



Title of Change:	NCS2632DTBR2G design change to reduce power on reset (POReset) level.
Proposed First Ship date:	06 Mar 2020 or earlier if approved by customer
Contact Information:	Contact your local ON Semiconductor Sales Office or <Jeremy.Becker@onsemi.com>
PCN Samples Contact:	Contact your local ON Semiconductor Sales Office or <PCN.samples@onsemi.com>. Sample requests are to be submitted no later than 30 days from the date of first notification, Initial PCN or Final PCN, for this change. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or <Vladislav.Hrachovec@onsemi.com>
Type of Notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 90 days prior to implementation of the change. ON Semiconductor will consider this change accepted, unless an inquiry is made in writing within 30 days of delivery of this notice. To do so, contact PCN.Support@onsemi.com
Marking of Parts/ Traceability of Change:	Date code traceability will be maintained. Parts manufactured after WW40, 2019 will be assembled with the new die.
Change Category:	Design Change
Change Sub-Category(s):	Product specific change, Datasheet/Product Doc change

Sites Affected:

ON Semiconductor Sites

None

External Foundry/Subcon Sites

None

Description and Purpose:

A design change was made to support customer requested reduction of power on reset (POReset) feature of the NCS2632DTBR2G. POReset is not specified in the datasheet, however before and after performance results are noted in the electrical characteristics summary section of this document.

In addition, this design change creates an increase in IDD shutdown current; the maximum specification will increase from 0.5uA to 25uA in order to account for this change. The datasheet will be revised to account for this difference, as shown here.

ELECTRICAL CHARACTERISTICS. $T_A = 25^{\circ}C$ (unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Offset Voltage	V _{OS}	V _{DD} = 2.5 V to 5 V, Voltage follower – gain = 1		100	400	μV
High-Level Input Current (EN)	I _{IH}	V _{DD} = 5 V, V _I = V _{DD}			100	nA
Low-Level Input Current (EN)	I _{IL}	V _{DD} = 5 V, V _I = 0 V			100	nA
Supply Current	I _{DD}	V _{DD} = 2.2 V, No load, EN = V _{DD}		7	11	mA
		V _{DD} = 5.5 V, No load, EN = V _{DD}		8	11	mA
		Shutdown mode, V _{DD} = 2.2 V to 5.5 V		80	500	mA

15 25 μA

Finally, these electrical differences are noted in the electrical characteristics summary section, below.

	Before Change Description	After Change Description
Other Changes	NCS2632 Die Revision A	NCS2632 Die Revision B

There are no product marking changes as a result of this change.



Reliability Data Summary:

QV DEVICE NAME : NCS2632DTBR2G

RMS : 18102

PACKAGE : TSSOP 14

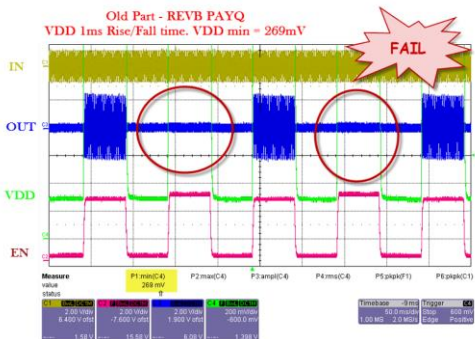
Test	Specification	Condition	Interval	Results
HTOL	JESD22-A108	Ta=125°C, 100% max rated V	504 hrs 1008 hrs	0/231 0/231
HTSL	JESD22-A103	Ta=150°C	504 hrs 1008 hrs	0/231 0/231
PC	J-STD-020 JESD-A113	MSL1 @ 260 °C		0/693
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/231
HAST	JESD22-A110	130°C, 18.8psig, 85% RH, bias	96 hrs	0/231
UHAST	JESD22-A118	130°C, 18.8psig, 85% RH	96 hrs	0/231

Electrical Characteristics Summary:

POR Reset Before change:

Old Part. Using Function Generator for Pulsing Unit On/OFF

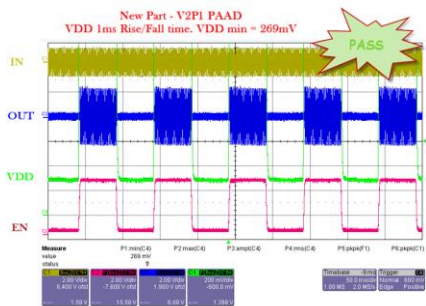
VDD = 0.269 to 5V - 1ms R/F time – Unit Fails



POR Reset After Change:

New Part. Using Function Generator for Pulsing Unit On/OFF

VDD = 0.269 to 5V - 1ms R/F time – Unit Passes





IDD Shutdown Before and After design change:

Ta	IDD Shutdown Mode, Vdd=2.2V, No Load (uA)		IDD Shutdown Mode, Vdd=5.5V, No Load (uA)	
	25C		25C	
	Avg	Std Dev	Avg	Std Dev
Before	-0.0332	0.0007	0.0498	0.0023
After	5.939	0.076	15.009	0.194

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
NCS2632DTBR2G	NCS2632DTBR2G



Appendix A: Changed Products

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
NCS2632DTBR2G		NCS2632DTBR2G		