

## Chip Resistor Array

Type: **EXB 14V, 18V, 24V, 28V, N8V, 2HV, 34V, V4V, 38V, V8V, S8V**



### Features

- High density  
 2 resistors in 0.8 mm × 0.6 mm size / 0302 inch size : EXB14V  
 4 resistors in 1.4 mm × 0.6 mm size / 0502 inch size : EXB18V  
 2 resistors in 1.0 mm × 1.0 mm size / 0404 inch size : EXB24V  
 4 resistors in 2.0 mm × 1.0 mm size / 0804 inch size : EXB28V, EXBN8V  
 8 resistors in 3.8 mm × 1.6 mm size / 1506 inch size : EXB2HV  
 2 resistors in 1.6 mm × 1.6 mm size / 0606 inch size : EXB34V, EXBV4V  
 4 resistors in 3.2 mm × 1.6 mm size / 1206 inch size : EXB38V, EXBV8V  
 4 resistors in 5.1 mm × 2.2 mm size / 2009 inch size : EXBS8V
- Improvement of placement efficiency  
 Placement efficiency of Chip Resistor Array is two, four or eight times of the flat type chip resistor
- Reference Standard...IEC 60115-9, JIS C 5201-9, EIAJ RC-2129
- AEC-Q200 qualified (EXB2, EXB3)
- RoHS compliant

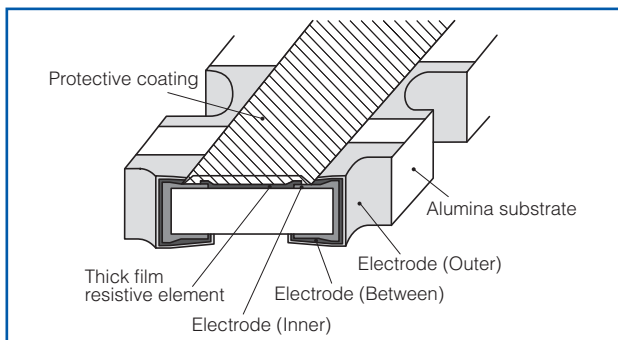
■ **As for Packaging Methods, Land Pattern, Soldering Conditions and Safety Precautions,**  
 Please see Data Files

### Explanation of Part Numbers

1	2	3	4	5	6	7	8	9	10	11
E	X	B	V	8	V	4	7	2	J	V

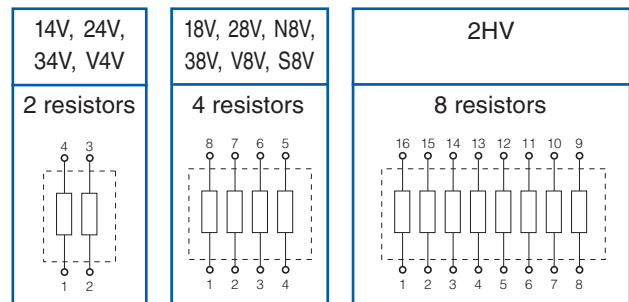
Product Code	Code	Inch	Construction	Schematics	Resistance Value	Resistance Tolerance	Packaging Methods		
Thick Film Chip Resistor Networks	14	0201×2	Convex Terminal	V Isolated type	The first two digits are significant figures of resistance value and the third one denotes the number of zeros following. Jumper is expressed by R00 Example : 222 → 2.2k Ω	J ±5 % 0 Jumper	Code	Packaging	Part No.
	18	0201×4	Flat Terminal				Nil	Embossed Carrier Taping 4 mm pitch, 2,500 pcs.	EXBS8V
	24	0402×2	Convex Terminal	X		Punched Carrier Taping 2 mm pitch, 10,000 pcs.	EXB14V, 18V, 24V, 28V, N8V		
	28	0402×4	Convex Terminal	V		Punched Carrier Taping 4 mm pitch, 5,000 pcs.	EXB2HV, 34V, 38V, V4V, V8V		
	2H	0602×8	Convex Terminal						
	34	0603×2	Convex Terminal						
	38	0603×4	Convex Terminal						
	N8	0402×4	Concave Terminal						
	V4	0603×2	Concave Terminal						
	V8	0603×4	Concave Terminal						
	S8	0805×4	Concave Terminal						

