

Metal Film (Thin Film) Chip Resistors, High Reliability Type 0402, 0603, 0805, 1206

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

■ Features

- High reliabilityStable at high temperature and humidity
(85 °C 85 %RH rated load, Category temperature range : -55 to +155 °C)
- High accuracySmall resistance tolerance and Temperature Coefficient of Resistance
- High performanceLow current noise, excellent linearity
- Reference StandardIEC 60115-8, JIS C 5201-8, EIAJ RC-2133B
- RoHS compliant

■ Packaging Methods

Please see Pages 40 to 43

■ Recommended Land Pattern

Please see Pages 44 to 45

■ Recommended Soldering Conditions

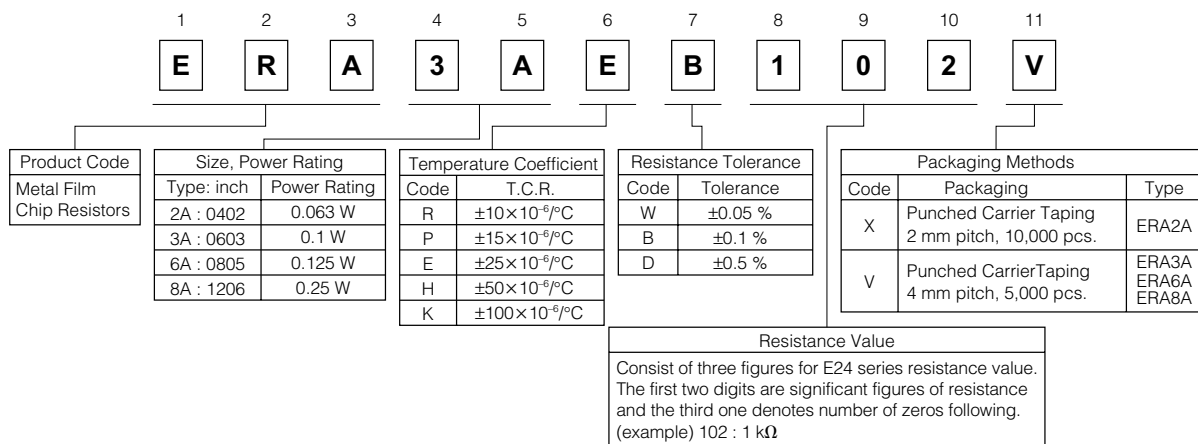
Please see Page 46

■ Safety Precautions

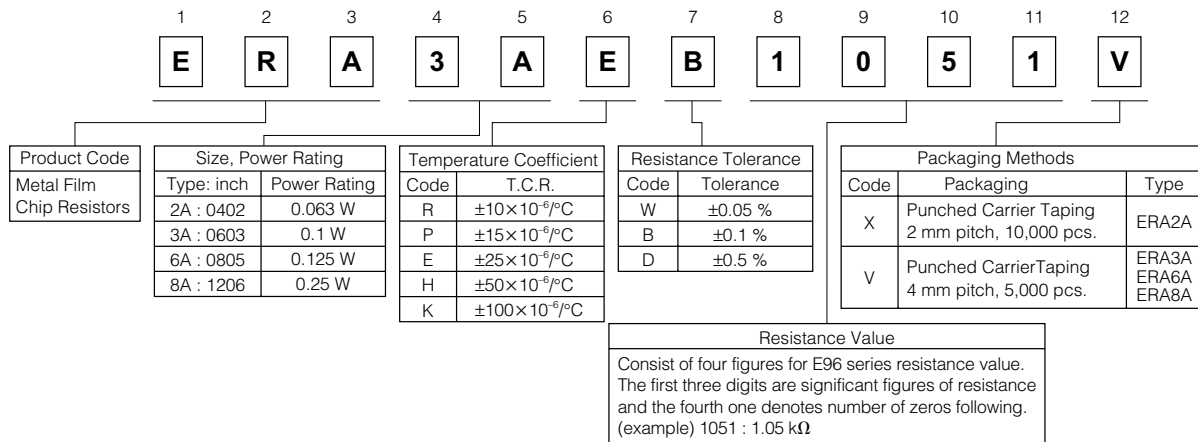
Please see Page 47

■ Explanation of Part Numbers

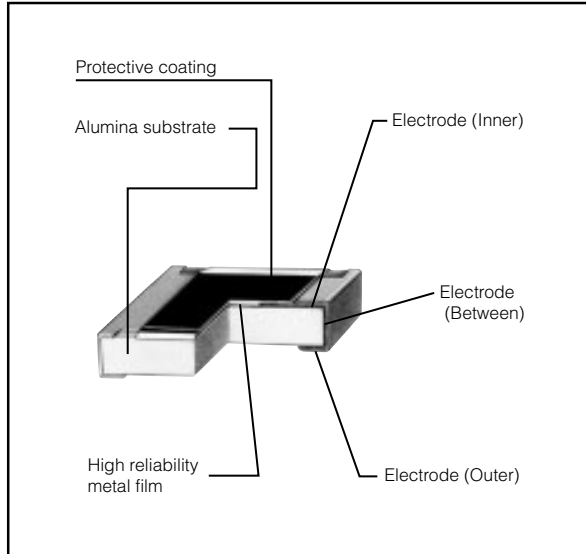
- E24 Series



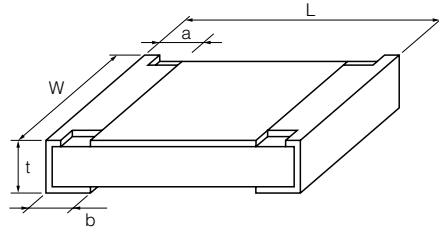
- E96 Series



Construction



Dimensions in mm (not to scale)



Type (inch size)	Dimensions (mm)					Mass (Weight) [g/1000pcs.]
	L	W	a	b	t	
ERA2A (0402)	1.00 ^{±0.10}	0.50 ^{+0.10/-0.05}	0.15 ^{±0.10}	0.25 ^{±0.10}	0.35 ^{±0.05}	0.6
