

Fixed Chip Resistor Array

ACN1E2G · ACN1E4G

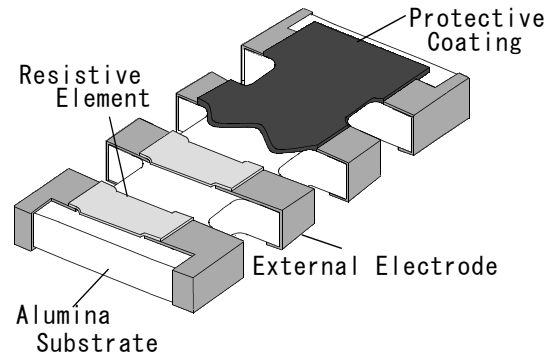
Features

- High density than chip resistors.
- High cost reduction efficiently by eliminating mounter operation.
- Since it is the array of 1005 types, it is small and lightweight.

How to order

Example : ACN1E4GTPOJ103LF							
ACN	Fixed Chip Resistor Array						
1E	Models <table border="1" style="margin-left: 20px;"> <tr> <td>1E</td> <td>1.0 mm</td> </tr> </table>	1E	1.0 mm				
1E	1.0 mm						
4	Resistors						
G	Circuit, Terminal and Corner Type						
TP	Packaging Methods <table border="1" style="margin-left: 20px;"> <tr> <td>TP</td> <td>Paper Tape</td> </tr> </table>	TP	Paper Tape				
TP	Paper Tape						
O	Packaging Quantity <table border="1" style="margin-left: 20px;"> <tr> <td>O</td> <td>10,000 PCS/reel</td> </tr> <tr> <td>2</td> <td>20,000 PCS/reel</td> </tr> <tr> <td>4</td> <td>40,000 PCS/reel</td> </tr> </table>	O	10,000 PCS/reel	2	20,000 PCS/reel	4	40,000 PCS/reel
O	10,000 PCS/reel						
2	20,000 PCS/reel						
4	40,000 PCS/reel						
J	Resistance Tolerance <table border="1" style="margin-left: 20px;"> <tr> <td>J</td> <td>±5.0%</td> </tr> <tr> <td>F</td> <td>±1.0%</td> </tr> </table>	J	±5.0%	F	±1.0%		
J	±5.0%						
F	±1.0%						
103	Resistance Value (3-digit and 4-digit number. The first two and three digits are significant figures of resistance Value, and the third and fourth one denotes number of zeros following. R shows a decimal point.) Example : 100 10 Ω 3R0 3 Ω 1003 100kΩ						
LF	Terminal surface material <table border="1" style="margin-left: 20px;"> <tr> <td>nothing</td> <td>Sn/Pb</td> </tr> <tr> <td>LF</td> <td>Sn</td> </tr> </table>	nothing	Sn/Pb	LF	Sn		
nothing	Sn/Pb						
LF	Sn						

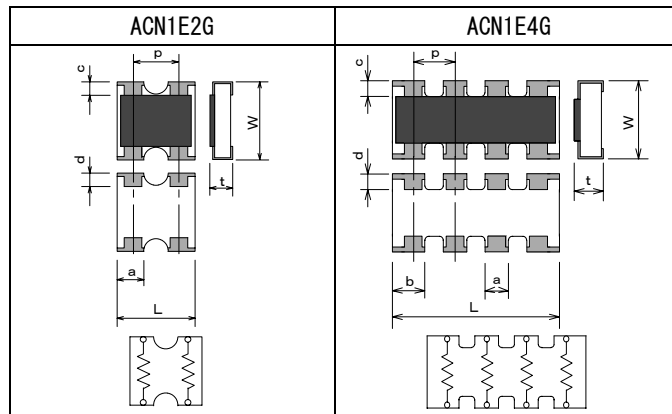
Construction



Ratings

Resistance Tolerance		J class (±5.0%)	F class (±1.0%)
Resistance Range	ACN1E2G	3Ω ~ 1MΩ (E-24)	—
	ACN1E4G	3Ω ~ 1MΩ (E-24)	10Ω ~ 1MΩ (E-96)
Power Rating	1/element	0.063 W	
	1/PKG	ACN1E2G	0.125 W
		ACN1E4G	0.25 W
Max. Working Voltage		25 V	
Max. Overload Voltage		50 V	
T. C. R.		10Ω ~ 1MΩ : ±200 PPM/°C 3Ω ~ 9.1Ω : ±400 PPM/°C	
Operating Temp. Range		-55 °C ~ +125 °C	

Dimensions · Circuit · Weight



[mm]

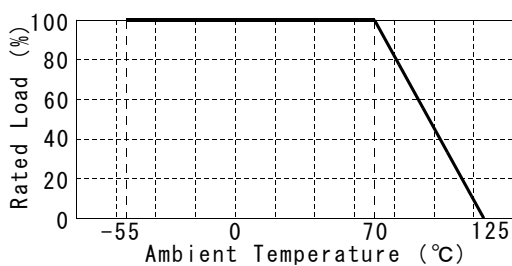
Type	L	W	a	b	c	d	p	t	Weight
ACN1E2G	1.00±0.10	1.00±0.10	0.33±0.10	0.15±0.10	0.15±0.10	0.25±0.10	0.67±0.10	0.35±0.10	1.1mg
ACN1E4G	2.00±0.10	1.00±0.10	0.30±0.15	0.40±0.15	0.15±0.10	0.25±0.10	0.50±0.05	0.35±0.10	2.4mg

Specifications are subject to change without notice. Please confirm us before purchase and /or use.