### Construction (Example : Concave Terminal)



### Schematics

- Isolated type



## Ratings

### [For Resistor]

Part No. (inch size)	Power Rating at 70 °C (W / element)	Limiting Element Voltage <sup>(1)</sup> (V)	Maximum Overload Voltage <sup>(2)</sup> (V)	Resistance Tolerance (%)	Resistance Range (Ω)	T.C.R. (× 10 <sup>-6</sup> /°C)	Category Temperature Range (°C)	AEC-Q200 Grade
EXB14V (0201×2)	0.031	12.5	25	±5	10 to 1M (E24)	±200	-55 to +125	-
EXB18V (0201×2)	0.031 (0.1 W / package)	12.5	25	±5	10 to 1M (E24)	±200	-55 to +125	-
EXB24V (0402×2)	0.063	50	100	±5	1 to 1M (E24)	±200	-55 to +125	Grade 1
EXB28V (0402×4)	0.063	50	100	±5	1 to 1M (E24)	±200	-55 to +125	Grade 1
EXB2HV (0602×8)	0.063 (0.25 W / package)	25	50	±5	10 to 1M (E24)	±200	-55 to +125	Grade 1
EXB34V (0603×2)	0.063	50	100	±5	1 to 1M (E24)	±200	-55 to +125	Grade 1
EXB38V (0603×4)	0.063	50	100	±5	1 to 1M (E24)	±200	-55 to +125	Grade 1
EXBN8V (0402×4)	0.031	50	100	±5	10 to 1M (E24)	±200	-55 to +125	-
EXBV4V (0603×2)	0.063	50	100	±5	10 to 1M (E24)	±200	-55 to +125	-
EXBV8V (0603×4)	0.063	50	100	±5	10 to 1M (E24)	±200	-55 to +125	-
EXBS8V (0805×4)	0.1	100	200	±5	10 to 1M (E24)	±200	-55 to +125	-

- (1) Rated Continuous Working Voltage (RCWW) shall be determined from  $RCWW = \sqrt{\text{Power Rating} \times \text{Resistance Values}}$ , or Limiting Element Voltage listed above, whichever less.  
 (2) Overload Test Voltage (OTV) shall be determined from  $OTV = \text{Specified Magnification (refer to performance)} \times RCWW$  or Maximum Overload Voltage listed above, whichever less.

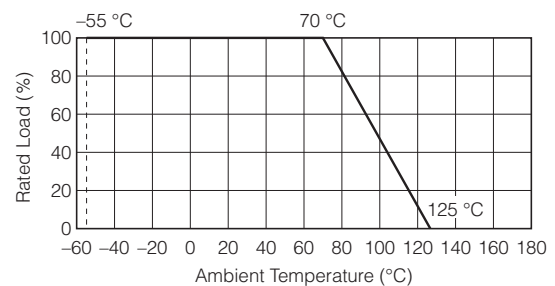
### [For Jumper]

Part No. (inch size)	Rated Current (A / element)	Maximum Overload Current <sup>(1)</sup> (A)
EXB14V (0201×2)	0.5	1
EXB18V (0201×4)	0.5	1
EXB24V (0402×2)	1	2
EXB28V (0402×4)	1	2
EXB2HV (0602×8)	1	2
EXB34V (0603×2)	1	2
EXB38V (0603×4)	1	2
EXBN8V (0402×4)	1	2
EXBV4V (0603×2)	1	2
EXBV8V (0603×4)	1	2
EXBS8V (0805×4)	2	4

