

Soldering conditions for Resistors

Lead free paste (Sn-3Ag-0.5Cu) version

Resistors

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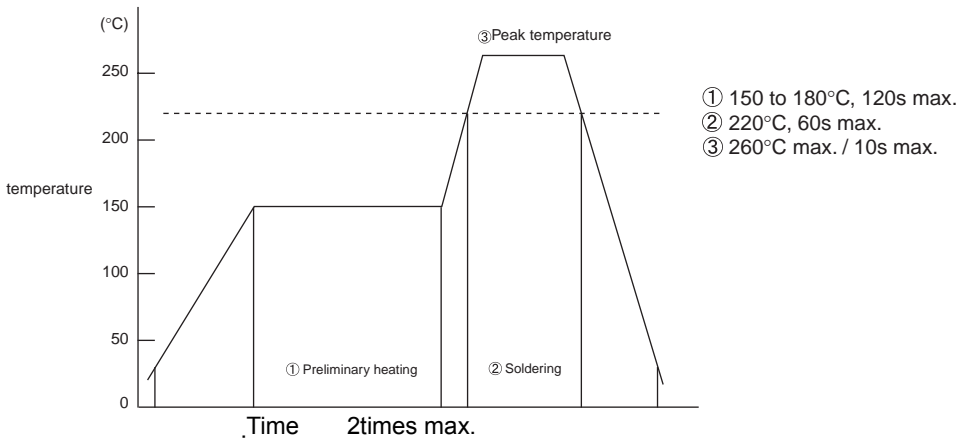
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● Recommended reflow soldering conditions

Corresponded products

MCR series / MNR series / PMR series / ESR series / UCR series
KTR series / RCN series / LTR series / TRR series /



● Recommended flow soldering conditions

Peak temperature 265°C, 10s max.

Corresponded products

MCR series (except for MCR006 series) / MNR series (except for MNR02 / 04 / 12 / 14 / 15 / 18 series) /
ESR series / KTR series / LTR series / TRR series / UCR series

● Recommended hand soldering conditions

Temperature less than 350°C

Time less than 3s

Times one time

Watt less than 20W

Corresponded products

MCR series (except for MCR006 series) / MNR series (except for MNR15 / 18 series) /
PMR series / ESR series / KTR series / RCN series / LTR series / TRR series / UCR series

● **Recommended washing conditions**

Corresponded products

MCR series / MNR series / PMR series / ESR series / UCR series

KTR series / RCN series / LTR series / TRR series /

1. Washing liquid

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

2. Condition of washing

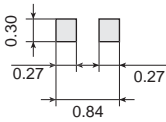
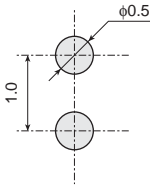
washing bath		time	temperature	remarks
first bath	ultrasonic bath	less than 2min	less than 60°C	25 to 28kHz, 15W / L
second bath	immersion bath	less than 2min	less than 40°C	
third bath	immersion bath	less than 2min	room temperature	

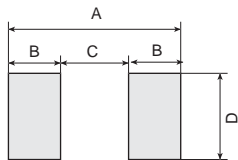
3. Condition of drying

	time	temperature	remarks
Drying machine	less than 5min	less than 100°C	

●Sample of land pattern

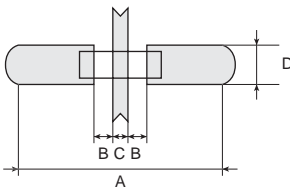
(Unit : mm)

<p>MCR006</p> 	<p>MCR01, TRR01</p> 
<p>PMR</p>	



Type	Dimension	A	B	C	D
PMR03		2.5	1.0	0.5	0.9
PMR25		4.0	1.5	1.0	2.8
PMR50		6.0	2.1	1.8	2.8
PMR100		7.6	2.3	3.0	3.8

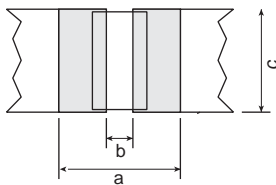
MCR / ESR / KTR



Type	Dimension	A	B	C	D reference
MCR03, TRR03		2.7	0.3	0.2	0.52 to 0.92
MCR10, ESR10, KTR10, TRR10		3.5	0.3 to 0.4	0.3	1.1 to 1.3
MCR18, ESR18, KTR18, TRR18		5.0	0.8	0.6	1.4 to 1.8
MCR25		5.0	0.8	0.6	2.1 to 3.0
MCR50		8.4	1.6	0.6	2.1 to 3.0
MCR100		10.5	1.6	0.6	2.56 to 4.8

