R _L = 1 MΩ, C _L = 15 pF, R _L = 2 kΩ	Figures 1, 2
		1.10 ≤ V _{CC} ≤ 1.30		5.9	10.0		14.9			
		1.40 ≤ V _{CC} ≤ 1.60		3.2	6.1		7.0			
		1.65 ≤ V _{CC} ≤ 1.95		2.0	5.2		6.2			
		2.30 ≤ V _{CC} < 2.70		1.8	3.7		4.4			
		2.70 ≤ V _{CC} ≤ 3.60		1.5	3.3		3.8			

Symbol	Parameter	V _{CC}	Conditions	T _A =25°C		T _A =-40 to 85°C		Units	Figure	
				Min.	Max.	Min.	Max.			
t _{PLH} , t _{PLZ}	Propagation Delay	0.90	C _L =15pF, R _L =R _D =1kΩ		13			ns	Figure 5 Figure 6	
		1.10 ≤ V _{CC} ≤ 1.30	C _L =30pF, R _L =R _D =1kΩ	3.0	6.0	15.0	1.0			18.6
		1.40 ≤ V _{CC} ≤ 1.60	C _L =30pF, R _L =R _D =1kΩ	1.0	3.2	8.7	1.0			9.7
		1.65 ≤ V _{CC} ≤ 1.95	C _L =30pF, R _L =R _D =1kΩ	1.0	2.0	6.0	1.0			6.8
		2.30 ≤ V _{CC} < 2.70	C _L =30pF, R _L =R _D =1kΩ	0.8	1.2	3.6	0.7			4.7
		2.70 ≤ V _{CC} ≤ 3.60	C _L =30pF, R _L =R _D =1kΩ	0.7	1.0	3.3	0.6			4.0

Symbol	Parameter	V _{CC}	Conditions	T _A =25°C		T _A =-40 to 85°C		Units	Figure	
				Min.	Typ.	Max.	Min.			Max.
t _{PLH} , t _{PLZ}	Propagation Delay	0.90	C _L =15pF, R _L =R _D =1kΩ		13			ns	Figure 5 Figure 6	
		1.10 ≤ V _{CC} ≤ 1.30	C _L =30pF, R _L =R _D =1kΩ		6.0	15.0				18.6
		1.40 ≤ V _{CC} ≤ 1.60	C _L =30pF, R _L =R _D =1kΩ		3.2	8.7				9.7
		1.65 ≤ V _{CC} ≤ 1.95	C _L =30pF, R _L =R _D =1kΩ		2.0	6.0				6.8
		2.30 ≤ V _{CC} < 2.70	C _L =30pF, R _L =R _D =1kΩ		1.2	3.6				4.7
		2.70 ≤ V _{CC} ≤ 3.60	C _L =30pF, R _L =R _D =1kΩ		1.0	3.3				4.0



認定計画:

デバイス名: NC7SP125P5X

RMS 51765

パッケージ: SC88A

テスト	仕様	条件	間隔	テスト
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/804
HTSL	JESD22-A103	Ta=150°C	2016 hrs	0/234
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/297
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	192 hrs	0/273
UHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/234
HTOL	JESD22-A108	Ta=125°C, 100 % max rated Vcc x 1.2	1008 hrs	0/252
ELFR	JESD22-A108	Ta=125°C, 100 % max rated Vcc x 1.2	48 hrs	0/1600
RSH	JESD22- B106	Ta = 265C, 10 sec		0/90

デバイス名: NL17SG14P5T5G

RMS 56472

パッケージ: SOT953

テスト	仕様	条件	間隔	テスト
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/720
HTSL	JESD22-A103	Ta=150°C	2016 hrs	0/249
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/234
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	192 hrs	0/252
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/234
HTOL	JESD22-A108	Ta=125°C, 100 % max rated Vcc x 1.2	1008 hrs	0/252
ELFR	JESD22-A108	Ta=125°C, 100 % max rated Vcc x 1.2	48 hrs	0/1600
RSH	JESD22- B106	Ta = 265C, 10 sec		0/90

