RECOMMENDABLE CONDITION OF SOLDERING

SURFACE MOUNTED DEVICE

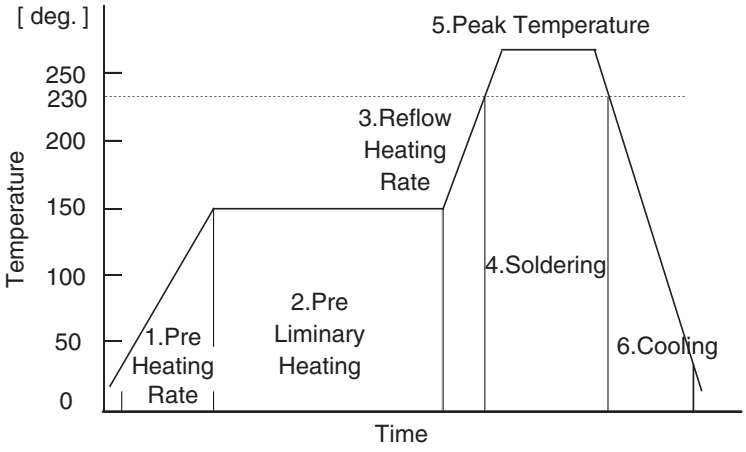
CONDITION OF SOLDERING
FOR SURFACE MOUNTED DEVICE
(DISCRETE TRANSISTOR)
LEAD FREE (Sn-3Ag-0.5Cu) VERSION

CONTENTS

RECOMMENDABLE CONDITION OF REFLOW , FLOW AND HAND SOLDERING

■RECOMMENDABLE CONDITION OF REFLOW SOLDERING

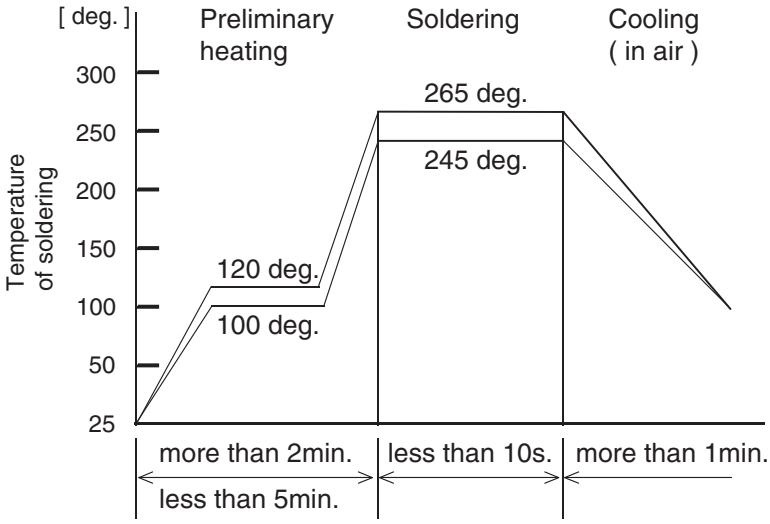
1.Pre Heating Rate	: 1 to 5 deg./s
2.Pre Liminary Heating	: 130 to 170 deg. , 50 to 120s
3.Reflow Heating Rate	: 1 to 5 deg./s
4.Soldering	: 230 deg. , 20 to 30s
5.Peak Temperature	: 245 to 260 deg. , 10s Max.
6.Cooling	: 60s Min.
7.Number of Reflow Soldering	: 2 times Max.



* Recommended peak temperature is over 245 degree. If peak temperature is below 245 degree., you may adjust the following parameters ; Time length of peak temperature (longer), Time length of soldering (longer), Thickness of solder paste (thicker).

■RECOMMENDABLE CONDITION OF FLOW SOLDERING

Soldering Temperature	: 245 to 265 deg.
Soldering Time	: 10s Max.
Number of Flow Soldering	: 1 times Max.



