



Final Product/Process Change Notification

Document #:FPCN23971XF

Issue Date:06 Dec 2022

Title of Change:	Transfer of FS50 wafer technology from Macronix (MXIC) Taiwan to Diodes, Maine, US FAB
Proposed First Ship date:	13 Mar 2023 or earlier if approved by customer
Contact Information:	Contact your local onsemi Sales Office or Seok-Ho.Choi@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 Dongsun.Park@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:	As material from different FABs cannot be combined in to (1) reel, product from Maine will show "Diffused In: US" on the label of the reel and box. Please see sample MPN on page 2 at the following link http://www.onsemi.com/pub_link/Collateral/LABELRM-D.PDF to see the location of the Diffused In notation.
Change Category:	Wafer Fab Change
Change Sub-Category(s):	Manufacturing Site Transfer

Sites Affected:

onsemi Sites

None

External Foundry/Subcon Sites

Diodes, Maine, United States

Description and Purpose:

onsemi would like to inform our customers of the qualification of our FS50 Technology into the 8" Diodes, Maine, US FAB Foundry. This technology was processed out of our 6" foundry Macronix (MXIC) in Taiwan. MXIC announced it will discontinue this technology, thus necessitating the transfer.

While the typical language of the FPCN is to wait 90 days until shipments of first material, as there is no inventory of MXIC wafer, die, assembly WIP or finished goods either at onsemi or at our distributors, there will be no waiting period for approval or rejection of the PCN and deliveries will start immediately. If a customer does not wish to receive product from the new wafer FAB, they should take action to cancel or push out all future orders. onsemi can no longer provide material from the original MXIC FAB site. Customers should work with their local sales contacts to cancel or push orders as needed.

	From	To
FAB Site	Macronix (MXIC) Taiwan	Diodes, Maine, US
Wafer Size	6"	8"

There is no product marking change as a result of this change.



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Reliability Data Summary:

QV DEVICE NAME: FAN6300AMY

RMS: K72385, O79686

PACKAGE: SOIC-8

Test	Specification	Condition	Interval	Results
HTOL	JESD22-A108	Ta= 115°C, 100 % max rated Vcc	1008 hrs	0/231
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/231
TC	JESD22-A104	Ta= -55°C to +150°C	1000 cyc	0/231
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/231
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C, Pre TC, uHAST, HAST for surface mount pkgs only		Pass

Electrical Characteristics Summary:

FAN6921MLMY	From (min/typ/max, [Unit])	To (min/typ/max, [Unit])
ICOMP23	15 / 25 / 35 [uA]	10 / 30 / 50 [uA]
TFB_PFC_INHIB	30 / 34 / 38 [uS]	30 / 35 / 40 [uS]
VRATIO_RANGE_GND	1.04 / - / 1.08 [V]	1.03 / - / 1.08 [V]
VZCD_ssc	0.8 / 0.9 / 1.0 [V]	0.9 / 1.05 / 1.20 [V]
VZCD_dis	150 / 200 / 250 [mV]	120 / 185 / 250 [mV]
TFB_OLP	40 / 50 / 60 [mS]	40 / 52.5 / 65 [mS]
Ton_max_PWM	38 / 45 / 52 [uS]	37 / 46.5 / 55 [uS]
Min_off_time_VN	7 / 8 / 9 [uS]	6.8 / 8 / 9.2 [uS]
Vlimit_IDET=30uA	0.81 / 0.84 / 0.87 [V]	0.85 / 0.9 / 0.95 [V]
Vlimit_IDET=185uA	0.69 / 0.72 / 0.75 [V]	0.7 / 0.74 / 0.78 [V]
Vlimit_IDET=350uA	0.55 / 0.58 / 0.61 [V]	0.54 / 0.59 / 0.64 [V]
Vlimit_IDET=550uA	0.34 / 0.4 / 0.46 [V]	0.34 / 0.405 / 0.47 [V]
tRT_OTP_L	70 / 100 / 130 [uS]	95 / 125 / 155 [uS]

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
FAN6921MLMY	FAN6300AMY

Appendix A: Changed Products

PCN#: FPCN23971XF
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DIKG: DIGI-KEY

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
FAN6921MLMY		FAN6300AMY		