ON Semiconductor®

Final Product/Process Change Notification

Document #:FPCN22643XA
Issue Date:15 Sep 2020

Title of Change:	ON Suzhou's IPAK Case Outline Change from Non-JEDEC to JEDEC Standard for SSU1N50BTUPCN
Proposed First Ship date:	22 Dec 2020 or earlier if approved by customer
Contact Information:	Contact your local ON Semiconductor Sales Office or Daisy.Zhi@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 Lake.Wang@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:	No marking change and traceability by date code
Change Category:	Assembly Change
Change Sub-Category(s):	Datasheet/Product Doc change

Sites Affected:

ON Semiconductor Sites	**External Foundry/Subcon Sites**
ON Semiconductor Suzhou, China	None

Description and Purpose:

• Table 1 : Old vs New Comparison for DPAK dimension
Update some dimensions for DPAK Non-JEDEC(369AK) and DPAK JEDEC(369AS)
1) Delete "NOM" item in the comparison table
2) Some dimension changes on below item:

Dimension in previous PCN FPCN22643X

REF	DESCRIPTION	Old Dimension (DPAK NON-JEDEC)			New Dimension (DPAK JEDEC)		
		MIN	NOM	MAX	MIN	NOM	MAX
A1	Profile height	-0.05		0.2	---		0.127
e	Lead pitch	2.08	2.28	2.48	---	2.29	BSC
L	Foot length	1.4	----	1.7	1.4	1.59	1.78
L2	Gage plane	0.49	0.5	0.51	---	0.51	BSE
L4	Center lead cut length	----	----	----	0.64	0.83	1.02
ANG2	foot landing angle	----	----	----	0	---	10
aaa	Lead position tolerances	---	---	----	---	---	0.25

Dimension in new PCN FPCN22643X1

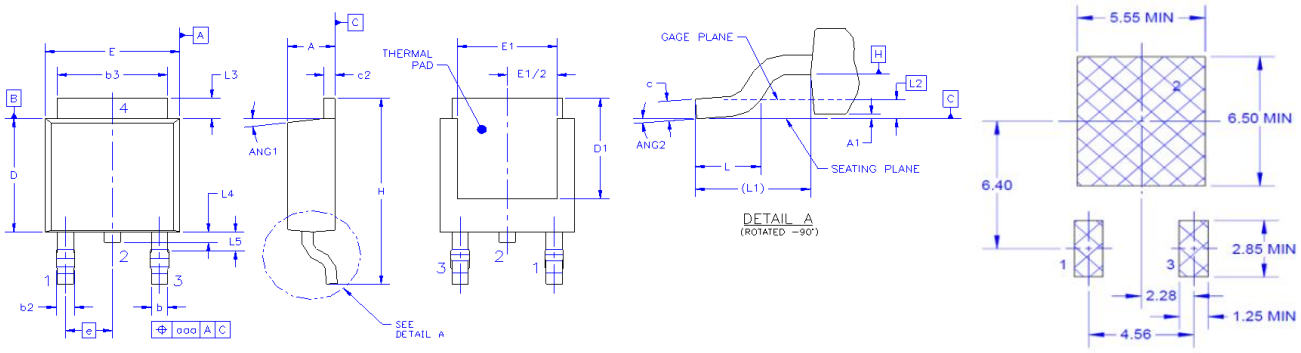
Old Dimension (DPAK NON-JEDEC, 369AK)		New Dimension (DPAK JEDEC, 369AS)	
MIN	MAX	MIN	MAX
---	0.127	---	0.127
2.08	2.48	2.29	
0.55	----	1.4	1.78
1.02		0.51	
----	----	----	1.02
0	8	0	10
---	0.25	---	0.25

• Table 2 : Old vs New Comparison for IPAK dimension

369AR is being used for both IPAK Non-JEDEC and IPAK JEDEDC. Delete the dimension comparison in “Table 2” as no any changes on the package dimension and the package dimension in previous FPCN22643X is just used for Suzhou production for quality monitor only.

Table 1 : Old vs New Comparison for DPAK dimension

REF	DESCRIPTION	Old Dimension (DPAK NON-JEDEC, 369AK)		New Dimension (DPAK JEDEC, 369AS)	
		MIN	MAX	MIN	MAX
A	Package thickness	2.2	2.4	2.18	2.39
A1	Profile height	**---**	**0.127**	---	0.127
b	Lead width	0.66	0.86	0.64	0.89
b2	Dambar cutting width	----	0.96	0.76	1.14
b3	Heat sink width	5.04	5.64	5.21	5.46
c	Lead thickness	0.4	0.6	0.45	0.61
c2	Heat sink thickness	0.4	0.6	0.45	0.58
D	Package length	5.9	6.3	5.97	6.22
D1	Back metal length	4.83	----	5.21	---
E	Package width	6.4	6.8	6.35	6.73
E1	Back metal width	5.04	5.64	4.32	---
e	Lead pitch	2.08	2.48	**2.29**	
H	Total package length	9.2	9.8	9.4	10.41
L	Foot length	**0.55**	**----**	1.4	1.78
(L1)	Lead length	2.5	2.9	2.9 ref	
L2	Gage plane	**1.02**		**0.51**	
L3	Heat sink height	0.5	0.9	0.89	1.27
L4	Center lead cut length	----	----	**----**	**1.02**
L5	Dambar distance to pkg edge	---	---	---	---
ANG1	Package draft angle	----	----	---	---
ANG2	foot landing angle	**0**	**8**	0	10
aaa	Lead position tolerances	---	**0.25**	---	0.25



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

Reliability Data Summary:

- For Discrete Products use TEM001639:
  QV Device Name FQD2N90TM
  PACKAGE: TO252 (D2PAK)

Test	Name	Test Conditions	Test Results	(rej/ ss)
HTRB	JESD22-A108	Ta = 150°C, 80% rated BV	1008 Hrs	0/77
HTGB	JESD22-A108	Ta = 150°C, 100% rated Vgs	1008 Hrs	0/77
HTSL	JESD22-A103	Ta = 150°C	1008 Hrs	0/77
IOL	MIL-STD-750(M1037) AEC-Q101	Ta=+25°C, delta Tj=125°C On/of = 2 min	5,000 Cyc	0/77
TC	JESD22-A104	Ta=-65C to +150C	500 Cyc	0/77
H3TRB	JESD22-A101	Ta=85°C, 85% RH, 80% rated or 100V max	1008 Hrs	0/77
UHAST	JESD22-A118	+110°C, RH=85% , unbiased	264 Hrs	0/77
RSH	JESD22-A106	270 C Immersion	Electrical	0/30

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
SSU1N50BTU	FQD2N90TM