

Metal Film (Thin Film) Chip Resistors, High Reliability Type

Type: **ERA 1A, 2A, 3A, 6A, 8A**

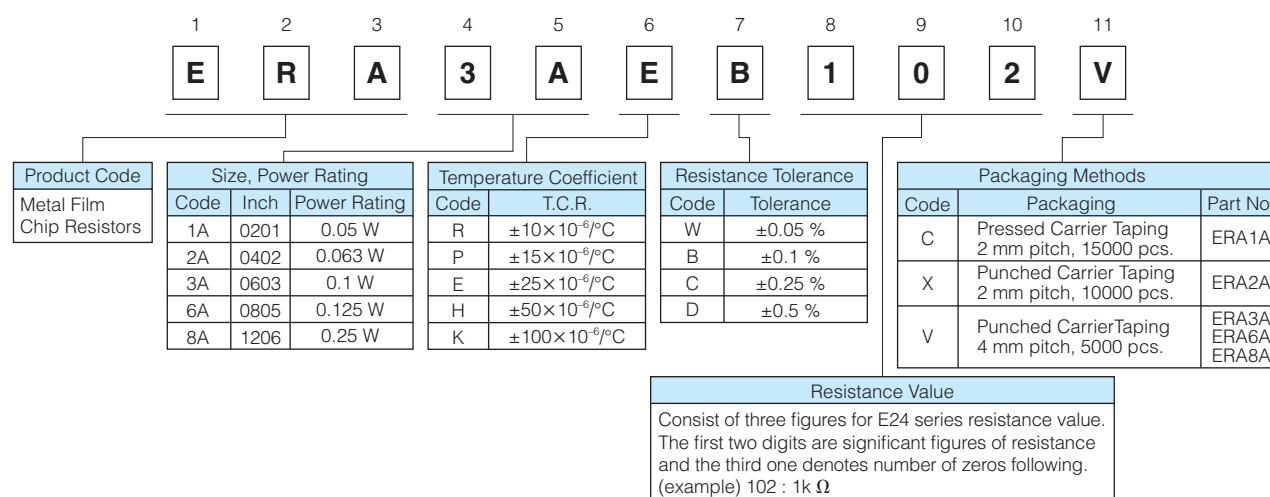
Features

- High reliability Stable at high temperature and humidity
(85 °C 85 %RH rated load, Category temperature range : -55 °C to +155 °C)
- High accuracy Small resistance tolerance and Temperature Coefficient of Resistance
- High performance Low current noise, excellent linearity
- Reference Standard IEC 60115-8, JIS C 5201-8, EIAJ RC-2133B
- AEC-Q200 qualified
- RoHS compliant

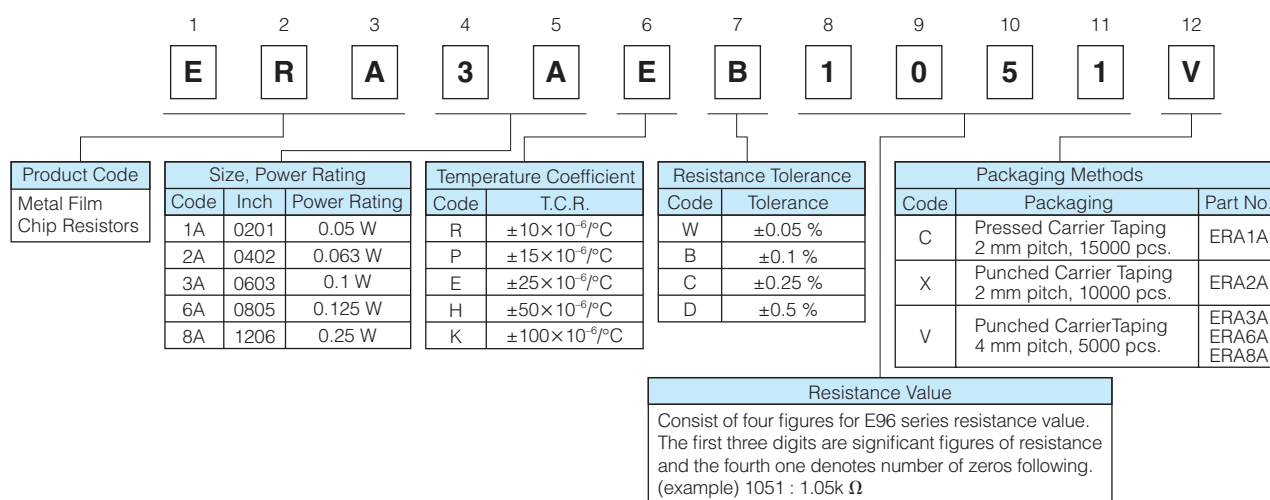
■ **As for Packaging Methods, Land Pattern, Soldering Conditions and Safety Precautions,**
Please see Data Files