デバイス名: NL17SV16XV5T2G

RMS 51763

パッケージ: SOT553

テスト	仕様	条件	間隔	テスト
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/753
HTSL	JESD22-A103	Ta=150°C	2016 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	192 hrs	0/249
UHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/252
HTOL	JESD22-A108	Ta=125°C, 100 % max rated Vcc x 1.2	2016 hrs	0/252
ELFR	JESD22-A108	Ta=125°C, 100 % max rated Vcc x 1.2	48 hrs	0/1600
RSH	JESD22- B106	Ta = 265C, 10 sec		0/90



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	認定試験用ピークル
NC7SP00P5X	NC7SP125P5X
NC7SP02P5X	NC7SP125P5X
NC7SP04P5X	NC7SP125P5X
NC7SP05P5X	NC7SP125P5X
NC7SP08P5X	NC7SP125P5X
NC7SP125P5X	NC7SP125P5X
NC7SP126P5X	NC7SP125P5X
NC7SP14P5X	NC7SP125P5X
NC7SP17P5X	NC7SP125P5X
NC7SP32P5X	NC7SP125P5X
NC7SP34P5X	NC7SP125P5X
NC7SP38P5X	NC7SP125P5X
NC7SP86P5X	NC7SP125P5X
NC7SPU04P5X	NC7SP125P5X
NC7SV00P5X	NC7SP125P5X
NC7SV02P5X	NC7SP125P5X
NC7SV04P5X	NC7SP125P5X
NC7SV05P5X	NC7SP125P5X
NC7SV08P5X	NC7SP125P5X
NC7SV125P5X	NC7SP125P5X
NC7SV126P5X	NC7SP125P5X
NC7SV14P5X	NC7SP125P5X
NC7SV17P5X	NC7SP125P5X
NC7SV32P5X	NC7SP125P5X
NC7SV34P5X	NC7SP125P5X
NC7SV86P5X	NC7SP125P5X
NC7SVL04P5X	NC7SP125P5X
NC7SVL08P5X	NC7SP125P5X
NC7SVL32P5X	NC7SP125P5X
NC7SVU04P5X	NC7SP125P5X
NL17SG00DFT2G	NC7SP125P5X
NL17SG00P5T5G	NL17SG14P5T5G



NL17SG02DFT2G	NC7SP125P5X
NL17SG02P5T5G	NL17SG14P5T5G
NL17SG04DFT2G	NC7SP125P5X
NL17SG04P5T5G	NL17SG14P5T5G
NL17SG07DFT2G	NC7SP125P5X
NL17SG07P5T5G	NL17SG14P5T5G
NL17SG08DFT2G	NC7SP125P5X
NL17SG08P5T5G	NL17SG14P5T5G
NL17SG125DFT2G	NC7SP125P5X
NL17SG125P5T5G	NL17SG14P5T5G
NL17SG126DFT2G	NC7SP125P5X
NL17SG126P5T5G	NL17SG14P5T5G
NL17SG126P5T6G	NL17SG14P5T5G
NL17SG14DFT2G	NC7SP125P5X
NL17SG14P5T5G	NL17SG14P5T5G
NL17SG17DFT2G	NC7SP125P5X
NL17SG17P5T5G	NL17SG14P5T5G
NL17SG32DFT2G	NC7SP125P5X
NL17SG32P5T5G	NL17SG14P5T5G
NL17SG34DFT2G	NC7SP125P5X
NL17SG34P5T5G	NL17SG14P5T5G
NL17SG86DFT2G	NC7SP125P5X
NL17SG86P5T5G	NL17SG14P5T5G
NL17SGU04DFT2G	NC7SP125P5X
NL17SGU04P5T5G	NL17SG14P5T5G
NL17SV00XV5T2G	NL17SV16XV5T2G
NL17SV02XV5T2G	NL17SV16XV5T2G
NL17SV04XV5T2G	NL17SV16XV5T2G
NL17SV08XV5T2G	NL17SV16XV5T2G
NL17SV16XV5T2G	NL17SV16XV5T2G
NL17SV32XV5T2G	NL17SV16XV5T2G