(1) Overload test current

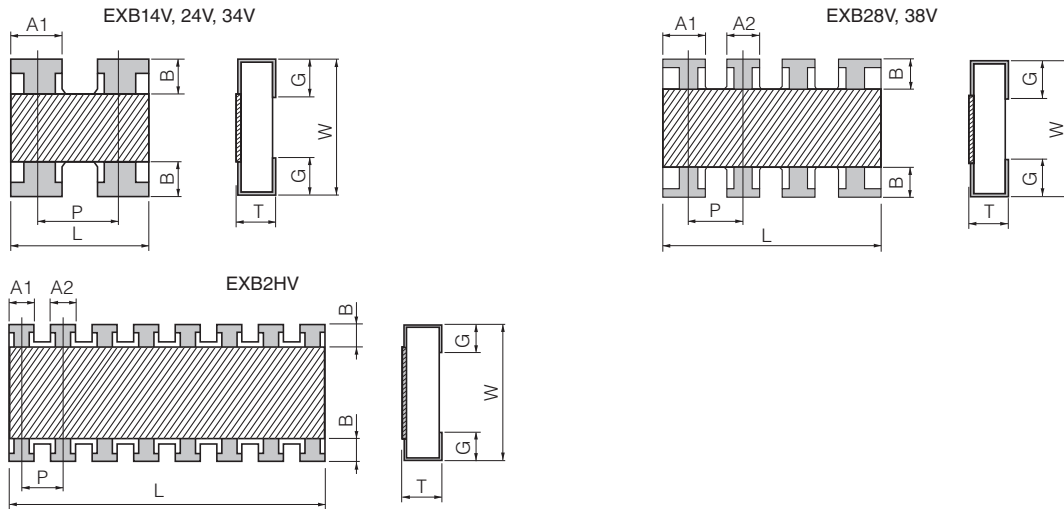
### Power Derating Curve

For resistors operated in ambient temperatures above 70 °C, power rating shall be derated in accordance with the figure below.



## Dimensions in mm (not to scale)

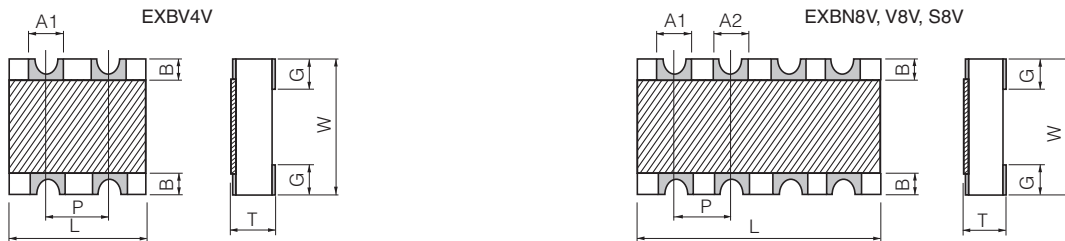
### (1) Convex Terminal type



Part No. (inch size)	Dimensions (mm)								Mass (Weight) [g/1000 pcs.]
	L	W	T	A1	A2	B	P	G	
EXB14V (0201×2)	0.80 <sup>±0.10</sup>	0.60 <sup>±0.10</sup>	0.35 <sup>±0.10</sup>	0.35 <sup>±0.10</sup>	—	0.15 <sup>±0.10</sup>	(0.50)	0.15 <sup>±0.10</sup>	0.5
EXB24V (0402×2)	1.00 <sup>±0.10</sup>	1.00 <sup>±0.10</sup>	0.35 <sup>±0.10</sup>	0.40 <sup>±0.10</sup>	—	0.18 <sup>±0.10</sup>	(0.65)	0.25 <sup>±0.10</sup>	1.2
EXB28V (0402×4)	2.00 <sup>±0.10</sup>	1.00 <sup>±0.10</sup>	0.35 <sup>±0.10</sup>	0.45 <sup>±0.10</sup>	0.35 <sup>±0.10</sup>	0.20 <sup>±0.10</sup>	(0.50)	0.25 <sup>±0.10</sup>	2.0
EXB2HV (0602×8)	3.80 <sup>±0.10</sup>	1.60 <sup>±0.10</sup>	0.45 <sup>±0.10</sup>	0.35 <sup>±0.10</sup>	0.35 <sup>±0.10</sup>	0.30 <sup>±0.10</sup>	(0.50)	0.30 <sup>±0.10</sup>	9.0
EXB34V (0603×2)	1.60 <sup>±0.20</sup>	1.60 <sup>±0.15</sup>	0.50 <sup>±0.10</sup>	0.65 <sup>±0.15</sup>	—	0.30 <sup>±0.20</sup>	(0.80)	0.30 <sup>±0.20</sup>	3.5
EXB38V (0603×4)	3.20 <sup>±0.20</sup>	1.60 <sup>±0.15</sup>	0.50 <sup>±0.10</sup>	0.65 <sup>±0.15</sup>	0.45 <sup>±0.15</sup>	0.30 <sup>±0.20</sup>	(0.80)	0.35 <sup>±0.20</sup>	7.0

