Reference Conditions for Drying Mounted or Unmounted SMD

Floor life begins counting at time = 0 after drying
Packages that were exposed to Conditions 60% RH
(For ICs with Novolac, Biphenyl and Multifunctional Epoxies)

Body Thickness	Level	1%RH HSD/XSD Series				2%RH MSD/SD/SDA Series		5%RH N_2 Cabinet	
		25C°	40C°	50C°	60C°	25C°	40C°	40C°	90C°
Thickness ≤1.4mm	2a	5 days	2 days	1 days	12 hours	7 days	3 days	5 days	23 hours
	3	8 days	3 days	1.5 days	18 hours	12 days	5 days	8 days	33 hours
	4	9 days	4 days	2 days	24 hours	13 days	6 days	9 days	37 hours
	5	10 days	5 days	2.5 days	30 hours	14 days	7 days	10 days	41 hours
	5a	10 days	6 days	3 days	36 hours	15 days	9 days	10 days	54 hours
Thickness >1.4mm ≤2.0mm	2a	22 days	10 days	5 days	2 days	30 days	15 days	22 days	3 days
	3	23 days	11 days	5.5 days	2 days	35 days	16 days	23 days	4 days
	4	28 days	14 days	7 days	3 days	40 days	17 days	28 days	5 days
	5	35 days	16 days	8 days	4 days	50 days	24 days	35 days	6 days
	5a	56 days	18 days	9 days	4 days	67 days	27 days	56 days	8 days
Thickness >2.0mm ≤4.5mm	2a	67 days	20 days	10 days	5 days	80 days	30 days	67 days	10 days
	3	67 days	22 days	11 days	5 days	80 days	31 days	67 days	10 days
	4	67 days	22 days	11 days	5 days	80 days	31 days	67 days	10 days
	5	67 days	22 days	11 days	5 days	80 days	31 days	67 days	10 days
	5a	67 days	22 days	11 days	5 days	80 days	31 days	67 days	10 days

*** according 100TQFP-Test (Semiconductor Device(100TQFP)Dehumidifying Property.)**

*** * according to IPC J-STD-033B**

The interim values were calculated in proportion to the values indicated in the IPC-STANDARD. Additionally to this a halving of the drying times with a temperature rise in each case of 10°K was assumed. This factor can be determined from the measured data of the 100TQFP-Tests at 25°C and 60°C.

The interim value has been calculated due to the given data in the IPC-STANDARD.
For this has been assumed that the drying time is 50 % shorter at a temperature of 10 °K. This factor can be found out by the measured data of the 100 TQFP-test at 25 °C and 60 °C.

Semiconductor Device (100TQFP) Dehumidifying Property

1. Purpose:	The graphic shows semiconductor device dehumidifying property.
2. Device:	100TQFP (IPC-Level 3).
3. The experiment is divided by two steps:	Humidifying and Dehumidifying Before reading the graphic, you need to ascertain the Adsorption Ratio!

First step: humidifying
When we do any experiment, we must define a point as 0.0Wt% for the experiment.

Test Condition:

A. Baking process performed on the device of 100TQFP for 120°C for 60 hours, defined as 0.0Wt%.

B. Humidifying process at 33°C and 87%RH for 168 hours. The volume weight is weighed at a daily basis, to check the adsorption ratio of wt%. The humidifying experiment is a preceding term. The purpose is to set a condition to completely saturate the device with humidity.

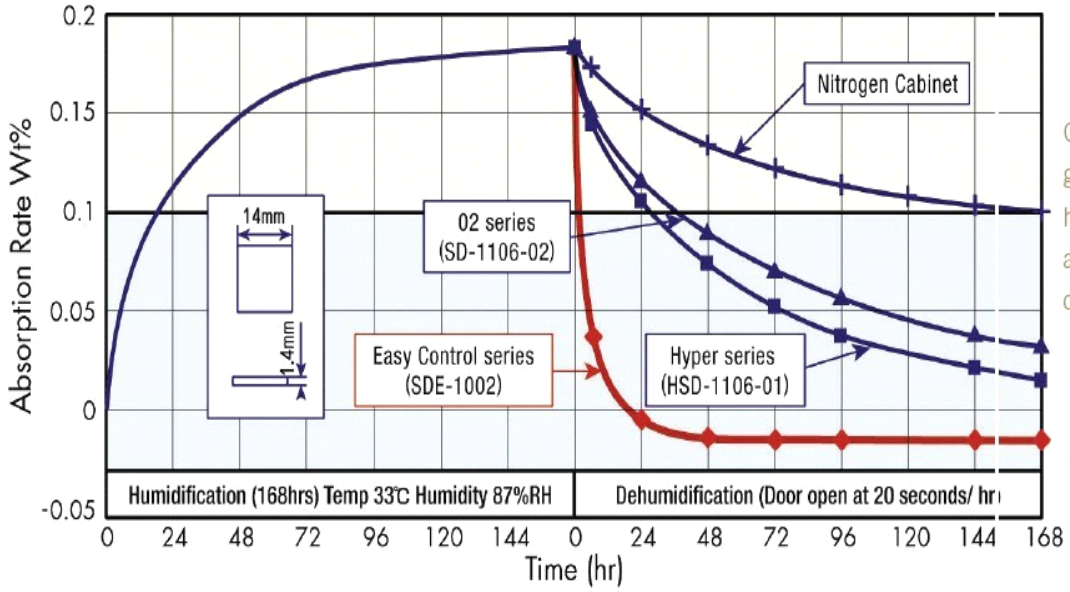
Second step: dehumidifying
The saturated device with humidity is put into a cabinet to check the absorption performance.

Test Condition:

C. Opening of the cabinet door: 20 seconds every hour per day for continuous 7 days. The volume weight will be weighed every day to log the absorption ratio of wt%.

D. Cabinets used for test procedure and Setting points:

Totech, HSD-1106-01: 1%RH, 25°C
Totech, SD-1106-02: 2%RH, 25°C
Totech, XSD-1404: 1%RH, 60°C
Totech, SDA-201: N^2, 25°C



Conclusion: Different from the general baking system, due to no heating stress on the devices at all, no defect on products can be observed in use of cabinets.

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