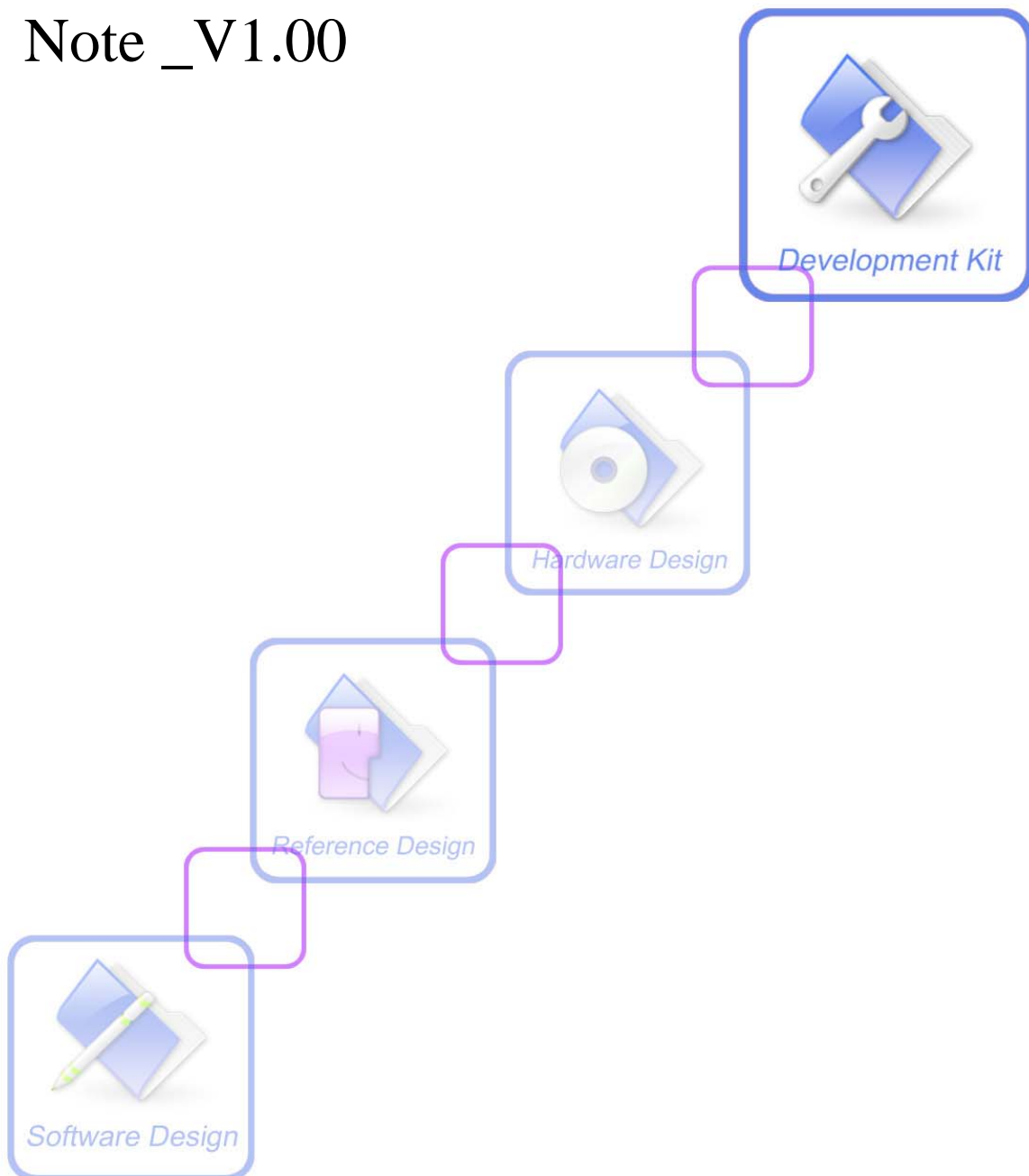




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# SIM28&SIM68V\_SMT\_Application Note \_V1.00



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## Version history

Date	Version	Description of change	Author
2013-7-8	1.00	Origin	QiuJu.Huang

## SCOPE

This document describes how to solder the SIM28&SIM68V module for two reflow soldering processes. Two reflow means solder the SIM28&SIM68V module side first then solder the other side.

