Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

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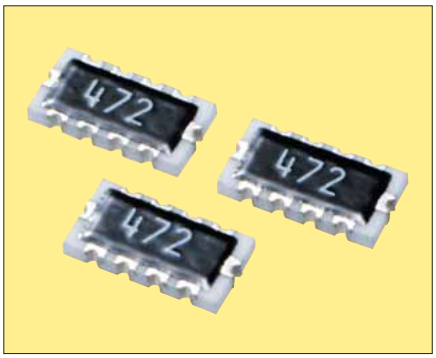
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



RoHS Conforming

Features

- Reduction in mounting costs & Process
- Save PCB space
- Eight resistors in one SMD package
- Reduction of inventory control costs

Applications

- Lap Top Computer
- Printer
- CD ROM
- Notebook Computer
- Hard Disk Drive
- Facsimile

How to Order

RNA4A ① 8E ② 103 ③ J ④ T ⑤

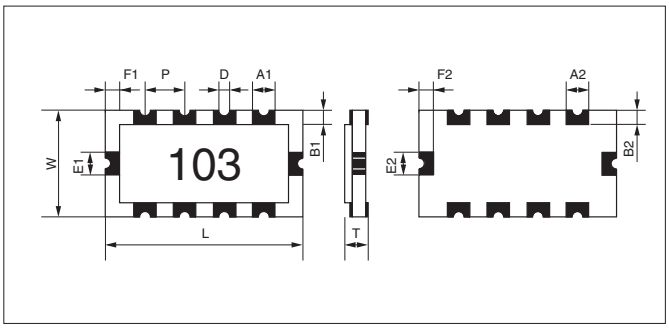
①Series
②Number of elements(8E : 8 elements)
③Resistance code (3 digits)
④Resistance tolerance(J : ±5%)
⑤Packaging

T	Plastic Taping, 4,000pcs/reel

∗ Taping Qty: 4000pcs/7 inch reel (4mm pitch)
Carrier Tape: plastic

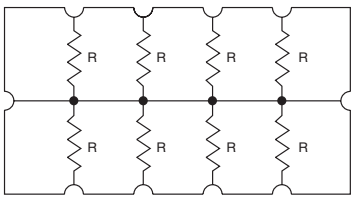
Shape and Dimensions

(Unit : mm)



Code	L	W	T	A1	B1
Dimensions	4.0±0.15	2.1±0.15	0.6±0.1	0.5±0.1	0.25±0.15
Code	**E1**	**F1**	**D**	**P**	**A2**
Dimensions	0.5±0.1	0.3±0.15	0.3typ	0.8typ	0.4±0.1
Code	**B2**	**E2**	**F2**		
Dimensions	0.4±0.15	0.5±0.1	0.35±0.15		

Circuit Diagram



∗ nominal resistance value is all the same.

Specifications

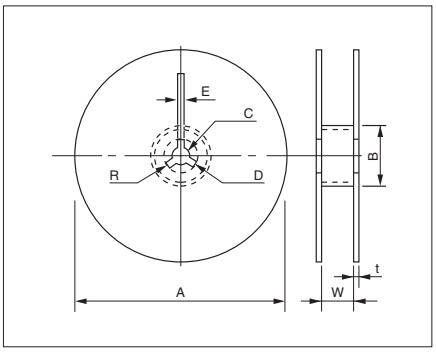
Item	Rating
Rated power(70°C)	1/16W(0.0625W)/Element
Max working voltage*	25V
Max over-load voltage	50V
Resistance value	100Ω to 220KΩ
Tolerance	J:±5%
Number of elements	8E:8 Elements
Working temperature	–55 to +125°C

∗ Rated Voltage: $\sqrt{\text{Rated power} \times \text{Resistance value}}$, whichever is less.
∗ Standard Resistance Value: E-6 Series
∗ If resistance value under 100Ω is needed, please contact sales.