■RECOMMENDABLE CONDITION OF HAND SOLDERING

Temperature	: Refer to Right Table
Time	: 3s Max.
Number of Hand Soldering	: One time

Temperature differ from Package

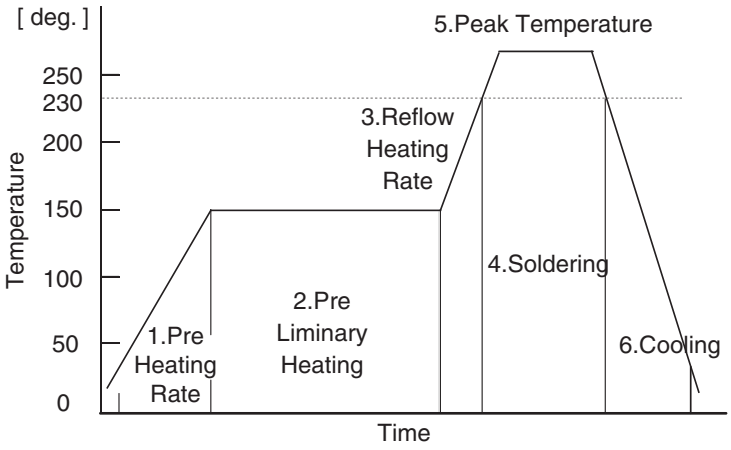
PKG less than 400 deg.
SMT3 (expect for 2SB1051K), SMT5 , SMT6 , UMT3 , UMT3F , UMT5 , UMT6 , EMT3 , EMT3F , EMT5 , EMT6 , SST3 , VMT3 , VMT6 , WEMT6

PKG less than 350 deg.
MPT3 , MPT6 , CPT3 , TCPT3 , LPTS , LPTL , PSD , SOP8 , PSOP8 , TSMT3 , TSMT5 , TSMT6 , TSMT8 , TSST8 , SMT3 (2SB1051K) , TUMT3 , TUMT5 , TUMT6 , HSMT8

CONDITION OF HEAT - RESISTANT

■CONDITION OF HEAT-RESISTANT

1.Pre Heating Rate	: 1 to 5 deg./s
2.Pre Liminary Heating	: 150 to 180 deg. , 60 to 120s
3.Reflow Heating Rate	: 1 to 5 deg./s
4.Soldering	: 230 deg. , 20 to 40s
5.Peak Temperature	: 260 deg. Max. , 10s Max.
6.Cooling	: 60s Min.
7.Number of Reflow Soldering	: 2 times Max.



CONDITION OF WASHING

■RECOMMENDABLE CONDITION OF WASHING

1.WASHING LIQUID

washing liquid		maker
water		-
ethanol		-
methanol		-
pine alpha	ST-100S	ARAKAWA CHEMICAL
clean through	750H	KAO
technocare	FRW-1	MOMENTIVE performance materials
mighty solve	AH-V	ASAHI GLASS

