



Final Product/Process Change Notification

Document #:FPCN21520XE

Issue Date: 05 Dec 2019

Title of Change:	Qualification of AFSM (Aizu Fujitsu Semiconductor Manufacturing) as an additional Wafer Fab facility for ONC25 Technology.	
Proposed First Ship date:	12 Mar 2020 or earlier if approved by customer	
Contact Information:	Contact your local ON Semiconductor Sales Office or <Marek.Haluska@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:	Custom source	
Change Category:	Wafer Fab Change	
Change Sub-Category(s):	Manufacturing Site Addition	
Sites Affected:		
ON Semiconductor Sites	External Foundry/Subcon Sites	
ON Semiconductor Aizu, Japan	None	
Description and Purpose:		
<p>The AFSM (Aizu Fujitsu Semiconductor Manufacturing) Wafer Fab located in Aizuwakamatsu, Japan has been qualified to process the ONC25 CMOS process.</p> <p>The exact same process technology has been transferred as is currently running in the ON Semiconductor wafer fab located at Gresham, Oregon, USA. Tool sets are different but the exact same masking layers and steps are being used in the AFSM Fab.</p> <p>This is a capacity expansion to supplement the existing ON Semiconductor wafer fab. The parts being qualified are dual sourced and may be processed at either wafer fab in the future depending on capacity requirements.</p> <p>Additional part families will be announced on future PCNs once qualifications of those parts are completed.</p> <p>This PCN will apply to future Regulator output voltage versions of the part families listed below.</p>		

**Reliability Data Summary:****QV Device Name:** NCP170A/BXVxxxT2G**RMS#** : S33743**Package** : SOT-563, Case outline 463A

Test	Specification	Condition	Interval	Results
HTOL	JESD22-A108	Ta=125°C, 100 % max rated Vcc	2016 hrs	0/160
ELFR	JESD22-A108	Ta=125°C, 100 % max rated Vcc	48 hrs	0/2400
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/240
TC	JESD22-A104	Ta= -65°C to +150°C	2000 cyc	0/240
HAST	JESD22-A110	110°C, 85% RH, 18.8psig, bias	264 hrs	0/270
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/240
PC	J-STD-020 JESD-A113	MSL 1 @ 260°C, 3x IR Reflow	-	PASS
RSH	JESD22- B106	Ta = 265C, 10 sec	-	0/90
ED	Electrical Distribution	Critical parameters	-	Cpk >1.67 PASS
BPS	MIL-STD883, Method 2011	Condition C	-	Cpk >1.67 PASS
SAT	J-STD-020, JESD-A113		-	PASS
ESD-CDM	JS-002		1kV	PASS
ESD-HBM	JS-001		2kV	PASS
LU	JESD-78, AEC-Q100-004	Class II	+/- 100mA	PASS

QV Device Name: NCP160/1A/BFCSxxxT2G**RMS#** : S34344**Package** : WLCSP-4, Case outline 567KA

Test	Specification	Condition	Interval	Results
HTOL	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs	0/240
ELFR	JESD22-A108	Ta=125°C, 100 % max rated Vcc	48 hrs	0/2400
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/240
TC	JESD22-A104	Ta= -40°C to +125°C	1000 cyc	0/240
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/240
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/240
PC	J-STD-020 JESD-A113	3x IR Reflow	-	PASS
ED	Electrical Distribution	Critical parameters	-	Cpk >1.67 PASS
ESD-HBM	JS-001		2kV	PASS
LU	JESD-78	Class I	+/- 100mA	PASS



QV Device Name: NCP160/1A/BFCTxxxT2G

RMS# : S34346

Package : WLCSP-4, Case outline 567JZ

Test	Specification	Condition	Interval	Results
HTOL	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs	0/80
ELFR	JESD22-A108	Ta=125°C, 100 % max rated Vcc	48 hrs	0/2400
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/80
TC	JESD22-A104	Ta= -40°C to +125°C	1000 cyc	0/80
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/80
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/80
PC	J-STD-020 JESD-A113	3x IR Reflow	-	PASS
ED	Electrical Distribution	Critical parameters	-	Cpk >1.67 PASS
ESD-HBM	JS-001		2kV	PASS
LU	JESD-78	Class I	+/- 100mA	PASS

Electrical Characteristics Summary:

There are no changes to any electrical parameters. All data sheet specifications remain the same.

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
NCP139AFCT100T2G	NCP170A/BXVXXXT2G NCP160/1BFCSXXXT2G NCP160/1BFCTXXXT2G NCP160/1A/BMXXXTBG
NCP139AFCTC05ADJT2G	NCP170A/BXVXXXT2G NCP160/1BFCSXXXT2G NCP160/1BFCTXXXT2G NCP160/1A/BMXXXTBG
NCP139AFCTC06ADJT2G	NCP170A/BXVXXXT2G NCP160/1BFCSXXXT2G NCP160/1BFCTXXXT2G NCP160/1A/BMXXXTBG
NCP139AFCTC110T2G	NCP170A/BXVXXXT2G NCP160/1BFCSXXXT2G NCP160/1BFCTXXXT2G NCP160/1A/BMXXXTBG
NCP139AFCT180T2G	NCP170A/BXVXXXT2G NCP160/1BFCSXXXT2G NCP160/1BFCTXXXT2G NCP160/1A/BMXXXTBG
NCP139AFCT120T2G	NCP170A/BXVXXXT2G NCP160/1BFCSXXXT2G NCP160/1BFCTXXXT2G NCP160/1A/BMXXXTBG
NCP139AFCT110T2G	NCP170A/BXVXXXT2G NCP160/1BFCSXXXT2G NCP160/1BFCTXXXT2G NCP160/1A/BMXXXTBG
NCP139AFCT105T2G	NCP170A/BXVXXXT2G NCP160/1BFCSXXXT2G NCP160/1BFCTXXXT2G NCP160/1A/BMXXXTBG
NCP139AFCT06ADJT2G	NCP170A/BXVXXXT2G NCP160/1BFCSXXXT2G NCP160/1BFCTXXXT2G NCP160/1A/BMXXXTBG
NCP139AFCT05ADJT2G	NCP170A/BXVXXXT2G NCP160/1BFCSXXXT2G NCP160/1BFCTXXXT2G



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	NCP160/1A/BMXXXXTBG
NCP137BFCTADJT2G	NCP170A/BXVXXXT2G NCP160/1BFCSXXXT2G NCP160/1BFCTXXXT2G NCP160/1A/BMXXXXTBG
NCP137AFCTCADJT2G	NCP170A/BXVXXXT2G NCP160/1BFCSXXXT2G NCP160/1BFCTXXXT2G NCP160/1A/BMXXXXTBG
NCP137AFCTC110T2G	NCP170A/BXVXXXT2G NCP160/1BFCSXXXT2G NCP160/1BFCTXXXT2G NCP160/1A/BMXXXXTBG
NCP137AFCTADJT2G	NCP170A/BXVXXXT2G NCP160/1BFCSXXXT2G NCP160/1BFCTXXXT2G NCP160/1A/BMXXXXTBG
NCP137AFCT120T2G	NCP170A/BXVXXXT2G NCP160/1BFCSXXXT2G NCP160/1BFCTXXXT2G NCP160/1A/BMXXXXTBG
NCP137AFCT110T2G	NCP170A/BXVXXXT2G NCP160/1BFCSXXXT2G NCP160/1BFCTXXXT2G NCP160/1A/BMXXXXTBG
NCP137AFCT105T2G	NCP170A/BXVXXXT2G NCP160/1BFCSXXXT2G NCP160/1BFCTXXXT2G NCP160/1A/BMXXXXTBG