Tape & Reel

• Reel

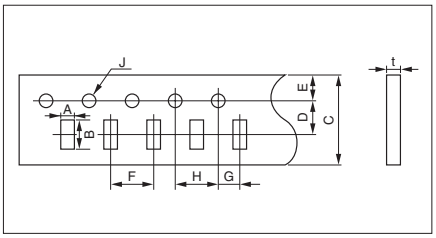
(Unit : mm)



Code	A	B	C	D	E	W	t	R
Width: 8mm	ϕ178±2.0	ϕ50min.	ϕ13.0±0.5	ϕ21.0±0.8	2.0±0.5	10.0±1.5	2.5MAX.	1.0
Width: 12mm						13.0±1.5		

• Carrier Tape(8mm)

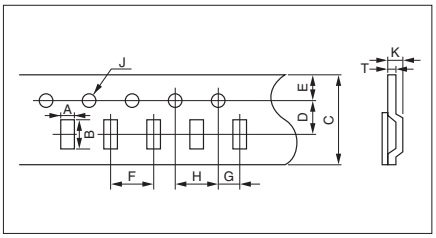
(Unit : mm)



Dimension Code / TYPE	A	B	C	D	E	F	G	H	J	t
0404	1.2±0.1	1.2±0.1	8.0±0.2	3.5±0.05	1.75±0.1	2.0±0.1	2.0±0.05	4.0±0.1	ϕ1.5 +0.1 -0	0.6max.
0804	1.25±0.2	2.25±0.2								1.1max.
0805	1.65±.0.2	2.4±.0.2				4.0±0.1				
1206	2.0±.0.2	3.6±.0.2								
1506	1.9±.0.2	4.1±.0.2								

• Carrier Tape(12mm)

(Unit : mm)



Dimension Code / TYPE	A	B	C	D	E	F	G	H	J	T	K
1020	2.9±0.2	5.3±0.2	12.0±0.3	5.5±0.05	1.75±0.1	4.0±0.1	2.0±0.1	4.0±0.1	ϕ1.5 +0.1 -0	0.6max.	1.4max.
1608	2.5±0.2	4.4±0.2									
2512	3.5±0.2	6.7±0.2									
2506	2.0±0.2	6.9±0.2									

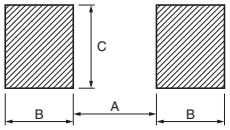
• Taping Quantity per reel

(Unit : pcs)

TYPE	Series	Paper(ϕ178 reel)
0404	CRC11A2E, ATC1A	10000(2mm pitch)
0804	CRB2A4E, CRC2A4E	10000(2mm pitch)
0805	LR21	5000(4mm pitch)
1206	LR32	5000(4mm pitch)
1506	CRC4A8E	5000(4mm pitch)
1020	LR50	4000(4mm pitch)
1608	RNA4A	4000(4mm pitch)
2512	LR63	4000(4mm pitch)
2506	CRB6A8E	4000(4mm pitch)

Recommended Land Patterns

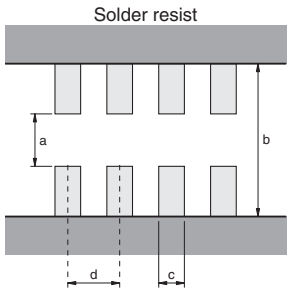
Chip Type



(Unit : mm)

EIA Size	A	B	C
0805	1.0	0.8	1.2
1206	2.2	0.9	1.5
1020	1.4	1.0	5.0
2512	5.0	1.0	3.0

Array Type

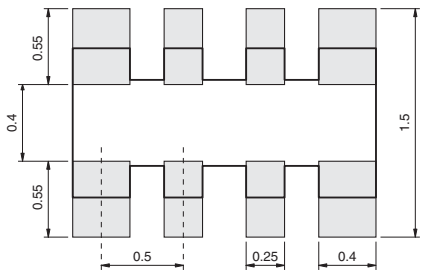


(Unit : mm)