Explanation of Part Numbers

● E24 Series

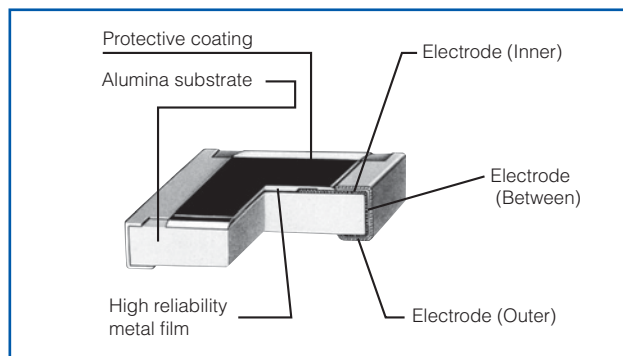


● E96 Series and other Resistance values

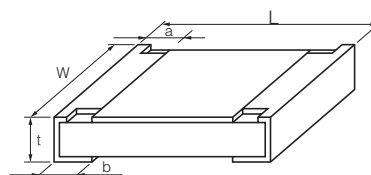


note : Duplicated resistance values as E24 series part numbers shall follow E24 part numbers.
(apply three digit resistance value)

Construction



Dimensions in mm (not to scale)



Part No. (inch size)	Dimensions (mm)					Mass (Weight) [g/1000pcs.]
	L	W	a	b	t	
ERA1A (0201)	0.60 $\pm$ 0.03	0.30 $\pm$ 0.03	0.15 $\pm$ 0.05	0.15 $\pm$ 0.05	0.23 $\pm$ 0.03	0.14
ERA2A (0402)	1.00 $\pm$ 0.10	0.50 $\pm$ 0.05	0.15 $\pm$ 0.10	0.25 $\pm$ 0.10	0.35 $\pm$ 0.05	0.6
ERA3A (0603)	1.60 $\pm$ 0.20	0.80 $\pm$ 0.20	0.30 $\pm$ 0.20	0.30 $\pm$ 0.20	0.45 $\pm$ 0.10	2
ERA6A (0805)	2.00 $\pm$ 0.20	1.25 $\pm$ 0.10	0.40 $\pm$ 0.25	0.40 $\pm$ 0.25	0.50 $\pm$ 0.10	4
ERA8A (1206)	3.20 $\pm$ 0.20	1.60 $\pm$ 0.15	0.50 $\pm$ 0.25	0.50 $\pm$ 0.25	0.60 $\pm$ 0.10	8

Ratings

Part No. (inch size)	Power Rating at 85 °C (W)	Limiting Element Voltage ⁽¹⁾ (V)	Maximum Overload Voltage ⁽²⁾ (V)	Part No. (detail)	Resistance Tolerance (%)	T.C.R. (×10 ⁻⁶ /°C)	Resistance Range ⁽³⁾⁽⁴⁾ (Ω)	Category Temperature Range (°C)
ERA1A (0201)	0.05	25	50	ERA1AEB	±0.1	±25	100 to 10k (E24, E96)	−55 to +155
				ERA1AEC	±0.25			
				ERA1ARC	±0.25	±10	100 to 10k (E24, E96)	
				ERA1ARB	±0.1			
				ERA1ARW	±0.05		1k to 10k (E24, E96)	
ERA2A (0402)	0.063	50	100	ERA2AKD	±0.5	±100	10 to 46.4 (E24, E96)	
				ERA2AED	±0.5	±25	47 to 100k (E24, E96)	
				ERA2AEC	±0.25			
				ERA2AEB	±0.1			
				ERA2APC	±0.25	±15	200 to 47k (E24, E96)	
				ERA2APB	±0.1			
				ERA2ARC	±0.25	±10	200 to 47k (E24, E96)	
ERA2ARB	±0.1							
ERA3A (0603)	0.1	75	150	ERA3AHD	±0.5	±50	10 to 46.4 (E24, E96)	
				ERA3AED	±0.5	±25	47 to 330k (E24, E96)	
				ERA3AEC	±0.25			
				ERA3AEB	±0.1			
				ERA3APC	±0.25	±15	470 to 100k (E24, E96)	
				ERA3APB	±0.1			
				ERA3ARC	±0.25	±10	1k to 100k (E24, E96)	
				ERA3ARB	±0.1			
ERA3ARW	±0.05							
ERA6A (0805)	0.125	100	200	ERA6AHD	±0.5	±50	10 to 46.4 (E24, E96)	
				ERA6AED	±0.5	±25	47 to 1M (E24, E96)	
				ERA6AEC	±0.25			
				ERA6AEB	±0.1			
				ERA6APC	±0.25	±15	470 to 100k (E24, E96)	
				ERA6APB	±0.1			
				ERA6ARC	±0.25	±10	1k to 100k (E24, E96)	
ERA6ARB	±0.1							
ERA6ARW	±0.05							
ERA8A (1206)	0.25	150	300	ERA8AHD	±0.5	±50	10 to 46.4 (E24, E96)	
				ERA8AED	±0.5	±25	47 to 1M (E24, E96)	
				ERA8AEC	±0.25			
				ERA8AEB	±0.1			
				ERA8APC	±0.25	±15	470 to 100k (E24, E96)	
				ERA8APB	±0.1			
				ERA8ARC	±0.25	±10	1k to 100k (E24, E96)	
				ERA8ARB	±0.1			
ERA8ARW	±0.05							

