



Final Product/Process Change Notification

Document #:FPCN22962X

Issue Date:15 Nov 2019

Title of Change:	PQFN 56MP NTMFD001N03P9 assembly dual source at ASE Malaysia (ASEM).	
Proposed First Ship date:	09 Mar 2020 or earlier if approved by customer	
Contact Information:	Contact your local ON Semiconductor Sales Office or <CheePin.Tay@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 <KarenMae.Taping@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:	Affected product will have identification for the assembly plant code of 'AL'	
Change Category:	Assembly Change	
Change Sub-Category(s):	Manufacturing Site Change/Addition	
Sites Affected:		
ON Semiconductor Sites	External Foundry/Subcon Sites	
None	ASE Malaysia (ASEM)	
Description and Purpose:		
ON Semiconductor's plan to qualify PQFN5x6, Device NTMFD001N03P9 in ASEM as additional assembly site.		
At the end of the FPCN approval cycle, the products may be dual sourced.		
	Before Change Description	After Change Description
LeadFrame	C194 Cu Lead Frame	C194 Cu Lead Frame
Die Attach	Solder Paste 92.5Pb5Sn2.5Ag, NC-SMQ75	Solder Paste 92.5Pb5Sn2.5Ag, NC-SMQ75
Bond Wire	1.0 mil, Palladium Coated Copper Wire	1.0 mil, Palladium Coated Copper Wire
Mold Compound	CEL9240HF10LS(45C)	CEL9240HF10LS(45C)
Assembly Site	ON Semiconductor CEBU, Philippines	ON Semiconductor CEBU, Philippines & ASE, MALAYSIA
There are no product material & marking change as a result of this change.		

**Reliability Data Summary:**

QV DEVICE NAME: NTMFD001N03P9

RMS# : F55660

PACKAGE : PQFN56 POWER CLIP

Test	Specification	Condition	Interval	Results
HTGB	JESD22-A108	Ta = 150C, 100% rated Vgs - Q1 & Q2 biasing	504 hrs 1008 hrs	0/231 0/231
HTRB	JESD22-A108	Ta = 150C(Q1) & Ta = 135C(Q2), bias =80% of rated Vds - Q1 & Q2 biasing	504 hrs 1008 hrs	0/231 0/231
HTSL	JESD22-A103	Ta= 150C	504 hrs 1008 hrs 1512 hrs 2016 hrs	0/231 0/231 0/231 0/231
PC	J STD 020 , JESD22-A113	3x IR reflow at 260C	-	0/1386
HAST+PC	JESD22-A110	Temp = 130C, 85% RH, ~ 18.8 psig, bias = 80% of rated V or 100V max - Q1 & Q2 biasing	96 hrs 192 hrs	0/231 0/231
TC+PC	JESD22-A104	Temp = -55°C to +150°C	500 cyc 1000 cyc 1500 cyc 2000cyc	0/231 0/231 0/231 0/231
UHAST+PC	JESD22-A118	Temp = 130C, RH=85%, ~ 18.8 psig	96 hrs	0/231
IOL+PC	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C max, 2 mins, Ton=Toff is package dependent – Q1 & Q2 biasing	7500 cyc 15000 cyc	0/231 0/231
RSH	JESD22- B106	Ta = 265C, 10 sec dwell B106	-	0/90

Electrical Characteristics Summary:

The temperature characterization performance meet datasheet specification. Detail of Electrical characterization

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
NTMFD001N03P9	NTMFD001N03P9