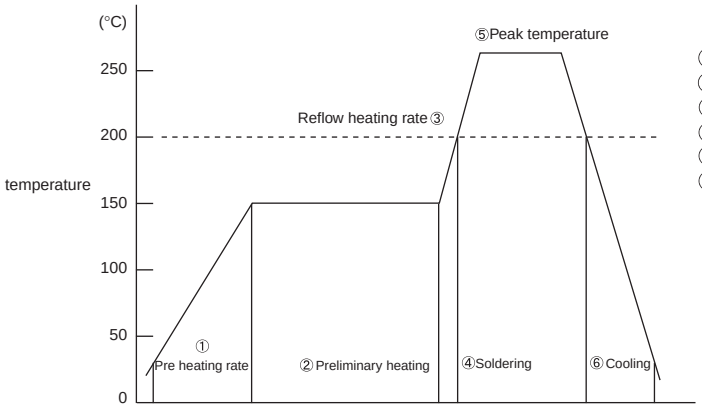
Condition of soldering for Surface mounted mold Diodes Lead free paste (Sn-3Ag-0.5Cu) version

CONTENTS

● **Recommended condition of reflow soldering**

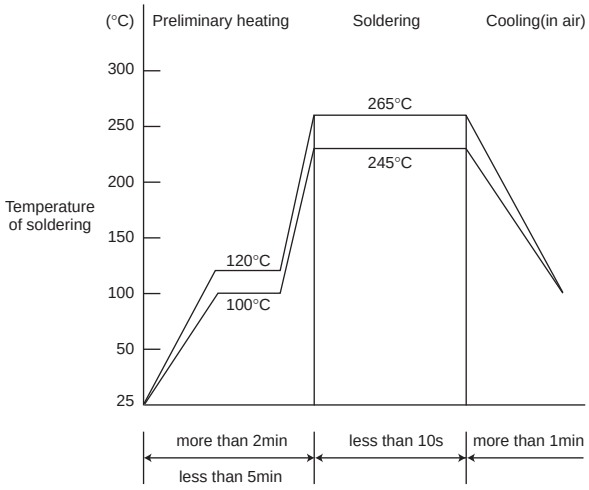


① 1 to 5°C / s
② 130 to 170°C, 50 to 120s
③ 1 to 5°C / s
④ 230°C, 20 to 30s
⑤ 245 to 260°C, 10s max.
⑥ 60s min.

∗Time 2times max.

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

● **Recommended condition of flow soldering**

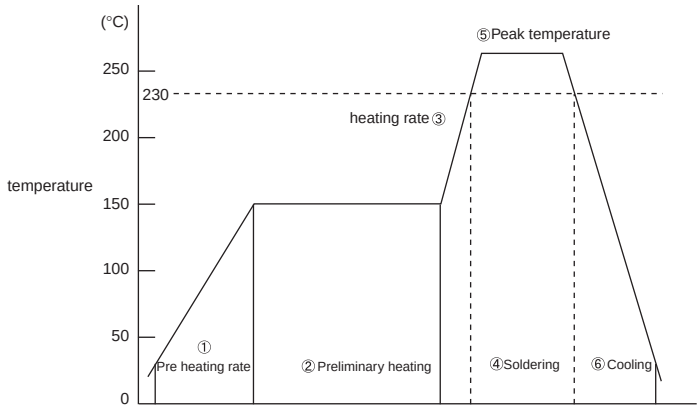


● **Condition of hand soldering**

Temperature	refer to right table
Time	less than 3s
Times	one time

Temperature differ from PKG
PKG less than 400°C SMD3, SMD4, SMD5, SMD6, SSD3, UMD2(expect for 1SS355, 1SS380, 1SS376, UDZ S series) UMD3, UMD4, UMD5, UMD6, EMD2, EMD3, EMD4, EMD5, EMD6, VMN2, VMD2, VMD3, TUMD2, TSMD5, TSMD6, MPD, CPD, LLDS, LLDL, GMD2, TUMD5
PKG less than 350°C UMD2(1SS355, 1SS380, 1SS376, UDZ S series) PMDU, PMDS, PMDT

● **Condition of heat-resistant**



① 1 to 5°C / s
② 150 to 180°C, 60 to 120s
③ 1 to 5°C / s
④ 230°C, 20 to 40s
⑤ 260°C max, 10s max.
⑥ 60s min.

∗ Time 2Times max.

