



Title of Change:	Dual source qualification for TO-220 Jedec from ON Semiconductor Suzhou, China to Nantong Huada Microelectronics, China.
Proposed First Ship date:	06 Jul 2020 or earlier if approved by customer
Contact Information:	Contact your local ON Semiconductor Sales Office or Lisa.Wang@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.
Type of Notification:	This is an Initial Product/Process Change Notification (IPC�) sent to customers. An IPC� 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. The completed qualification and characterization data will be included in the Final Product/Process Change Notification (FPC�). This IPC� notification will be followed by a Final Product/Process Change Notification (FPC�) at least 90 days prior to implementation of the change. In case of questions, contact <PCN.Support@onsemi.com>
Marking of Parts/ Traceability of Change:	Product marked with "AF" as the assembly location will be from Huada
Change Category:	Assembly Change, Test Change
Change Sub-Category(s):	Manufacturing Site Addition

Sites Affected:**ON Semiconductor Sites**

None

External Foundry/Subcon Sites

Nantong Huada Microelectronics, China

Description and Purpose:

This notification announces to customers of ON Semiconductor's plan to dual source TO-220 Jedec parts from ON Semiconductor Suzhou, China to Nantong Huada Microelectronics, China. Refer to List of Affected Parts below. The purpose is capacity expansion.

Qualification tests are designed to show that the reliability of the transferred devices will continue to meet or exceed ON Semiconductor standards.

	Before Change Description	After Change Description	
LeadFrame	TO-220 Leadframe with KFC/ PMC-90 material	TO-220 Leadframe with KFC/ PMC-90 material	TO-220 Leadframe with KFC material
Mold Compound	SI7200DX2,SG8200DL, CEL8240HF10FC (SI7200DX2,SG8200DL will be replaced by KTMC-1050GFB after ON Semiconductor Suzhou related PCN approved)	SI7200DX2,SG8200DL, CEL8240HF10FC (SI7200DX2,SG8200DL will be replaced by KTMC-1050GFB after ON Semiconductor Suzhou related PCN approved)	KTMC-1050GFB, CEL8240HF10FC
Assembly and Test Site	ON Semiconductor Suzhou	ON Semiconductor Suzhou	Nantong Huada Microelectronics
Product marking change	1 ST Line Plant code "1" for ON Semiconductor Suzhou	1 ST Line Plant code "1" for ON Semiconductor Suzhou	1st Line Plant code "AF" for Nantong Huada Microelectronics

**Qualification Plan:**

Generic plans shown below based on technology and application will be followed

QV DEVICE NAME: FQP7N80C/FCP290N80/FCP190N65F/FDP12N60NZ/FDP2710/FDP047N08

RMS: 57818/57828/62069/57831/57832/57829

PACKAGE: TO220

Test	Specification	Condition	Interval
HTRB	JESD22-A108	Tj = max rate Tj for 1,008 hours, 80% BV	1,008 hrs
HTGB	JESD22-A108	Ti= Maximum rated junction temperature, Vgss Bias = 100% of max rated	1,008 hrs
IOL	MIL-STD-750, M1037 AEC-Q101	Ta=+25°C, delta Tj=100°C max, Ton=Toff=3.5mins	8572 cyc
TC	JESD22-A104	Ta= -55°C to +150°C	1,000 cyc
H3TRB	JESD22-A101	Temp = 85C, RH=85%, bias = 80% of rated V or 100V max	1008hrs
UFAST	JESD22-A118	Temp = 130C, RH=85%, ~ 18.8 psig	96hr
RSH	JESD22-B106	Ta=265C 10 sec dwell, electrical test before and after	10s
SD	J-STD-002	Ta=245C 5 sec dwell	5s

QV DEVICE NAME: FCP125N65S3

RMS: 57821

PACKAGE: TO220

Test	Specification	Condition	Interval
HTRB	JESD22-A108	Tj = max rate Tj for 1,008 hours, 100% BV	1,008 hrs
HTGB	JESD22-A108	Ti= Maximum rated junction temperature, Vgss Bias = 100% of max rated	1,008 hrs
IOL	MIL-STD-750, M1037 AEC-Q101	Ta=+25°C, delta Tj=100°C max, Ton=Toff=3.5mins	8572 cyc
TC	JESD22-A104	Ta= -55°C to +150°C	1,000 cyc
H3TRB	JESD22-A101	Temp = 85C, RH=85%, bias = 80% of rated V or 100V max	1008hrs
UFAST	JESD22-A118	Temp = 130C, RH=85%, ~ 18.8 psig	96hr
RSH	JESD22-B106	Ta=265C 10 sec dwell, electrical test before and after	10s
SD	J-STD-002	Ta=245C 5 sec dwell	5s

