



Packing specification change (Rev. 1)

2018. 3.12 Rev1
ATP Manufacturing Div.
Production Engineering Dept

1. Background

<Outline>

Actual packing specification for LSI surface mounted devices is following JIS (Japan Industrial Standard) standard.

Due to customers requirements ROHM will change to common JEDEC standard from April 2018.





Objected Product	Before changing	After changing
LSI SMD IC	JIS 0301	JEDEC J-STD-033

<Changing plan>

JEDEC supported packing specification will be applied for products moisture sensitive products from April 2018.

2. Changing points

Specification changing point is below.

Objected Product	Changing item		Before changing (JIS 0301)		After changing (J-STD-033)		Appendix
			Standard	Specification	Standard	Specification	
All Objected Product	Production label	Information item	—	—	J-STD-033	Add MSL lank, reflow temperature dry packing seal date and floor life information	3
Dry pack Product	Moisture Barrier Bag (MBB)	Water vapor transmission rate	JIS Z 0208	< 0.5 g/(m ² ·day)	ASTM F-1249	< 0.0093 g/(m ² ·day)	—
		Design	—	—	J-JEP113 J-STD-033	Add JEDEC required design (Caution card, MSID card)	1, 2
	Desiccant	Amount of Water absorbed	JIS Z 0701	<ul style="list-style-type: none"> Absorb water >20 wt% in 50%RH environment Decide desiccant type case by case. Silica gel type (Normal) or clay type (Custom)  <p>Silica gel</p>  <p>Clay</p>	MIL-I-D3464	<ul style="list-style-type: none"> Decide desiccant weight (amount of water absorbance) to keep 10%RH in dry pack for 5 years in 40°C/90%RH environment Unify desiccant type to clay 	—
Humidity Indicator Card (HIC)	Humidity indicated RH%	MIL-I-8835	 <p>COBALT DICHLORIDE FREE HUMIDITY INDICATOR</p> <p>AP&G JAPAN</p> <p>APH-CDF1234</p>	MIL-I-8835 J-STD-033	 <p>HUMIDITY INDICATOR COBALT DICHLORIDE FREE</p> <p>Complex with IEC/JEDEC J-STD-033 and REACH regulation</p> <p>LEVEL 2 PARTS 60% Bake parts if 60% is NOT blue</p> <p>LEVEL 2A-5A PARTS 10% Bake parts if 10% is NOT blue and 5% is pink</p> <p>5%</p> <p>Initial Use: Do not put this card into a bag if 60% is pink</p> <p>DYE-CCF051000 Batch #: 01094892</p>	—	

Appendix 1. MBB design changing

Change “dry pack manual note” design to JEDEC style “Caution card”.
 Add MSID card (Please refer appendix 2)

Appearance	Before changing	After changing
Front side		<p>MSID Card</p> <p>Caution Card</p>
Back side		

Appendix 2. Caution card・MSID Card



Caution card shows dry pack management manual, and MSID card indicates dry pack product. Information of blank area in caution card are shown in production label following with JEDEC (Please refer appendix 3)

Caution Card	MSID Card (Moisture Sensitive Identification Card)
<p>Caution This bag contains MOISTURE-SENSITIVE DEVICES</p> <p>1. Calculated shelf life in sealed bag: 72 months at <math><40^{\circ}\text{C}</math> and <math><90\%</math> relative humidity (RH)</p> <p>2. Peak package body temperature: _____ $^{\circ}\text{C}$</p> <p>3. After bag is opened, devices that will be subjected to reflow solder or other high temperature process must be</p> <p>a) Mounted within: _____ hours of factory conditions</p> <p>b) Stored per J-STD-033</p> <p>4. Devices require bake, before mounting, if:</p> <p>a) Humidity Indicator Card reads >10% for level 2a - 5a devices or >60% for level 2 devices when read at $23 \pm 5^{\circ}\text{C}$</p> <p>b) 3a or 3b are not met</p> <p>5. If baking is required, refer to IPC/JEDEC J-STD-033 for bake procedure</p> <p>6. Bag Seal Date: _____</p> <p>Note: Level and body temperature defined by IPC/JEDEC J-STD-020</p>	<p>Caution Moisture-Sensitive IFC-033c-3-3</p>
<p>Indicate how to use dry pack products</p> <ul style="list-style-type: none"> ① Moisture sensitive level (Add to production label) ② Dry pack storage available time ③ Package peak body temperature (Add to production label) ④ Usable time without bake after opening dry pack (Add to production label) ⑤ Humidity Indicator Card judgment method ⑥ Product backing method ⑦ Dry pack bag seal date (Add to production label) 	<p>Indicates dry pack required product.</p>

Appendix 3. Production label layout change

MS-Level ①, Reflow peak temperature ③, Usable time without bake after opening④ and drypack bag seal date and ⑦ is indicated on ROHM factory label.

JEDEC information (Only change information ①-③ location)

- ①MSL rank
- ④ Floor life (After opening dry packing) [Drypack product only**]
- ③Reflow peak temperature (Reflow peak temperature defined in solder mounting specification)
- ⑦ Dry pack bag seal date (DAY/MONTH/YEAR) [Drypack product only**]



*Production label image is example

(In case this product is MSL3, floor life 168H, reflow temperature 260°C, dry pack sealed 18 Feb 2018)

**Floor life/dry pack bag seal date are not printed for MSL1 optional dry pack based on J-std-033.