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September 18, 2024
LFPCN-DMI-BTA-2024-002/01
Product Change Notification for Littelfuse Discrete MOSFETs & IGBTs

Dear valued customers,

Littelfuse would like to notify you of an addition in the backend manufacturing of the discrete MOSFET & IGBT parts listed under appendix C.

DESCRIPTION OF CHANGE:

1. Addition of in-house assembly line in Lipa as a new supplier and alternative source for TO-264, PLUS264 and ISOPLUS264 (ISOPLUS i5-PAC) packages. This will further streamline and enhance our supply chain efficiencies.
2. Change in device marking: Details under **APPENDIX A**.
3. Change in inner box and tube labels, and tube dimensions: Details under **APPENDIX A**.

Reliability data summary can be found under **APPENDIX B**.

Affected part number list can be found under **APPENDIX C**.

Form, fit, function changes: Littelfuse does not anticipate any change in form/fit/function of the affected part numbers.

Lack of acknowledgement of this PCN until 20/10/2024 will be considered an acceptance of the change.

New country of origin: Philippines

If you have any additional questions or concerns, please contact us or your sales representative.

Best Regards,

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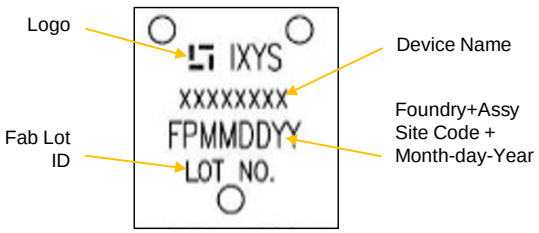
APPENDIX A: Comparison and Change Description

1. Comparison: Device Marking

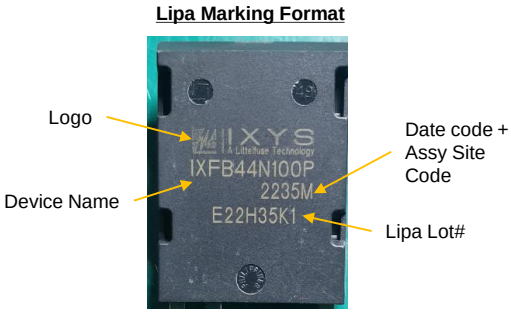
a. Packages: TO-264 and PLUS264

Item	Existing OSAT	Lipa	Change (Y/N)	Remarks
Logo	IXYS	IXYS	Y	Change to Littelfuse Logo
Part name	Device Name	Device Name	N	No change
Date Code	FPMMDDYY	YYWW+M	Y	Lipa uses Lipa format + site location code
Lot #	Fab lot ID	Lipa Lot #	Y	Lipa uses Lipa format . Wafer lot number is traceable thru Lipa MES system using the lot number
Assembly Line Code	P	M	Y	Site location code

Existing OSAT Marking Format



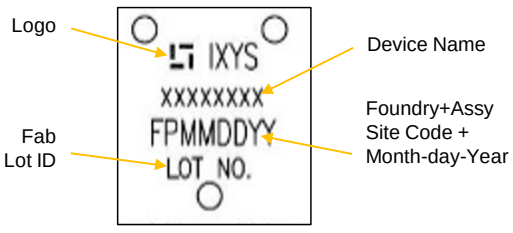
Lipa Marking Format



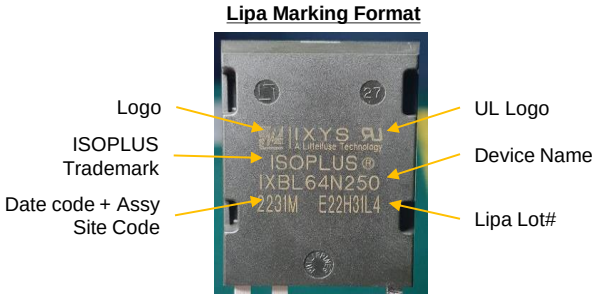
b. Packages: ISOPLUS264

Item	Existing OSAT	Lipa	Change (Y/N)	Remarks
Logo	IXYS	IXYS	Y	Change to Littelfuse Logo
Part name	Device Name	With UL Logo	N	No change
UL Logo	None	Yes	Y	Need to inform UL for qualification
Isoplus Trademark	None	ISOPLUS®	Y	Need to inform UL for qualification
Date Code	FPMMDDYY	YYWW+M	Y	Lipa uses Lipa format + site location code
Lot #	Fab lot ID	Lipa Lot #	Y	Lipa uses Lipa format
Assembly Line Code	P	M	Y	Site location code