Estimated date for qualification completion: 20 March 2020

**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
FCP165N65S3R0	FCP125N65S3
FCP165N65S3	FCP125N65S3
FCP125N65S3R0	FCP125N65S3
FCP125N65S3	FCP125N65S3
FCP9N60N	FCP190N65F
FCP7N60	FCP190N65F
FCP4N60	FCP190N65F
FCP380N60E	FCP190N65F
FCP260N60E	FCP190N65F
FCP22N60N	FCP190N65F
FCP21N60N	FCP190N65F
FCP190N65F	FCP190N65F
FCP190N60E	FCP190N65F
FCP190N60	FCP190N65F
FCP170N60	FCP190N65F
FCP16N60N	FCP190N65F
FCP16N60	FCP190N65F
FCP165N60E	FCP190N65F
FCP13N60N	FCP190N65F
FCP11N60N	FCP190N65F
FCP11N60F	FCP190N65F
FCP11N60	FCP190N65F
FCP850N80Z	FCP290N80
FCP650N80Z	FCP290N80
FCP190N65S3	FCP125N65S3
FCP190N65S3R0	FCP125N65S3
FCP260N65S3	FCP125N65S3
FCP360N65S3R0	FCP125N65S3
FCP600N65S3R0	FCP125N65S3



FCP400N80Z	FCP290N80
FCP290N80	FCP290N80
NDP7060	FDP047N08
NDP6060L	FDP047N08
NDP6060	FDP047N08
MTP3055VL	FDP047N08
FDP8447L	FDP047N08
FDP150N10	FDP047N08
FDP120N10	FDP047N08
FDP100N10	FDP047N08
FDP047N08	FDP047N08
FDP8N50NZ	FDP12N60NZ
FDP7N60NZ	FDP12N60NZ
FDP75N08A	FDP12N60NZ
FDP65N06	FDP12N60NZ
FDP5N60NZ	FDP12N60NZ
FDP5N50NZ	FDP12N60NZ
FDP39N20	FDP12N60NZ
FDP33N25	FDP12N60NZ
FDP19N40	FDP12N60NZ
FDP15N40	FDP12N60NZ
FDP12N60NZ	FDP12N60NZ
FDP12N50NZ	FDP12N60NZ
FDP12N50	FDP12N60NZ
FDP10N60NZ	FDP12N60NZ
RFP70N06	FDP2710
RFP50N06	FDP2710
RFP12N10L	FDP2710
HUF76423P3	FDP2710
HUF75645P3	FDP2710
HUF75639P3	FDP2710
HUF75545P3	FDP2710
HUF75542P3	FDP2710
HUF75345P3	FDP2710



HUF75344P3	FDP2710
HUF75339P3	FDP2710
HUF75332P3	FDP2710
HUF75321P3	FDP2710
FDP80N06	FDP2710
FDP55N06	FDP2710
FDP42AN15A0	FDP2710
FDP3682	FDP2710
FDP3672	FDP2710
FDP3652	FDP2710
FDP3651U	FDP2710
FDP3632	FDP2710
FDP2710	FDP2710
FDP2614	FDP2710
FDP2572	FDP2710
FDP2552	FDP2710
FDP16AN08A0	FDP2710
FDP070AN06A0	FDP2710
FDP047AN08A0-G	FDP2710
FDP047AN08A0	FDP2710
FDP038AN06A0	FDP2710
BUZ11-NR4941	FDP2710
FQP9N50C	FQP7N80C
FQP8N60C	FQP7N80C
FQP7N80C	FQP7N80C
FQP6N80C	FQP7N80C
FQP5N60C	FQP7N80C
FQP50N06	FQP7N80C
FQP45N15V2	FQP7N80C
FQP3N60C	FQP7N80C
FQP33N10	FQP7N80C
FQP2N80	FQP7N80C
FQP2N60C	FQP7N80C
FQP27P06	FQP7N80C