Performance

Requirements	Characteristics	Tset-Method (JIS C5201-1)
Temp. Coefficient (TCR)	J class $\leq \pm 200$ PPM/ $^{\circ}$ C (10 Ω ~ 1M Ω) ± 400 PPM/ $^{\circ}$ C (3 Ω ~ 9.1 Ω) F class $\leq \pm 200$ PPM/ $^{\circ}$ C (10 Ω ~ 1M Ω)	Operating temperature range = -55 $^{\circ}$ C ~ +125 $^{\circ}$ C
Short time overload (STOL)	There shall be no mechanical breakage. $\Delta R \leq \pm (2.0\% + 0.1\Omega)$	Apply voltage = the rated voltage $\times 2.5$ (Max. voltage = Max. overload voltage) Apply time = 5 seconds
Voltage endurance	There shall be no mechanical breakage.	Apply voltage = 100V AC Apply time = 1 minute
Bend strength	There shall be no mechanical breakage. $\Delta R \leq \pm (0.5\% + 0.05\Omega)$	Bend length = 3mm Bend time = 10 seconds
Resistance to soldering heat	There shall be no mechanical breakage. $\Delta R \leq \pm (1.0\% + 0.05\Omega)$	Solder temperature = 260 $^{\circ}$ C Dip time = 10 seconds
Solderability	More than 95% of the surface of termination shall be covered by new solder after the resistors are dipped in the solder.	Solder temperature = 235 $^{\circ}$ C Dip time = 2 seconds
Temperature cycle	There shall be no mechanical breakage. $\Delta R \leq \pm (1.0\% + 0.05\Omega)$	1 cycle = -55 $^{\circ}$ C/25 $^{\circ}$ C/125 $^{\circ}$ C/25 $^{\circ}$ C Test cycle = 5 cycles.
Humidity load test	There shall be no mechanical breakage. $\Delta R \leq \pm (3.0\% + 0.1\Omega)$	Temperature = 40 $^{\circ}$ C humidity = 90~95% RH Apply voltage = rated voltage (ON=1.5Hr/OFF=0.5Hr) Test time = 1,000 hours
Load life	There shall be no mechanical breakage. $\Delta R \leq \pm (3.0\% + 0.1\Omega)$	Temperature = 70 $^{\circ}$ C Apply voltage = rated voltage (ON=1.5Hr/OFF=0.5Hr) Test time = 1,000 hours

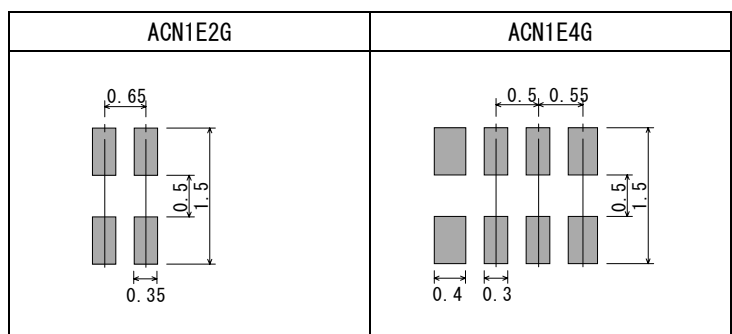
Power Derating Curve



For resistors operated in ambient temperature above 70 $^{\circ}$ C, power rating shall be derated in accordance with the above figure.

Recommended Land Pattern Design

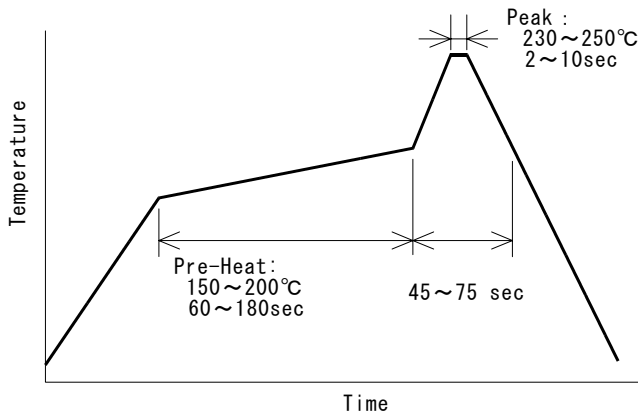
[mm]



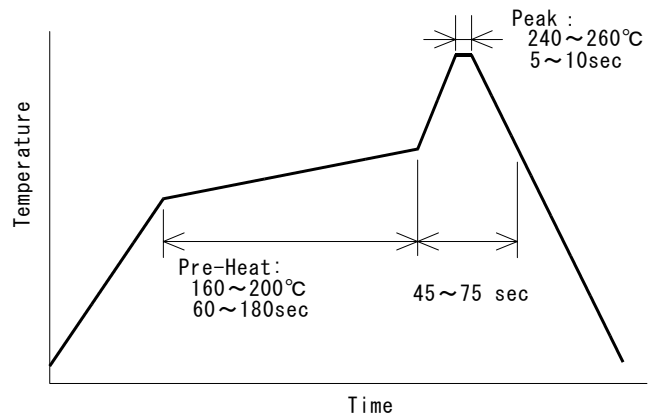
Recommendation Soldering Condition

(a)Reflow Methods

Recommendation the below temperature profile condition. (Reflow times = MAX 2 times)



(1)Normal solder



(2)Lead free solder

(b)Soldering iron Methods

Recommendation the following condition.

The point of the iron temperature = 300°C±5°C

Working time = MAX 3 seconds.

※The soldering iron point should not touch a product directly.

Caution

In operating condition, it should be fully verified suitability of product. In storage condition, it should be kept products with packing in normal temperature and normal humidity and avoided sunshine.

We recommend that ACN products use within one year from delivery. If over one year, check mounting and solderability before use it.

The Others

Please consult our business man about the packing specification and resistance value and so on beyond state in this catalog.