



Final Product/Process Change Notification

Document #: FPCN23269XA

Issue Date: 26 Oct 2022

Title of Change:	Change of bonding wire bill of material, from gold wire to palladium coated copper wire, for XDFN devices having ONC25 pad technology at onsemi, Tarlac City, Philippines.	
Proposed First Ship date:	02 Feb 2023 or earlier if approved by customer	
Contact Information:	Contact your local onsemi Sales Office or Jaroslav.Supina@onsemi.com	
PCN Samples Contact:	Contact your local onsemi Sales Office. Sample requests are to be submitted no later than 30 days from the date of first notification, Initial PCN or Final PCN, for this change. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.	
Additional Reliability Data:	Contact your local onsemi Sales Office or Andy.Esteve@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. onsemi 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:	Effective date of PCC wire implementation will be managed thru traceability code of device	
Change Category:	Assembly Change	
Change Sub-Category(s):	Material Change	
Sites Affected:		
onsemi Sites	External Foundry/Subcon Sites	
onsemi Tarlac, Philippines	None	
Description and Purpose:		
The change covers the conversion of bond wire material from 0.8 mil gold (Au) to 0.8 mil palladium coated copper (PCC) and 1.0 mil gold (Au) to 1.0 mil palladium coated copper (PCC) for products assembled by onsemi, Tarlac City, Philippines (onsemi-Tarlac). Upon effectivity of this PCN, product manufactured by onsemi-Tarlac will convert to PCC wire. The bill of material for product assembled in alternate qualified manufacturing locations will not change.		
	Before Change Description	After Change Description
Bond Wire	0.8 mil Au	0.8 mil PCC
Bond Wire	1.0 mil Au	1.0 mil PCC
There is no product marking change because of this change.		



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Reliability Data Summary:

QV DEVICE NAME: NCP186AMX300TAG

RMS : S63739/S64669

PACKAGE : XDFN8

Test	Specification	Condition	Interval	Results
HTOL	JESD22-A108	Ta=125°C, bias at 1.2X Nominal (not to exceed Max rated)	1008 hrs	0/336
HTSL	JESD22-A103	Ta= 150°C	1008 hrs & 2016 hrs	0/336
TC	JESD22-A104	Ta= -65°C to +150°C	1000 cyc	0/336
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs 192 hrs	0/344
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/344
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C	Results	0/1,032
RSH	JESD22- B106	Ta = 265C, 10 sec	Electrical	0/40
SAT	as outlined in MSB17722C	Compare for Delamination before and after PC	Results	0/88
DPA	AEC Q101 -004	Following PC + TC	Results	0/8
DPA SEM	AEC Q101 -004	Following PC + HAST	Results	0/8
BPS	Min Cpk 1.33	per assembly spec	Results	0/120
BS	Min Cpk 1.33	per assembly spec	Results	0/120
ED	Characterization of all 48A parameters	Critical Parameters	Results	0/120
PMD	12MON49370E	<80% PMD	Results	Pass
UPD	12MON49370E	No under pad damage	Results	Pass

QV DEVICE NAME: NCP152MX300180TCG

RMS : S60984/O64122

PACKAGE : XDFN6

Test	Specification	Condition	Interval	Results
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/112
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/84
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C	Results	0/196
RSH	JESD22- B106	Ta = 265C, 10 sec	Electrical	0/15
SAT	as outlined in MSB17722C	Compare for Delamination before and after PC	Results	0/22
CDPA WP	AEC Q101 -004	Following PC + TC	Results	0/6

QV DEVICE NAME: NCP134AMX105TCG

RMS : S60987/O63776

PACKAGE : XDFN4

Test	Specification	Condition	Interval	Results
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/336
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/252
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C	Results	0/588
RSH	JESD22- B106	Ta = 265C, 10 sec	Electrical	0/45
SAT	as outlined in MSB17722C	Compare for Delamination before and after PC	Results	0/66
CDPA WP	AEC Q101 -004	Following PC + TC	Results	0/18



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QV DEVICE NAME: **NCP160AMX280TBG**

RMS : **S61853/O65486**

PACKAGE : **XDFN4**

Test	Specification	Condition	Interval	Results
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/112
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/84
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C	Results	0/196
RSH	JESD22- B106	Ta = 265C, 10 sec	Electrical	0/15
SAT	as outlined in MSB17722C	Compare for Delamination before and after PC	Results	0/22
CDPA WP	AEC Q101 -004	Following PC + TC	Results	0/6

Electrical Characteristics Summary:

Electrical characteristics are not impacted.

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
NCP160BMX280TBG	NCP160AMX280TBG
SCP160AMX280TBG	NCP160AMX280TBG
NCP163AMX1825TBG	NCP160AMX280TBG
NCP163AMX130TBG	NCP160AMX280TBG
NCP161AMX514TBG	NCP160AMX280TBG
NCP160BMX275TBG	NCP160AMX280TBG
NCP160BMX1825TBG	NCP160AMX280TBG
NCP160AMX514TBG	NCP160AMX280TBG