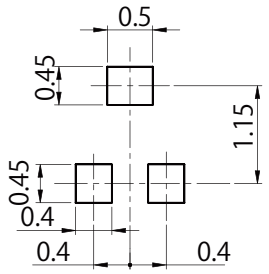
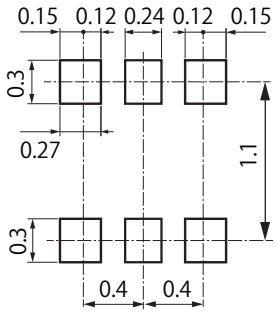
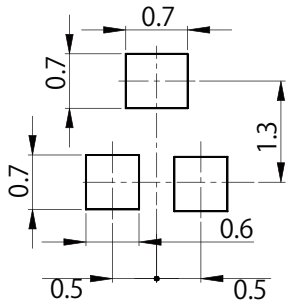
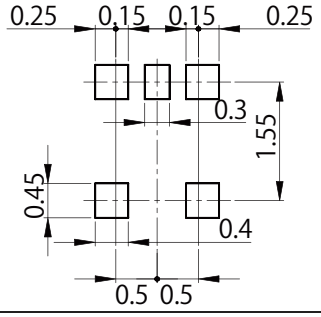
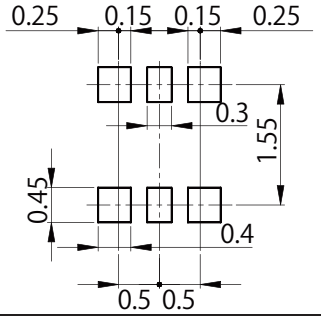
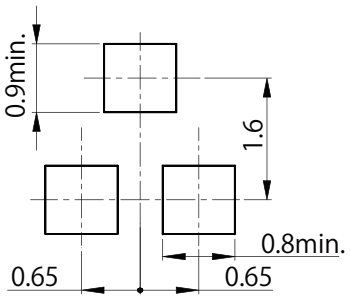
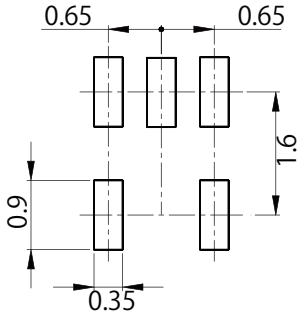
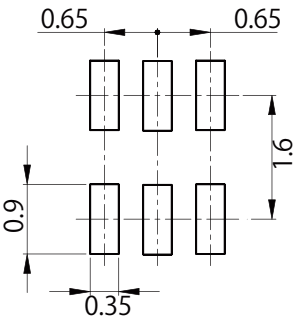
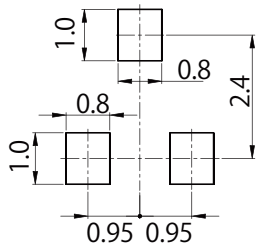
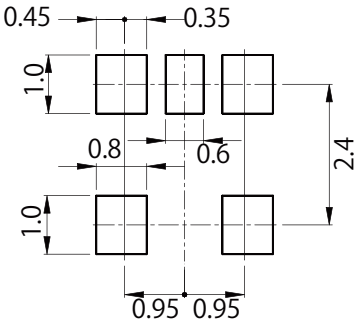
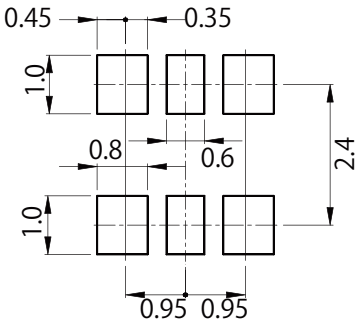
2.CONDITION OF WASHING

washing bath		time	temperature	remarks
first bath	ultrasonic bath	less than 60 s	room temperature	25 to 28kHz , 15W / L
second bath	immersion bath	less than 60 s	room temperature	
third bath	vaper bath *	less than 60 s	less than 44.7 deg.	the boiling point varies from washing liquid

* In vaper bath, you can not use ethanol, methanol, and water due to their high boiling points.

REFERENCE COPPER PLATE AREA DIMENSION ON PRINTED CIRCUIT BOARD

(UNIT) : mm

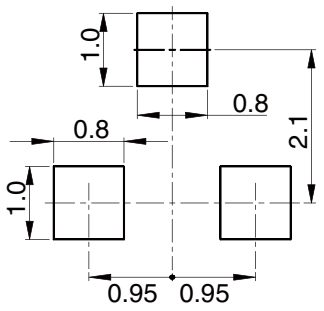
PACKAGE(MOLD SIZE)		
VMT3 1.2 × 0.8	VMT6 1.2 × 0.92	
		
