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Addition of a new in-house packaging factory for Littelfuse products in SMPD-Y package

Dear valued customers and partners,

Littelfuse would like to notify you of the addition and qualification of a new packaging location for its products delivered in the SMPD-Y package. The new in-house factory will improve our supply chain efficiency and our service levels to customers.

List of part numbers supported by the new factory

-> see page 2

Summary of changes

- > Future production locations: current location and new location
- > Country of origin for the new location: Philippines
- > Effective Date: September 1st 2024
- > Form, fit, function changes: none.
- > Part number change: no change.
- > Bill of Material: no change.
- > Assembly Process Flow: automated tin plating, other steps identical.
- > Marking & Labeling: some differences. Please refer to the detailed comparison below.
- > Packing: some differences. Please refer to the detailed comparison below.

Details of changes, comparison existing location / new location

-> see from page 3

Please contact your Regional Sales representative or Field Application Engineer for any inquiry or further details.

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Contents

List of part numbers supported by the new packaging location.....	2
Package Dimensions	3
Package marking differences.....	3
Tube labelling differences	3
Box labelling differences.....	4
Bill of material & process differences.....	4
Tube dimensions differences.....	5
Reliability	6
Example of marking and labels - new manufacturing location	6
New location part markings.....	6
New location, example labels.....	7

List of part numbers supported by the new Packaging supported by New Location.

Part number	Description	Electrical Family
MMIX4B22N300	Disc IGBT SMPD Pkg- MOSFET SMPD-B	BiMosfet
MMIX1969	Disc IGBT SMPD Pkg- Standard SMPD-B	IGBT
MMIX4G20N250	Disc IGBT SMPD Pkg- Standard SMPD-B	IGBT
MMIX4B12N300	Disc IGBT SMPD Pkg- BiMOSFET SMPD-B	IGBT
MMIX1992	Disc IGBT SMPD Pkg- Standard SMPD-B	IGBT
MMIX2F150N20T-TR	Disc MSFT SMPD Pkg- HiPerFET & MSFT SMPD-B	HiPerFET
MMIX2F60N50P3-TR	Disc MSFT SMPD Pkg- HiPerFET & MSFT SMPD-B	HiPerFET
MMIX4B20N300	Disc IGBT SMPD Pkg- BiMOSFET SMPD-B	IGBT
MMIX2F150N20T	Disc MSFT SMPD Pkg- HiPerFET & MSFT SMPD-B	HiPerFET
MMIX2F60N50P3	Disc MSFT SMPD Pkg- HiPerFET & MSFT SMPD-B	HiPerFET

Package Dimensions

No change, within existing datasheet tolerances.

Package marking differences

Item	Existing location	New location	Change (Y/N)	Remarks
Logo			Y	Change to Littelfuse Logo
Part name	Part number	Part number	N	No change
Date Code	FPMDDYY	YYWW+M	Y	New location: Date (YYWW) + M (factory code)
Lot #	Lot ID	Lot #	Y	Wafer lot number is traceable through MES system using the lot number
Assembly Line Code	P	M	Y	Factory code

Tube labelling differences

Item	Existing location	New location	Change (Y/N)	Remarks
Logo			N	No Change
Qty per tube	20	20	N	No change
Part Number	Device Name	Device Name	N	No change
Lot #	Lot ID	Lot #	Y	New location uses its own format. Wafer lot number is traceable MES system using the lot number
Country of Origin	Yes	Yes	N	No change
Code Type	Barcode	Barcode + 2D Code	Y	Additional scanning code to access information
Date Code	No	Yes	N	Lipa uses YYWW + M (factory code)

Box labelling differences

Item	Existing location	New location	Change (Y/N)	Remarks
ROHS Label			Y	Both have printed RoHS compliance label
Logo			N	No Change
Qty per Box	200	200	N	No change
Part Number	Device Name	Device Name	N	No change
Lot No	Fab Lot ID	Lot #	Y	Wafer lot number is traceable thru MES system using the lot number
Country of Origin	Yes	Yes	N	No change
Code Type	Barcode	Barcode + 2D Code	Y	Additional scanning code to access information
Date Code	No	Yes	Y	New location uses YYWW + M (factory code)