(1) Rated Continuous Working Voltage (RCWV) shall be determined from $\text{RCWV} = \sqrt{\text{Rated Power} \times \text{Resistance Values}}$, or Limiting Element Voltage listed above, whichever less.

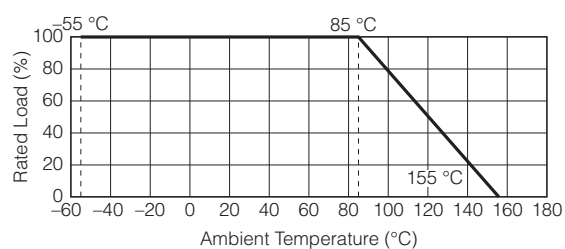
(2) Overload (Short-time Overload) Test Voltage (SOTV) shall be determined from $\text{SOTV} = 2.5 \times \text{RCWV}$ or max. Overload Voltage listed above whichever less.

(3) E192 series resistance values are also available. Please contact us for details.

(4) Duplicated resistance values between E96, E192 and E24 series shall follow E24 Part Numbers. (apply three digit resistance value)

Power Derating Curve

For resistors operated in ambient temperatures above 85 °C, power rating shall be derated in accordance with the figure on the right.



Mouser Electronics

Authorized Distributor

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Panasonic:

ERA-1AEB102C	ERA-1AEB132C	ERA-1AEB2800C	ERA-1AEB2550C	ERA-1AEB7680C	ERA-1AEB7681C	ERA-
1AEB4640C	ERA-1AEB3740C	ERA-1AEB6981C	ERA-1AEB4021C	ERA-1AEB1211C	ERA-1AEB1400C	ERA-
1AEB4641C	ERA-1AEB1210C	ERA-1AEB752C	ERA-1AEB1430C	ERA-1AEB3920C	ERA-1AEB1621C	ERA-
1AEB2150C	ERA-1AEB1270C	ERA-1AEB151C	ERA-1AEB3011C	ERA-1AEB9090C	ERA-1AEB2490C	ERA-
1AEB1780C	ERA-1AEB5360C	ERA-1AEB1470C	ERA-1AEB2611C	ERA-1AEB2940C	ERA-1AEB1781C	ERA-
1AEB6491C	ERA-1AEB5231C	ERA-1AEB1370C	ERA-1AEB1741C	ERA-1AEB1541C	ERA-1AEB2370C	ERA-
1AEB6810C	ERA-1AEB3741C	ERA-1AEB3090C	ERA-1AEB3651C	ERA-1AEB3831C	ERA-1AEB103C	ERA-
1AEB1021C	ERA-1AEB1241C	ERA-1AEB1330C	ERA-1AEB1020C	ERA-1AEB2740C	ERA-1AEB4531C	ERA-
1AEB8251C	ERA-1AEB4530C	ERA-1AEB751C	ERA-1AEB1240C	ERA-1AEB5111C	ERA-1AEB2100C	ERA-
1AEB5901C	ERA-1AEB1960C	ERA-1AEB2670C	ERA-1AEB1650C	ERA-1AEB6490C	ERA-1AEB5491C	ERA-
1AEB5490C	ERA-1AEB5230C	ERA-1AEB2431C	ERA-1AEB2321C	ERA-1AEB1371C	ERA-1AEB1050C	ERA-
1AEB6041C	ERA-1AEB1580C	ERA-1AEB6191C	ERA-1AEB4990C	ERA-1AEB2261C	ERA-1AEB2051C	ERA-
1AEB2430C	ERA-1AEB3571C	ERA-1AEB4320C	ERA-1AEB111C	ERA-1AEB2320C	ERA-1AEB1651C	ERA-
1AEB1690C	ERA-1AEB1070C	ERA-1AEB8450C	ERA-1AEB1181C	ERA-1AEB3401C	ERA-1AEB4870C	ERA-
1AEB2741C	ERA-1AEB7320C	ERA-1AEB3320C	ERA-1AEB3161C	ERA-1AEB4750C	ERA-1AEB6811C	ERA-
1AEB2870C	ERA-1AEB3481C	ERA-1AEB3830C	ERA-1AEB2211C	ERA-1AEB3650C	ERA-1AEB1540C	ERA-
1AEB3091C	ERA-1AEB7150C	ERA-1AEB2871C	ERA-1AEB1961C			