Initial Product/Process Change Notification

Document #:IPCN22989X

Issue Date:06 Jan 2020

FQP24N08	FQP7N80C
FQP19N20C	FQP7N80C
FQP13N50C	FQP7N80C
FQP13N10L	FQP7N80C
FQP13N06L	FQP7N80C
FQP11N40C	FQP7N80C

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# : IPCN22989X

発行日: 06 Jan 2020

変更件名:	TO-220 Jedec 品のオン・セミコンダクター蘇州 (中国) と Nantong Huada Microelectronics (中国) のデュアルソース認定		
初回出荷予定日:	6 July 2020 (またはお客様からの承認が得られた場合はそれ以前)		
連絡先情報:	現地のオン・セミコンダクター営業所または < Lisa.Wang@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:	組立拠点として「AF」がマークされた製品は Huada からのものです		
変更カテゴリ:	組立の変更, 検査の変更		
変更サブカテゴリ:	製造拠点の追加		
影響を受ける拠点:			
オン・セミコンダクター拠点:	外部製造工場 / 下請業者拠点:		
なし	Nantong Huada Microelectronics, China		
説明および目的:			
この通知は、TO-220 Jedec 製品を、オン・セミコンダクター蘇州 (中国) から Nantong Huada Microelectronics (中国) とのデュアルソースにする計画をお客様に案内するものです。以下の影響を受ける製品の一覧を参照願います。目的は生産能力の拡大です。			
認定試験は、移管された製品の信頼性が引き続きオン・セミコンダクターの基準以上となることを証明するように設計されています。			
	変更前の表記	変更後の表記	
リードフレーム	TO-220 Leadframe with KFC/ PMC-90 material	TO-220 Leadframe with KFC/ PMC-90 material	TO-220 Leadframe with KFC material
モールド・コンパウンド	SI7200DX2, SG8200DL, CEL8240HF10FC (SI7200DX2, SG8200DL will be replaced by KTMC-1050GFB after ON Semiconductor Suzhou related PCN approved)	SI7200DX2, SG8200DL, CEL8240HF10FC (SI7200DX2, SG8200DL will be replaced by KTMC-1050GFB after ON Semiconductor Suzhou related PCN approved)	KTMC-1050GFB, CEL8240HF10FC
組立と検査拠点	ON Semiconductor Suzhou	ON Semiconductor Suzhou	Nantong Huada Microelectronics
製品マーキング変更	1 st Line Plant code "1" for ON Semiconductor Suzhou	1 st Line Plant code "1" for ON Semiconductor Suzhou	1 st Line Plant code "AF" for Nantong Huada Microelectronics



認定計画:

テクノロジーおよびアプリケーションに基づき以下に示す包括的計画に従い認定されます。

デバイス名: FQP7N80C/FCP290N80/FCP190N65F/FDP12N60NZ/FDP2710/FDP047N08

RMS: 57818/57828/62069/57831/57832/57829

パッケージ: TO220

テスト	規格	条件	間隔
HTRB	JESD22-A108	Tj = max rate Tj for 1,008 hours, 80% BV	504/1,008 hrs
HTGB	JESD22-A108	Ti= Maximum rated junction temperature, Vgss Bias = 100% of max rated	504/1,008 hrs
IOL	MIL-STD-750, M1037 AEC-Q101	Ta=+25°C, delta Tj=100°C max, Ton=Toff=3.5mins	4268/8572 cyc
TC	JESD22-A104	Ta= -55°C to +150°C	500/1,000 cyc
H3TRB	JESD22-A101	Temp = 85C, RH=85%, bias = 80% of rated V or 100V max	504/1008hrs
UHASt	JESD22-A118	Temp = 130C, RH=85%, ~ 18.8 psig	96hr
RSH	JESD22-B106	Ta=265C 10 sec dwell, electrical test before and after	10s
SD	J-STD-002	Ta=245C 5 sec dwell	5s

デバイス名: FCP125N65S3

RMS: 57821

パッケージ: TO220

テスト	規格	条件	間隔
HTRB	JESD22-A108	Tj = max rate Tj for 1,008 hours, 100% BV	504/1,008 hrs
HTGB	JESD22-A108	Ti= Maximum rated junction temperature, Vgss Bias = 100% of max rated	504/1,008 hrs
IOL	MIL-STD-750, M1037 AEC-Q101	Ta=+25°C, delta Tj=100°C max, Ton=Toff=3.5mins	4268/8572 cyc
TC	JESD22-A104	Ta= -55°C to +150°C	500/1,000 cyc
H3TRB	JESD22-A101	Temp = 85C, RH=85%, bias = 80% of rated V or 100V max	504/1008hrs
UHASt	JESD22-A118	Temp = 130C, RH=85%, ~ 18.8 psig	96hr
RSH	JESD22-B106	Ta=265C 10 sec dwell, electrical test before and after	10s
SD	J-STD-002	Ta=245C 5 sec dwell	5s