This document is subject to change without notice at any time.

## 1. SIM28&SIM68V RECOMMENDED PCB DECAL

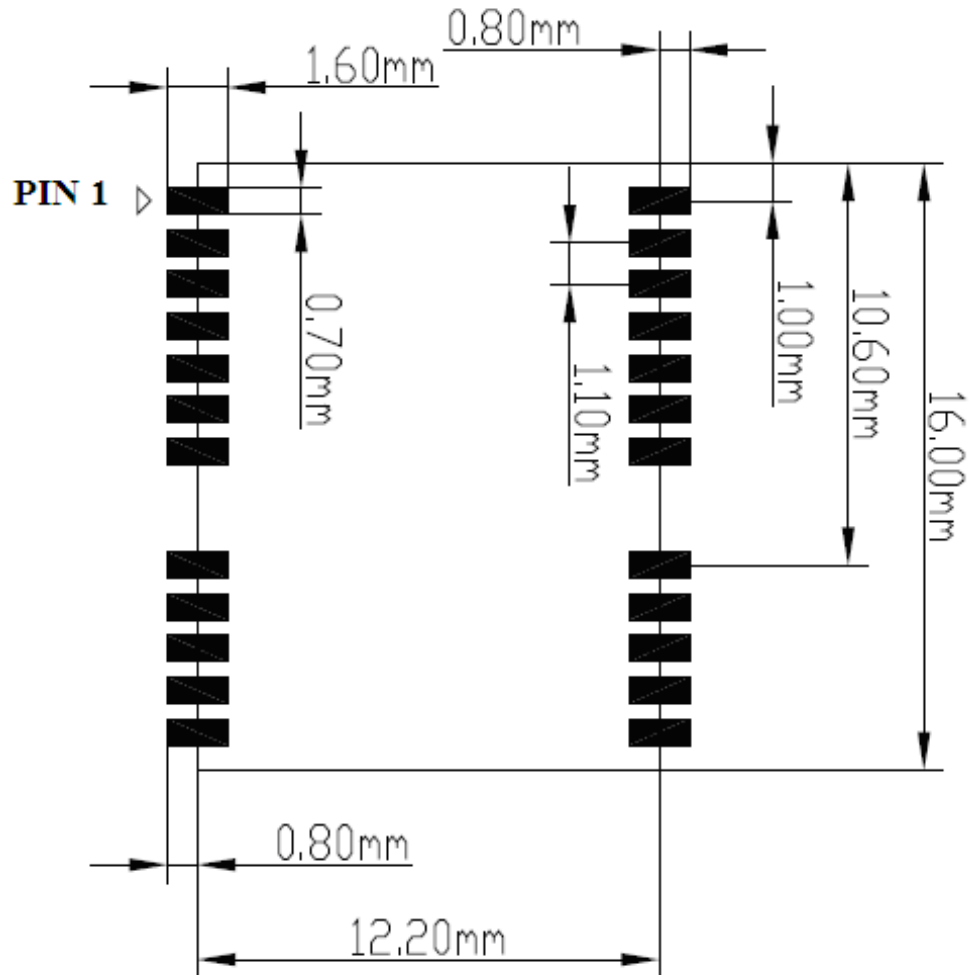


Figure 1: Recommended PCB decal (top view) (Unit: mm)

## **2 .REQUIRMENTS ON SMT DEVICE**

### **2.1 Mounter Requirements**

Component feeder:

Supported Auto-tray feeder.

Component alignment:

Supported Laser, vision, Laser and vision mix-up alignment

Diameter of nozzle:

5.0mm--10.0mm

### **2.2 Soldering Equipment Requirements**

Supported Hot-air soldering

### 3 SMT MANUFACTURINGH PROCESS

#### 3.1 The Moisture Sensitivity Level

The moisture sensitivity level (MSL) of SIM28&SIM68V module is 3 according to the IPC-JEDEC standard.

Please pay attention to the floor life in Table 1 before the soldering process starts.