Existing OSAT Marking Format



Lipa Marking Format



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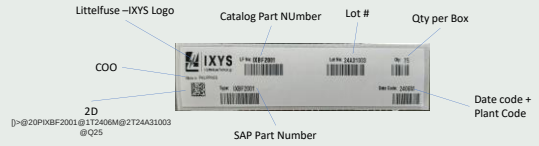
2. Comparison: Inner Box and Tube

a. Inner Box and Tube Labeling

Item	Existing OSAT	Lipa	Change (Y/N)	Remarks
ROHS Label			Y	Both have printed RoHs compliance label
Logo			N	No Change
Qty per Tube	25	25	N	No change
Qty per Box	250	250	N	No change
Part Number	Device Name	Device Name	N	No change
Lot No	Fab Lot ID	Lipa Lot ID format	Y	SBU-Lipa uses Lipa format
COO	Yes	Yes	N	No change
Code Type	Barcode	Barcode + 2D Code	Y	Additional scanning code to access information
Date Code	No	Yes	Y	SBU-Lipa uses Lipa format + Assy Site Code

b. Label Comparison

Change Description	Existing OSAT	SBU-Lipa
Inner Box Label		
Tube Label		

c. Tube Dimensions

Point of Comparison	Existing Location	SBU-LIPA	GAP
Length, mm	529.7 - 532.3	531 - 533	Yes
Width, mm	52.3 - 52.9	52.5 - 53.1	Yes
Height, mm	7.57 - 7.63	7.57 - 7.63	No gap
Material Thickness, mm	0.77 - 0.83	0.77 - 0.83	No gap
Tube Opening, mm	6 x 51	6 x 51	No gap
Quantity	25	25	No gap
Anti-static	Yes	Yes	No gap
Design			No gap

APPENDIX B: Reliability Data Summary

Test	Condition	ENDPOINT	Package	Result
HTRB	MIL-STD-750-1 M1038 Method A	1000 hours	TO-264 PLUS264 ISOPLUS264	PASS
HTGB	JESD22 A108; 150°C	1000 hours		
Temperature Cycle	JESD22-A104 (-55ºC to 150ºC)	1000 cycles		
Hast	JESD22-A110 (130° C, 85% RH)	96 hours		
UHAST/AC	JESD22-A118A; (130° C, 85% RH)	96 hours		
IOL	MIL-STD-750-1 Method 1037; ΔT= 100C	15,000 Cycles		

APPENDIX C:

Affected Part Number List - Discrete MOSFETs

Sl. No.	Part Number	Sl. No.	Part Number	Sl. No.	Part Number
1	IXFB100N50P	58	IXFK220N15P	115	IXFK90N30
2	IXFB100N50Q3	59	IXFK220N17T2	116	IXFK90N65X3
3	IXFB110N60P3	60	IXFK220N20X3	117	IXFK94N50P2
4	IXFB132N50P3	61	IXFK230N20T	118	IXFK98N50P3
5	IXFB150N65X2	62	IXFK240N15T2	119	IXFK98N60X3
6	IXFB170N30P	63	IXFK240N25X3	120	IXFL100N50P
7	IXFB2000	64	IXFK24N100	121	IXFL132N50P3
8	IXFB210N20P	65	IXFK24N100F	122	IXFL210N30P3
9	IXFB210N30P3	66	IXFK24N100Q3	123	IXFL32N120P
10	IXFB300N10P	67	IXFK24N80P	124	IXFL38N100P
11	IXFB30N120P	68	IXFK250N10P	125	IXFL38N100Q2
12	IXFB38N100Q2	69	IXFK26N100P	126	IXFL44N100P
13	IXFB40N110P	70	IXFK26N120P	127	IXFL60N80P
14	IXFB40N110Q3	71	IXFK27N80Q	128	IXFL80N50Q2
15	IXFB44N100P	72	IXFK300N20X3	129	IXFL82N60P
16	IXFB44N100Q3	73	IXFK320N17T2	130	IXKK85N60C
17	IXFB50N80Q2	74	IXFK32N100P	131	IXTB30N100L
18	IXFB52N90P	75	IXFK32N100Q3	132	IXTB62N50L
19	IXFB60N80P	76	IXFK32N100X	133	IXTK100N25P
20	IXFB62N80Q3	77	IXFK32N80P	134	IXTK102N30P
21	IXFB70N100X	78	IXFK32N80Q3	135	IXTK102N65X2
22	IXFB70N60Q2	79	IXFK32N90P	136	IXTK110N20L2
23	IXFB80N50Q2	80	IXFK360N10T	137	IXTK120N20P
24	IXFB82N60P	81	IXFK360N15T2	138	IXTK120N25P
25	IXFB82N60Q3	82	IXFK36N60P	139	IXTK120N65X2
26	IXFB90N85X	83	IXFK38N80Q2	140	IXTK120P20T
27	IXFK100N10	84	IXFK400N15X3	141	IXTK140N20P
28	IXFK100N65X2	85	IXFK40N90P	142	IXTK140N30P
29	IXFK102N30P	86	IXFK420N10T	143	IXTK150N15P
30	IXFK110N07	87	IXFK44N50	144	IXTK170N10P
31	IXFK110N65X3	88	IXFK44N50P	145	IXTK170P10P
32	IXFK120N20P	89	IXFK44N50Q	146	IXTK17N120L
33	IXFK120N25P	90	IXFK44N80P	147	IXTK180N15P
34	IXFK120N30P3	91	IXFK44N80Q3	148	IXTK200N10L2
35	IXFK120N30T	92	IXFK48N50	149	IXTK200N10P
36	IXFK120N60X3	93	IXFK48N50Q	150	IXTK20N150
37	IXFK120N65X2	94	IXFK48N60P	151	IXTK210P10T