● **Recommended condition of washing**

1. Washing liquid

washing liquid	manufacturers
water	–
ethanol	–
methanol	–
pine alpha ST-100S	ARAKAWA CHEMICAL
clean through 750H	KAO
technocare FRW-1	TOSHIBA TECHNOCARE
mighty solve AH-V	ASAHI GLASS

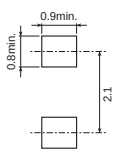
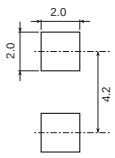
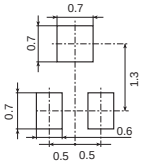
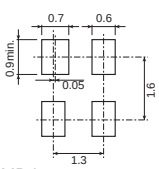
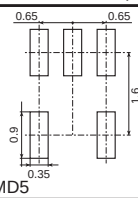
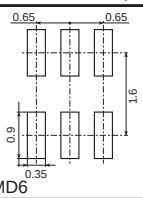
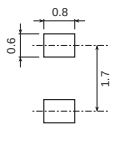
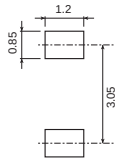
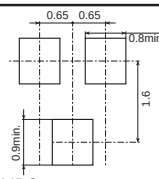
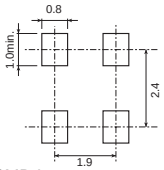
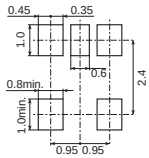
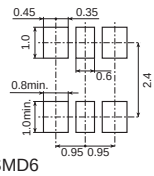
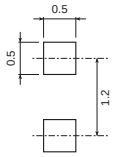
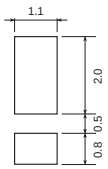
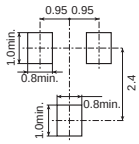
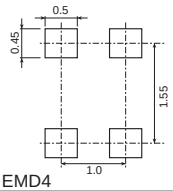
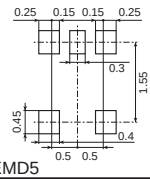
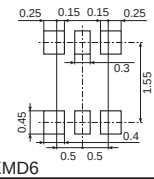
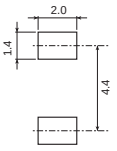
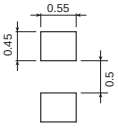
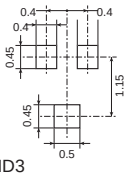
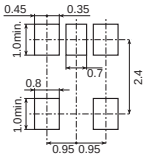
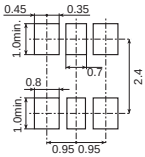
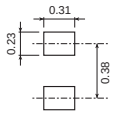
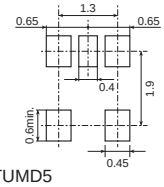
2. Condition of washing

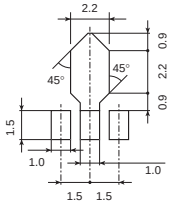
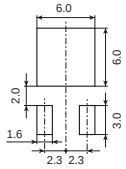
washing bath		time	temperature	remarks
first bath	ultrasonic bath	less than 60s	room temperature	25 to 28kHz, 15W / L
second bath	immersion bath	less than 60s	room temperature	
third bath	vaper bath *	less than 60s	less than 44.7°C	boiling points differ to washing liquid

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

● **Reference to copper plate area dimension on printed circuit board**

unit:mm

Terminal 2pin		Terminal 3pin	Terminal 4pin	Terminal 5pin	Terminal 6pin
 UMD2	 PMDS	 EMD3	 UMD4	 UMD5	 UMD6
 EMD2	 PMDU	 UMD3	 SMD4	 SMD5	 SMD6
 VMD2	 TUMD2	 SMD3,SSD3	 EMD4	 EMD5	 EMD6
 PMDT	 VMN2	 VMD3		 TSMD5	 TSMD6
 GMD2				 TUMD5	

 MPD	 CPD3

*Copper plate area dimensions above are reference dimensions with being soldered with conditions bellow.

PCB	FR-4,t=1.6mm
Solder paste	M705-GRN360-K2V
Paste thickness	150mm
Reflow soldering	max. 250°C,10s

Solderbility will depend on the soldering conditions,solder paste, paste thickness,soldering pad size, mount layout and so on. So, it is difficult for ROHM to refer to customer's soldering conditions.

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ROHM CO., LTD. 21 Saiin Mizosaki-cho, Ukyo-ku, Kyoto 615-8585, Japan
TEL : +81-75-311-2121
FAX : +81-75-315-0172