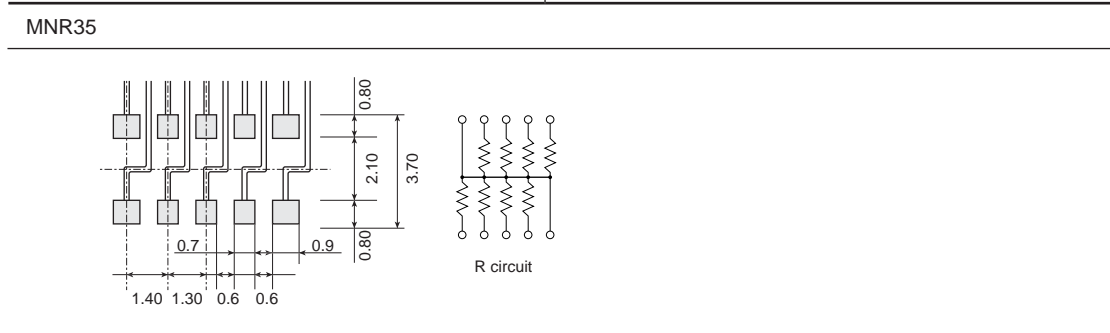
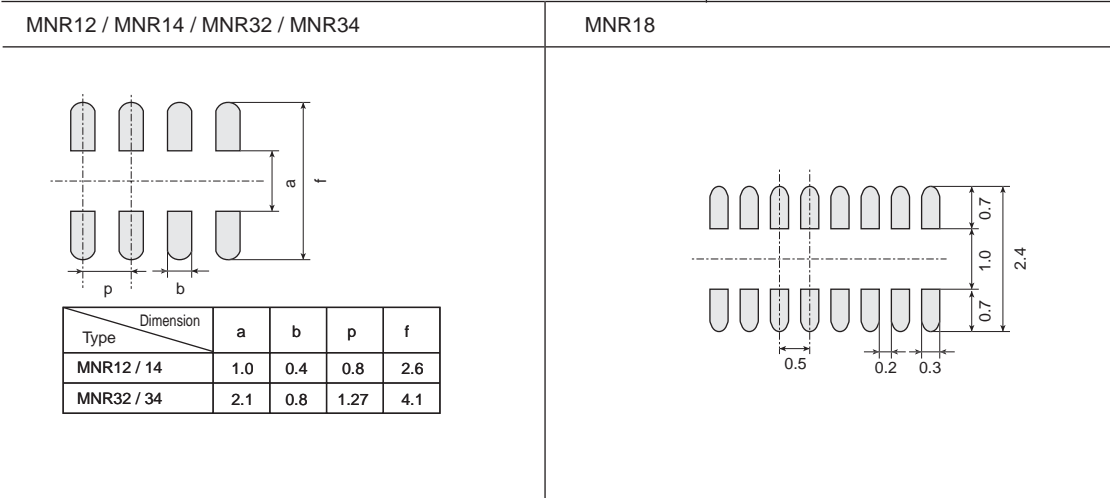
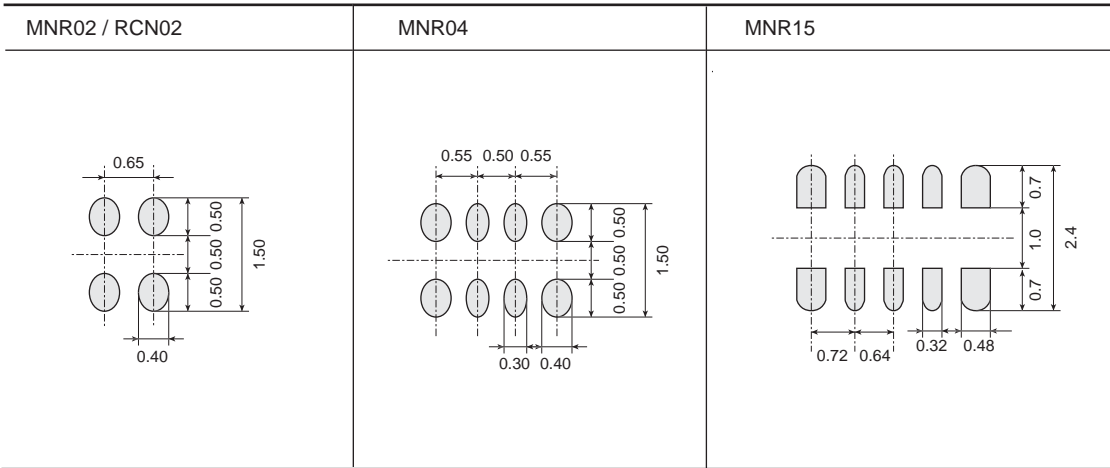
* C dimension is for the case of a cross-circuit between the two lands(feet) of a resistor.

LTR10 / LTR18 / LTR50



Type	Dimension	a	b	c
LTR10		2.70	0.40 to 0.60	1.90 to 2.10
LTR18		2.90	0.45 to 0.65	3.10 to 3.30
LTR50		3.35	0.60 to 0.80	4.90 to 5.10

(Unit : mm)



Notes

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