認定完了予定日: 20 March 2020

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
FCP165N65S3R0	FCP125N65S3
FCP165N65S3	FCP125N65S3
FCP125N65S3R0	FCP125N65S3



FCP125N65S3	FCP125N65S3
FCP9N60N	FCP190N65F
FCP7N60	FCP190N65F
FCP4N60	FCP190N65F
FCP380N60E	FCP190N65F
FCP260N60E	FCP190N65F
FCP22N60N	FCP190N65F
FCP21N60N	FCP190N65F
FCP190N65F	FCP190N65F
FCP190N60E	FCP190N65F
FCP190N60	FCP190N65F
FCP170N60	FCP190N65F
FCP16N60N	FCP190N65F
FCP16N60	FCP190N65F
FCP165N60E	FCP190N65F
FCP13N60N	FCP190N65F
FCP11N60N	FCP190N65F
FCP11N60F	FCP190N65F
FCP11N60	FCP190N65F
FCP850N80Z	FCP290N80
FCP650N80Z	FCP290N80
FCP190N65S3	FCP125N65S3
FCP190N65S3R0	FCP125N65S3
FCP260N65S3	FCP125N65S3
FCP360N65S3R0	FCP125N65S3
FCP600N65S3R0	FCP125N65S3
FCP400N80Z	FCP290N80
FCP290N80	FCP290N80
NDP7060	FDP047N08
NDP6060L	FDP047N08
NDP6060	FDP047N08
MTP3055VL	FDP047N08
FDP8447L	FDP047N08
FDP150N10	FDP047N08
FDP120N10	FDP047N08
FDP100N10	FDP047N08



FDP047N08	FDP047N08
FDP8N50NZ	FDP12N60NZ
FDP7N60NZ	FDP12N60NZ
FDP75N08A	FDP12N60NZ
FDP65N06	FDP12N60NZ
FDP5N60NZ	FDP12N60NZ
FDP5N50NZ	FDP12N60NZ
FDP39N20	FDP12N60NZ
FDP33N25	FDP12N60NZ
FDP19N40	FDP12N60NZ
FDP15N40	FDP12N60NZ
FDP12N60NZ	FDP12N60NZ
FDP12N50NZ	FDP12N60NZ
FDP12N50	FDP12N60NZ
FDP10N60NZ	FDP12N60NZ
RFP70N06	FDP2710
RFP50N06	FDP2710
RFP12N10L	FDP2710
HUF76423P3	FDP2710
HUF75645P3	FDP2710
HUF75639P3	FDP2710
HUF75545P3	FDP2710
HUF75542P3	FDP2710
HUF75345P3	FDP2710
HUF75344P3	FDP2710
HUF75339P3	FDP2710
HUF75332P3	FDP2710
HUF75321P3	FDP2710
FDP80N06	FDP2710
FDP55N06	FDP2710
FDP42AN15A0	FDP2710
FDP3682	FDP2710
FDP3672	FDP2710
FDP3652	FDP2710
FDP3651U	FDP2710
FDP3632	FDP2710



FDP2710	FDP2710
FDP2614	FDP2710
FDP2572	FDP2710
FDP2552	FDP2710
FDP16AN08A0	FDP2710
FDP070AN06A0	FDP2710
FDP047AN08A0-G	FDP2710
FDP047AN08A0	FDP2710
FDP038AN06A0	FDP2710
BUZ11-NR4941	FDP2710
FQP9N50C	FQP7N80C
FQP8N60C	FQP7N80C
FQP7N80C	FQP7N80C
FQP6N80C	FQP7N80C
FQP5N60C	FQP7N80C
FQP50N06	FQP7N80C
FQP45N15V2	FQP7N80C
FQP3N60C	FQP7N80C
FQP33N10	FQP7N80C
FQP2N80	FQP7N80C
FQP2N60C	FQP7N80C
FQP27P06	FQP7N80C
FQP24N08	FQP7N80C
FQP19N20C	FQP7N80C
FQP13N50C	FQP7N80C
FQP13N10L	FQP7N80C
FQP13N06L	FQP7N80C
FQP11N40C	FQP7N80C