EMT3 ／EMT3F 1.6 × 0.8	EMT5 1.6 × 1.2	EMT6 1.6 × 1.2
		
UMT3 ／UMT3F 2.0 × 1.25	UMT5 2.0 × 1.25	UMT6 2.0 × 1.25
		
SMT3 2.9 × 1.6	SMT5 2.9 × 1.6	SMT6 2.9 × 1.6
		

REFERENCE COPPER PLATE AREA DIMENSION ON PRINTED CIRCUIT BOARD

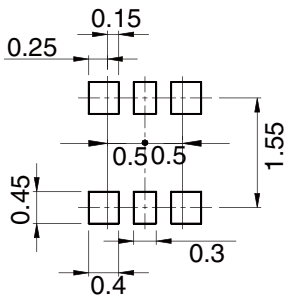
(UNIT) : mm

PACKAGE(MOLD SIZE)

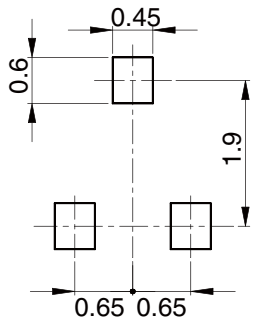
SST3 2.9 × 1.3



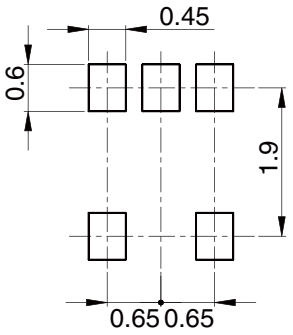
WEMT6 1.6 × 1.3



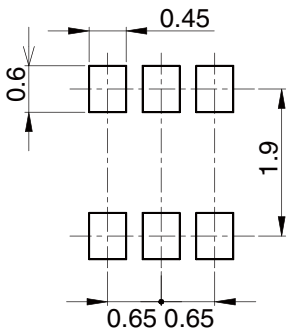
TUMT3 2.0 × 1.7



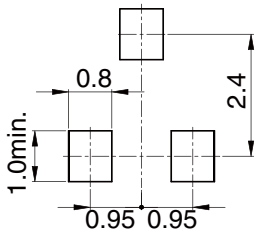
TUMT5 2.0 × 1.7



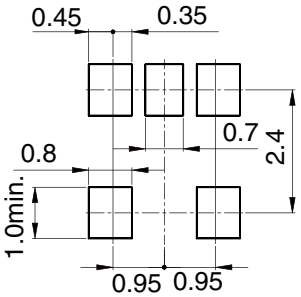
TUMT6 2.0 × 1.7



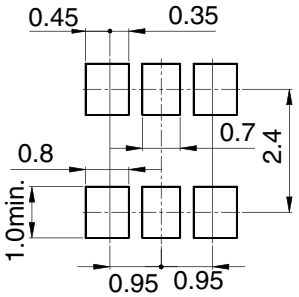
TSMT3 2.9 × 1.6



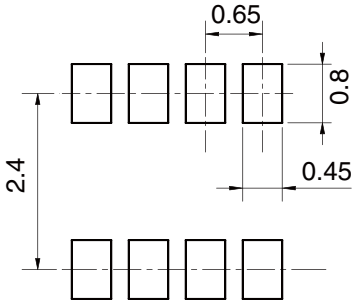
TSMT5 2.9 × 1.6



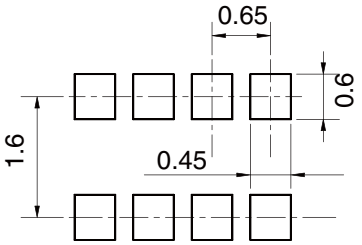
TSMT6 2.9 × 1.6



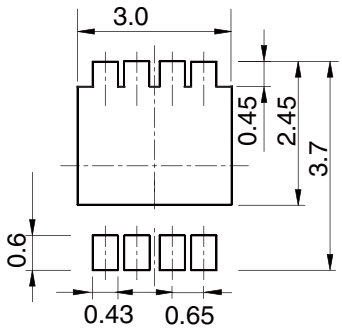