Sl. No.	Part Number	Sl. No.	Part Number	Sl. No.	Part Number
38	IXFK130N65X3	95	IXFK48N60Q3	152	IXTK22N100L
39	IXFK140N20P	96	IXFK50N85X	153	IXTK240N075L2
40	IXFK140N25T	97	IXFK520N075T2	154	IXTK32P60P
41	IXFK140N30P	98	IXFK52N100X	155	IXTK3N250L
42	IXFK140N60X3	99	IXFK55N50	156	IXTK400N15X4
43	IXFK150N30P3	100	IXFK55N50F	157	IXTK40P50P
44	IXFK150N30X3	101	IXFK64N50P	158	IXTK46N50L
45	IXFK160N30T	102	IXFK64N50Q3	159	IXTK550N055T2
46	IXFK170N10P	103	IXFK64N60P	160	IXTK5N250
47	IXFK170N20P	104	IXFK64N60P3	161	IXTK600N04T2
48	IXFK170N20T	105	IXFK64N60Q3	162	IXTK60N50L2
49	IXFK170N25X3	106	IXFK66N85X	163	IXTK80N30L2
50	IXFK180N07	107	IXFK78N50P3	164	IXTK82N25P
51	IXFK180N10	108	IXFK80N50P	165	IXTK88N30P
52	IXFK180N15P	109	IXFK80N50Q3	166	IXTK8N150L
53	IXFK180N25T	110	IXFK80N60P3	167	IXTK90N25L2
54	IXFK200N10P	111	IXFK80N65X2	168	IXTK90P20P
55	IXFK20N120P	112	IXFK88N30P	169	IXTL2N450
56	IXFK210N30X3	113	IXFK90N20	170	IXTL2N470
57	IXFK21N100Q	114	IXFK90N20Q	171	IXTL2X180N10T

Affected Part Number List - Discrete IGBTs

Sl. No.	Part Number	Sl. No.	Part Number	Sl. No.	Part Number
1	IXGK100N170	16	IXXK100N60C3H1	31	IXYK140N120A4
2	IXGK75N250	17	IXXK100N60B3H1	32	IXXK200N60C3
3	IXGL75N250	18	IXYB82N120C3H1	33	IXXK200N60B3
4	IXEL40N400	19	IXXK300N60C3	34	IXYK140N90C3
5	IXBK64N250	20	IXXK300N60B3	35	IXXK110N65B4H1
6	IXBL64N250	21	IXYK120N120C3	36	IXXK160N65C4
7	IXBL60N360	22	IXYK120N120B3	37	IXXK160N65B4
8	IXCK36N250	23	IXYK100N120C3	38	IXXK200N65B4
9	IXYK30N170CV1	24	IXYK220N65A5	39	IXGK50N90B2D1
10	IXYL50N170CV1	25	IXYK180N65A5	40	IXGK50N120C3H1
11	IXYL40N250CV1	26	IXYK200N65B3	41	IXGK55N120A3H1
12	IXGK72N60B3H1	27	IXYK85N120C4H1	42	IXGK82N120A3
13	IXGK400N30A3	28	IXYK110N120C4	43	IXGK82N120B3
14	IXYK100N65B3D1	29	IXYK110N120B4	44	IXGK120N120B3
15	IXYK300N65A3	30	IXYK110N120A4		