**Table 1 Moisture Classification Level and Floor Life**

Level	Floor Life (out of bag) at factory ambient $\leq 30^{\circ}\text{C}/60\%\text{RH}$ or as stated
1	Unlimited at $\leq 30^{\circ}\text{C}/85\% \text{RH}$
2	1 year
2a	4 weeks
3	168 hours
4	72 hours
5	48 hours
5a	24 hours
6	Mandatory bake before use. After bake, it must be reflowed within the time limit specified on the label.

**NOTES:**

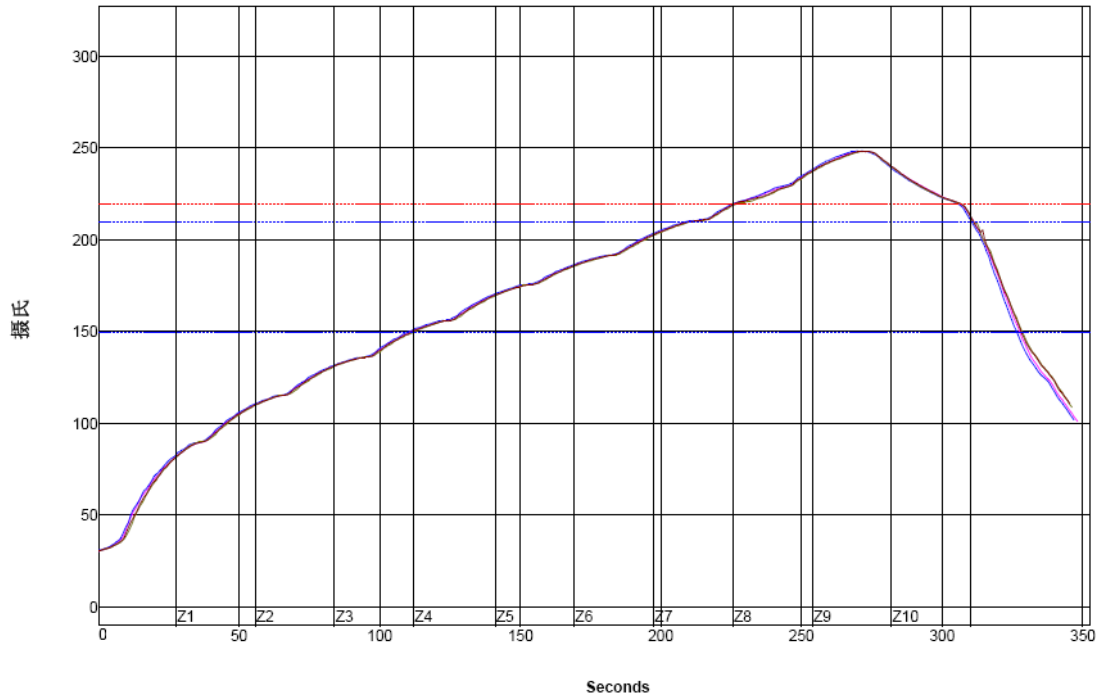
*If the vacuum package is not open for 3 months or longer than the packing date, baking is also recommended before re-flow soldering.*

#### 3.2 Solder Paste Printing

The squeegee should push the paste across the surface of the stencil that allows the paste to fill the stencil openings and down to the PCB. The force on the squeegee should be adjusted so as to produce a clean stencil surface on a single pass. **Except to following the recommended PCB decal, the customer should also pay attention to the recommended thickness of stencil foil for SIM28&SIM68V which is 0.12mm.**

### 3.3 The recommended reflow profile

Setpoints (摄氏)										
Zone	1	2	3	4	5	6	7	8	9	10
Top	100	120	140	160	180	195	215	235	260	220
Bottom	100	120	140	160	180	195	215	235	255	220
Conveyor Speed ( cm/min ): 80.00										



Seconds										
PWI= 93%	Max Rising Slope	Max Falling Slope	Soak Time 150-210C	Reflow Time /220C	Peak Temp					
2	2.92	92%	-3.94	-29%	98.83	15%	79.30	57%	248.38	68%
3	2.86	86%	-4.13	-42%	98.48	14%	79.48	58%	248.62	72%
4	2.89	89%	-3.91	-27%	98.39	14%	79.27	57%	248.34	67%
6	2.93	93%	-4.07	-38%	98.98	16%	80.04	60%	248.34	67%
Delta	0.07		0.22		0.59		0.77		0.28	



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