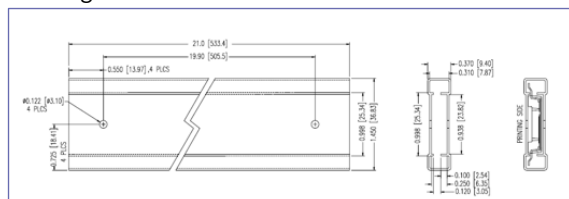
Bill of material & process differences

Material	GAP (Y/N)	RISK MITIGATION
CHIPS	N	No change of chips
LEAD FRAME	N	No change of lead frame
SOLDER MATERIAL	N	No change of solder material
WIRE	N	No change of wire size and composition
MOLDING COMPOUND	N	Same epoxy molding compound
PLATING	Y	New factory has an automated plating line

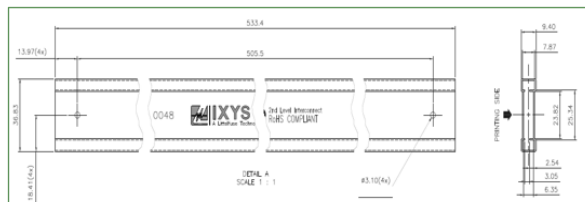
Tube dimensions differences

Point of Comparison	Existing location	New location	GAP
Length, mm	533.4	533.4	No gap
Width, mm	36.83	36.83	No gap
Height, mm	9.4	9.4	No gap
Material Thickness, mm	1.52	1.52	No gap
Quantity	20	20	No gap
Anti-static	Yes	Yes	No gap

Existing location:



New location:



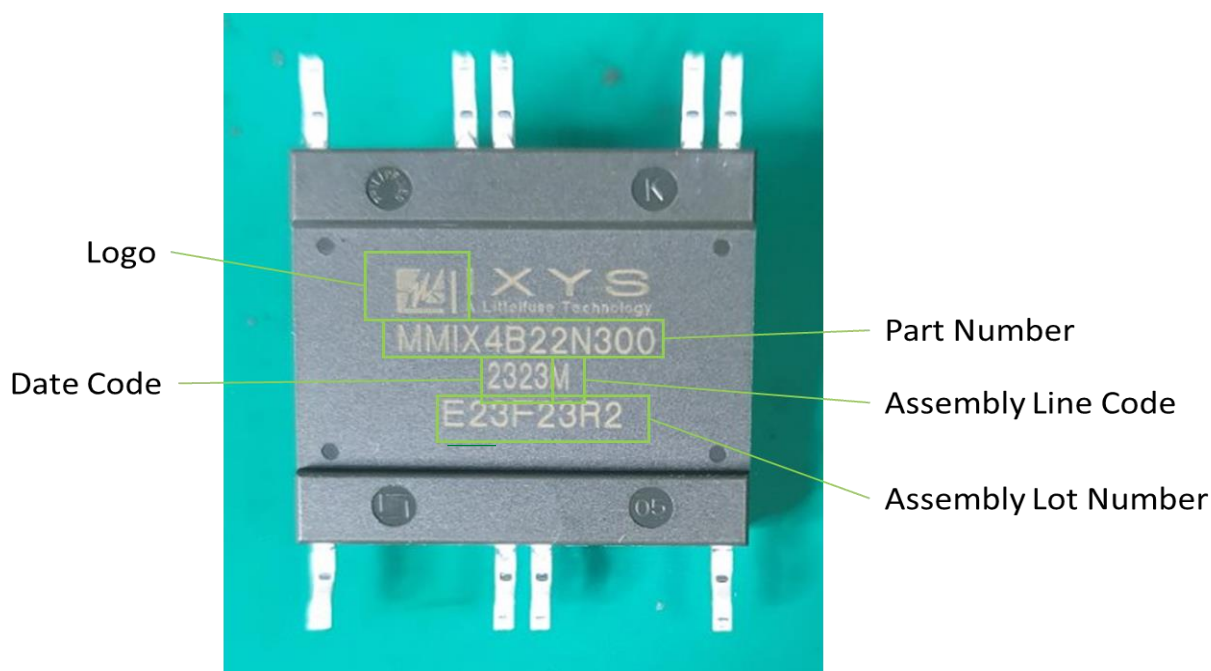
Reliability Result:

Product Reliability Test Summary – SMPD-Y (Approved by QA)

RELIABILITY TEST	Condition	SMPD-Y MMIX4B22N300
HTRB	1000hrs, 125°C, 2400V DC	0/20
HTGB	1000hrs, 125°C, 2400V DC	0/40
Temp Cycle	100 cycles, -55°C/150°C glued on to heatsink	0/40
UHAFT	96hrs, 130°C, 85% r.H, 48 hrs recovery time	0/40

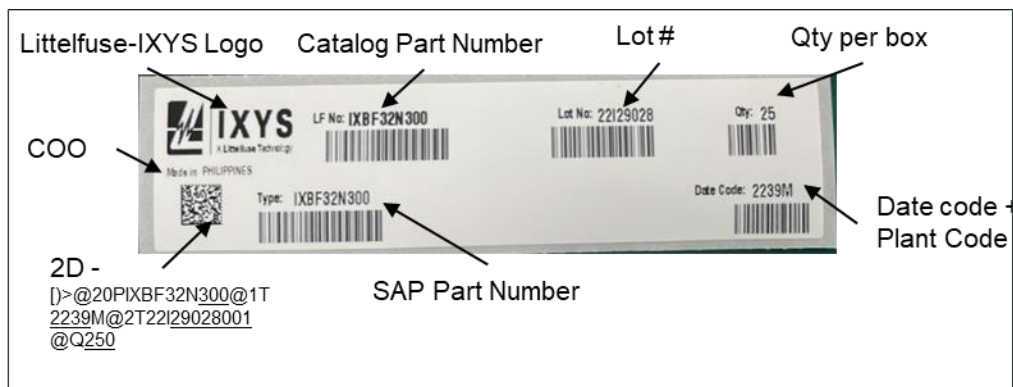
Example of marking and labels - new manufacturing location

New location part markings

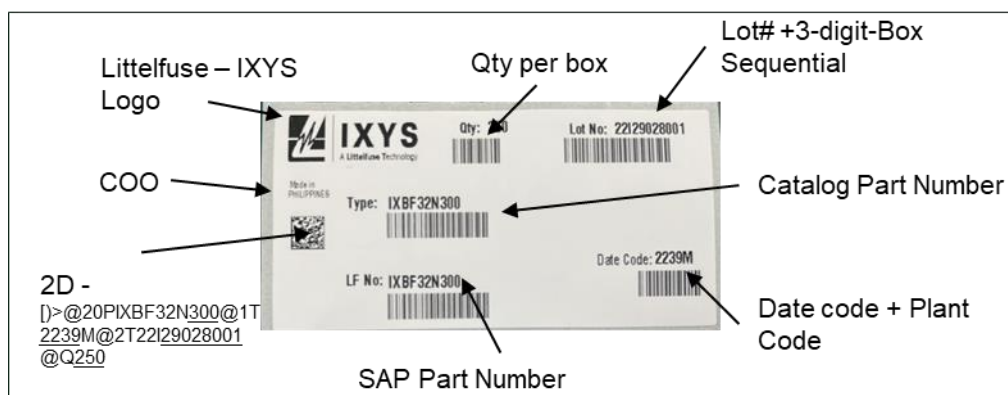

Part marking – example of MMIX4B22N300

New location, example labels

Tube label



Inner box label



RoHS label