TSMT8 3.0 × 2.4



TSST8 3.0 × 1.9



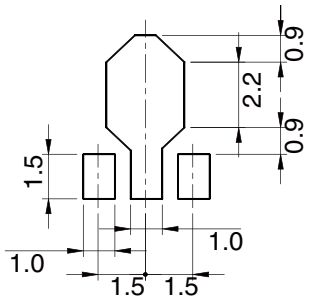
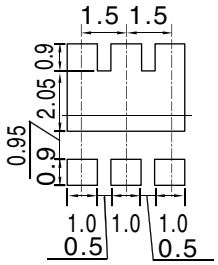
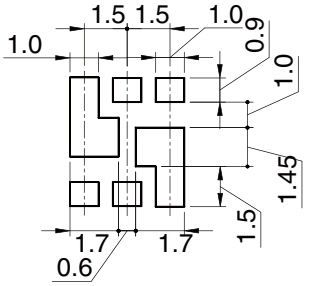
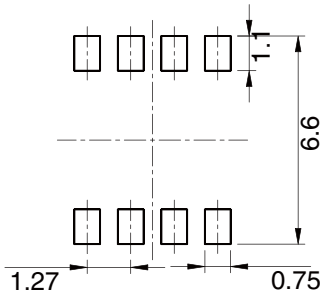
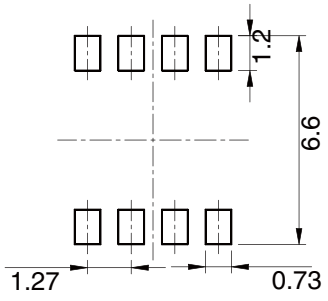
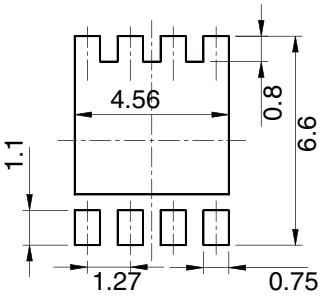
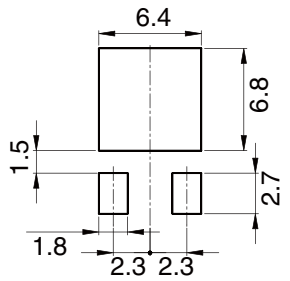
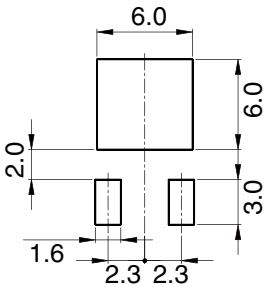
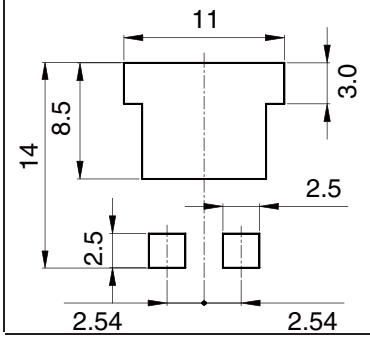
HSMT8 3.15 × 3.3



REFERENCE COPPER PLATE AREA DIMENSION ON PRINTED CIRCUIT BOARD

(UNIT) : mm

PACKAGE(MOLD SIZE)

MPT3 4.5 × 2.5	MPT6 : Single 4.5 × 3.2	MPT6 : Dual 4.5 × 3.2
		
SOP8 5.0 × 3.9	**PSOP8S 5.0 × 5.0**	**PSOP8 5.0 × 5.0**
		
TCPT3 6.6 × 8.3	**CPT3 6.5 × 5.5**	
		
PSD 10.1 × 8.8		
		

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ROHM SEMICONDUCTOR

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