( ) Reference

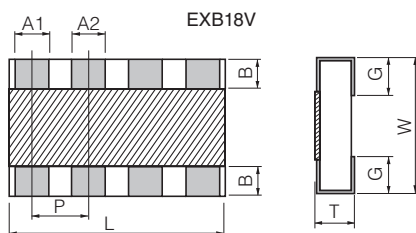
### (2) Concave Terminal type



Part No. (inch size)	Dimensions (mm)								Mass (Weight) [g/1000 pcs.]
	L	W	T	A1	A2	B	P	G	
EXBN8V (0402×4)	2.00 <sup>±0.10</sup>	1.00 <sup>±0.10</sup>	0.45 <sup>±0.10</sup>	0.30 <sup>±0.10</sup>	0.30 <sup>±0.10</sup>	0.20 <sup>±0.15</sup>	(0.50)	0.30 <sup>±0.15</sup>	3.0
EXBV4V (0603×2)	1.60 <sup>+0.20/-0.10</sup>	1.60 <sup>+0.20/-0.10</sup>	0.60 <sup>±0.10</sup>	0.60 <sup>±0.10</sup>	—	0.30 <sup>±0.15</sup>	(0.80)	0.45 <sup>±0.15</sup>	5.0
EXBV8V (0603×4)	3.20 <sup>+0.20/-0.10</sup>	1.60 <sup>+0.20/-0.10</sup>	0.60 <sup>±0.10</sup>	0.60 <sup>±0.10</sup>	0.60 <sup>±0.10</sup>	0.30 <sup>±0.15</sup>	(0.80)	0.45 <sup>±0.15</sup>	10
EXBS8V (0805×4)	5.08 <sup>+0.20/-0.10</sup>	2.20 <sup>+0.20/-0.10</sup>	0.70 <sup>±0.20</sup>	0.80 <sup>±0.15</sup>	0.80 <sup>±0.15</sup>	0.50 <sup>±0.15</sup>	(1.27)	0.55 <sup>±0.15</sup>	30

( ) Reference

### (3) Flat Terminal type



Part No. (inch size)	Dimensions (mm)								Mass (Weight) [g/1000 pcs.]
	L	W	T	A1	A2	B	P	G	
EXB18V (0201×4)	1.40±0.10	0.60±0.10	0.35±0.10	0.20±0.10	0.20±0.10	0.10±0.10	(0.40)	0.20±0.10	1.0

( ) Reference

## Performance

Test Item	Performance Requirements	Test Conditions
Resistance	Within Specified Tolerance	20 °C
T. C. R.	Within Specified T. C. R.	+25 °C/+125 °C
Overload	±2%	Rated Voltage × 2.5, 5 s Jumper type : Max. Overload Current, 5 s
Resistance to Soldering Heat	±1%	270 °C, 10 s
Rapid Change of Temperature	±1%	-55 °C (30min.) / +125 °C (30min.), 100 cycles
High Temperature Exposure	±1%	+125 °C , 1000 h
Damp Heat, Steady State	±1%	60 °C, 90% to 95 %RH, 1000 h
Load Life in Humidity	±3%	60 °C, 90% to 95 %RH, Rated Voltage (Jumper type: Rated Current), 1.5 h ON/0.5 h OFF cycle, 1000 h
Endurance at 70 °C	±3%	70 °C, Rated Voltage(Jumper type: Rated Current), 1.5 h ON/0.5 h OFF cycle, 1000 h