Reference table of drying components



Package body	Level	Bake @ 60°C + 5/-0 °C		Bake @ 40°C + 5/-0 °C		Bake @ 25°C + 5/-0 °C		Bake @ 40	°C + 5/-0 °C
rackage body	Level	≤ 1% RH		≤ 1% RH		≤ 1% RH		≤ 5% RH	
		Exceeding	Exceeding	Exceeding	Exceeding	Exceeding	Exceeding	Exceeding	Exceeding
		Floor life by	Floor life by	Floor life by	Floor life by	Floor life by	Floor life by	Floor life by	Floor life by
		> 72 h	< 72 h	> 72 h	< 72 h	> 72 h	< 72 h	> 72 h	< 72 h
	2	Not	Not	Not	Not	Not	Not	Not	Not
		required	required	required	required	required	required	required	required
	2-	(see Note 4)	(see Note 4)	(see Note 4)	(see Note 4)	(see Note 4)	(see Note 4)	(see Note 4)	(see Note 4)
	2a	1 hour	1 hour	3 hours	2 hours	9 hours	6 hours	12 hours	8 hours
	3	1 hour	1 hour	6 hours	2 hours	18 hours	6 hours	22 hours	8 hours
Thickness	4	1 hour	1 hour	6 hours	2 hours	18 hours	6 hours	23 hours	8 hours
< 0.5 mm	5	1 hour	1 hour	6 hours	2 hours	18 hours	6 hours	23 hours	8 hours
(see Note 5)	5a	2 hours	1 hour	7 hours	2 hours	21 hours	6 hours	26 hours	8 hours
·	2	Not	Not	Not	Not	Not	Not	Not	Not
		required	required	required	required	required	required	required	required
		(see Note 4)	(see Note 4)	(see Note 4)	(see Note 4)	(see Note 4)	(see Note 4)	(see Note 4)	(see Note 4)
	2a	6 hours	5 hours	1 day	18 hours	3 days	2 days	4 days	3 days
	3	6 hours	5 hours	1 day	18 hours	3 days	2 days	4 days	3 days
Thickness	4	6 hours	5 hours	1 day	18 hours	3 days	2 days	4 days	3 days
> 0.5 mm ≤ 1.4 mm	5	6 hours	5 hours	1 day	18 hours	3 days	2 days	4 days	3 days
(see Note 5)	5a	6 hours	5 hours	1 day	18 hours	3 days	2 days	4 days	3 days
(555 : 1515 5)	2	Not	Not	Not	Not	Not	Not	Not	Not
		required	required	required	required	required	required	required	required
		(see Note 4)	(see Note 4)	(see Note 4)	(see Note 4)	(see Note 4)	(see Note 4)	(see Note 4)	(see Note 4)
	2a	12 hours	11 hours	2 days	2 days	6 days	5 days	8 days	7 days
	3	12 hours	11 hours	2 days	2 days	6 days	5 days	8 days	7 days
Thickness	4	15 hours	11 hours	3 days	2 days	9 days	6 days	10 days	7 days
> 0.8 mm ≤ 1.4 mm	5	17 hours	11 hours	3 days	2 days	9 days	6 days	11 days	7 days
(see Note 5)	5a	18 hours	11 hours	3 days	2 days	9 days	6 days	12 days	7 days
(See Note 3)	2	38 hours	30 hours	6 days	5 days	18 days	15 days	25 days	20 days
	2a	2 days	33 hours	7 days	6 days	21 days	18 days	29 days	22 days
	3	2 days	33 hours	9 days	6 days	27 days	20 days	37 days	23 days
Thickness		_		,	,	,		,	,
> 1.4 mm	4	3 days	2 days	12 days	7 days	36 days	22 days	47 days	28 days
≤ 2.0 mm	5	4 days	3 days	14 days	9 days	42 days	27 days	57 days	35 days
(see Note 5)	5a	5 days	4 days	20 days	14 days	60 days	42 days	79 days	56 days
	2	5 days	4 days	20 days	17 days	60 days	50 days	79 days	67 days
	2a	5 days	4 days	20 days	17 days	60 days	50 days	79 days	67 days
	3	5 days	4 days	20 days	17 days	60 days	50 days	79 days	67 days
Thickness	4	5 days	4 days	20 days	17 days	60 days	50 days	79 days	67 days
> 2.0 mm	5	5 days	4 days	20 days	17 days	60 days	50 days	79 days	67 days
≤ 4.5 mm	5a	5 days	4 days	20 days	17 days	60 days	50 days	79 days	67 days
(see Note 5) Exception for BGA	2-5a	64 days	As above	Not	As above	Not	As above	Not	As above
package > 17 mm x	2 30	(See Note 2	per	applicable	per	applicable	per	applicable	per
7 mm or any stacked		and Note 5)	package		package		package		package
die package		<u> </u>	thickness		thickness		thickness		thickness
. 5			and		and		and		and
			moisture		moisture		moisture		moisture
			level		level		level		level

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Reference table of drying components



Note 1: Table 4-1 is based on worst-case moulded lead frame SMD packages. Users may reduce the actual bake time if technically justified (e.g., absorption/desorption data, etc.). In most cases it is applicable to other non-hermetic surface mount SMD packages. If parts have been exposed to > 60% RH it may be necessary to increase the bake time by tracking desorption data to ensure parts are "dry".

Note 2: For BGA packages > 17 mm x 17 mm, that do not have internal planes that block the moisture diffusions path in the substrate, may use bake times based on the thickness & moisture level portion of the table.

Note 3: If baking of packages > 4.5 mm thick is required see appendix B.

Note 4: Baking not required if Floor Life exposure is limited to < 30°C & < 60% RH for thin (< 14 mm) MSL2 devices. This is due to the moisture diffusion behaviour of the thin devices, which were fully saturated after the absorption at MSL2 (168 hours @ 85°C/ 60 % RH

Note 5: The bake times specified are conservative for packages without blocking planes or stacked die. For a stacked die or BGA package with internal planes that impede moisture diffusion the actual bake time may be long.