Appendix A: Changed Products

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
FQP11N40C		FQP7N80C		
FQP13N06L		FQP7N80C		
FQP13N10L		FQP7N80C		
FQP13N50C		FQP7N80C		
FQP19N20C		FQP7N80C		
FQP24N08		FQP7N80C		
FQP27P06		FQP7N80C		
FQP2N60C		FQP7N80C		
FQP2N80		FQP7N80C		
FQP33N10		FQP7N80C		
FQP3N60C		FQP7N80C		
FQP45N15V2		FQP7N80C		
FQP50N06		FQP7N80C		
FQP5N60C		FQP7N80C		
FQP6N80C		FQP7N80C		
FQP7N80C		FQP7N80C		
FQP8N60C		FQP7N80C		
FDP070AN06A0		FDP2710		
FDP16AN08A0		FDP2710		
FDP2552		FDP2710		
FDP2572		FDP2710		
FDP2614		FDP2710		
FDP2710		FDP2710		
FDP3632		FDP2710		
FDP3651U		FDP2710		
FDP3652		FDP2710		
FDP3672		FDP2710		
FDP3682		FDP2710		
HUF75645P3		FDP2710		
HUF76423P3		FDP2710		
RFP12N10L		FDP2710		
RFP50N06		FDP2710		
RFP70N06		FDP2710		
FDP10N60NZ		FDP12N60NZ		
FDP12N50		FDP12N60NZ		
FDP12N50NZ		FDP12N60NZ		
FDP12N60NZ		FDP12N60NZ		
FDP15N40		FDP12N60NZ		
FDP19N40		FDP12N60NZ		
FDP33N25		FDP12N60NZ		
FDP39N20		FDP12N60NZ		
FDP5N50NZ		FDP12N60NZ		



Appendix A: Changed Products

DIKG : DIGI-KEY

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
FDP5N60NZ		FDP12N60NZ		
FDP65N06		FDP12N60NZ		
FDP75N08A		FDP12N60NZ		
FDP7N60NZ		FDP12N60NZ		
FDP8N50NZ		FDP12N60NZ		
FDP047N08		FDP047N08		
FDP100N10		FDP047N08		
FDP120N10		FDP047N08		
FDP150N10		FDP047N08		
FDP8447L		FDP047N08		
MTP3055VL		FDP047N08		
NDP6060		FDP047N08		
NDP6060L	NDP6060L-ND	FDP047N08		
NDP7060		FDP047N08		
FCP290N80		FCP290N80		
FCP400N80Z		FCP290N80		
FCP190N65S3		FCP125N65S3		
FCP650N80Z		FCP290N80		
FCP850N80Z		FCP290N80		
FCP11N60		FCP190N65F		
FCP11N60F		FCP190N65F		
FCP11N60N		FCP190N65F		
FCP13N60N		FCP190N65F		
FCP165N60E		FCP190N65F		
FCP16N60		FCP190N65F		
FCP16N60N		FCP190N65F		
FCP170N60		FCP190N65F		
FCP190N60		FCP190N65F		
FCP190N60E		FCP190N65F		
FCP190N65F		FCP190N65F		
FCP22N60N		FCP190N65F		
FCP260N60E		FCP190N65F		
FCP380N60E		FCP190N65F		
FCP4N60		FCP190N65F		
FCP7N60		FCP190N65F		
FCP9N60N		FCP190N65F		
FCP125N65S3R0		FCP125N65S3		
FCP165N65S3		FCP125N65S3		
BUZ11-NR4941		FDP2710		
FDP038AN06A0		FDP2710		
FDP047AN08A0		FDP2710		
FDP42AN15A0		FDP2710		



Appendix A: Changed Products

DIKG : DIGI-KEY

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
FDP55N06		FDP2710		
FDP80N06		FDP2710		
HUF75321P3		FDP2710		
HUF75332P3		FDP2710		
HUF75339P3		FDP2710		
HUF75344P3		FDP2710		
HUF75345P3		FDP2710		
HUF75542P3		FDP2710		
HUF75545P3		FDP2710		
HUF75639P3		FDP2710		