Series	a	b	c	d
CRB2A4E	0.4	1.5	0.25	0.5
CRC11A2E	0.5	1.5	0.4	0.65
CRC4A8E	0.8	2.4	0.3	0.5
CRB6A8E	0.7	2.3	0.4	0.8
ATC1A	0.5	1.5	0.4	0.65

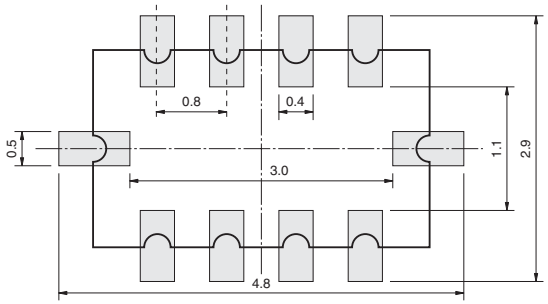
(Unit : mm)

CRC2A4E Series



(Unit : mm)

RNA4A8E Series



Circuit design

1) Once application and assembly environments have been checked, the resistors may be used in conformance with the catalog and the specifications.

2) Please consult the manufacturer in advance when the resistors is used in devices such as: devices which deal with human life, I.e. medical devices; devices which are highy public orientated; and devices which demand a high standerd of liability.

3) Please use the resistors in conformance with the operating temperature provided in both the catalog and the specifications.

4) Please keep voltage under the rated voltage which is applied to the resistor.

5) Do not use the resistor in an environment where it might easily exceed the respective provisions concerning shock and vibration specified in the catalog and specifications.

6) Please do not use the resistor in the following environments.
①State that water, oil, and solvent hang in resistor
②State where poisonous gas (sulfur and chlorine, etc.) exists
③State that direct sunshine, radiation, and ultraviolet, etc. are irradiated

7) There is a thing that resistance changes according to the stuff of the resin when the coating with the resin is given.
Please use resin coating after confirming the characteristic.

8) There is a thing that resistance changes according to flux and cleaner.
Please use flux and cleaner after confirming the characteristic.

9) Please consult about a lead free products.

Storage

1) Keep storage place temperature +5 to +35˚C, humidity 45 to 75% RH.

2) Please keep parts out of poisonous gas such as sulfur or chlorine in the air, and out of salty moisture. Or they may cause rust of terminal, and poor solderability. and, please consider the above-mentioned item after mounting your company.

3) Soldering iron

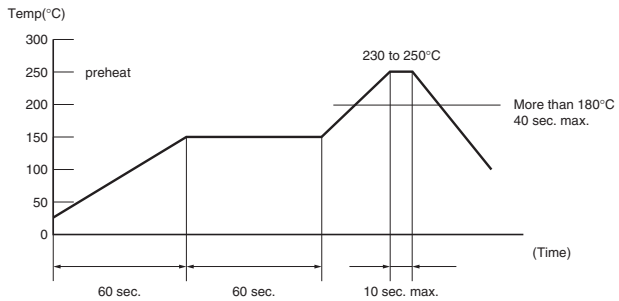
Temperature	soldering iron 300±5°C *
Time	3 sec. max. *

*Do not place the soldering iron on the chip. Soldering iron is 30W max.

Soldering method

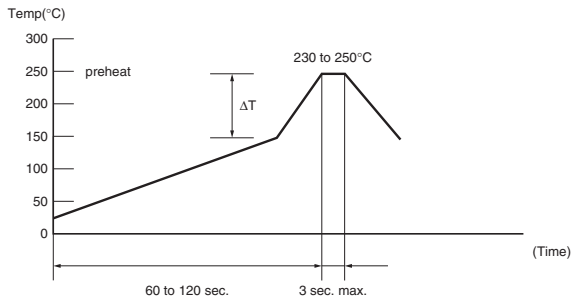
1) Recommendable temperature profile

reflow



2) Recommendable temperature profile

wave



(Caution) Cooling after soldering should be as slow as possible.
Ensure that the chip Resistor is preheated adequately.
Ensure that the temperature difference(ΔT) does not exceed 130˚C.

3) pb-free recommendable temperature profile

reflow