ERA3A (0603)	1.60 ^{±0.20}	0.80 ^{±0.20}	0.30 ^{±0.20}	0.30 ^{±0.20}	0.45 ^{±0.10}	2
ERA6A (0805)	2.00 ^{±0.20}	1.25 ^{±0.10}	0.40 ^{±0.25}	0.40 ^{±0.25}	0.50 ^{±0.10}	4
ERA8A (1206)	3.20 ^{±0.20}	1.60 ^{+0.05/-0.15}	0.50 ^{±0.25}	0.50 ^{±0.25}	0.60 ^{±0.10}	8

Ratings

Type (inch size)	Power Rating at 85 °C (W)	Limiting Element Voltage ⁽¹⁾ (V)	Maximum Overload Voltage ⁽²⁾ (V)	Type (detail)	Resistance Tolerance (%)	T.C.R. (×10 ⁻⁶ /°C)	Resistance Range ⁽³⁾ (Ω)	Category Temperature Range (°C)
ERA2A (0402)	0.063	25	50	ERA2AKD	±0.5	±100	10 to 46.4 (E24, E96)	-55 to +155
				ERA2AED	±0.5		±25	
				ERA2AEB	±0.1			
ERA3A (0603)	0.1	75	150	ERA3AHD	±0.5	±50	10 to 46.4 (E24, E96)	
				ERA3AED	±0.5		±25	
				ERA3AEB	±0.1	±15	470 to 100 k (E24, E96)	
				ERA3APB	±0.1		1 k to 100 k (E24, E96)	
				ERA3ARB	±0.1	±10	1 k to 100 k (E24, E96)	
				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 1 M (E24, E96)
				ERA6AEB	±0.1	±15	470 to 100 k (E24, E96)	
				ERA6APB	±0.1		1 k to 100 k (E24, E96)	
				ERA6ARB	±0.1	±10	1 k to 100 k (E24, E96)	
				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 1 M (E24, E96)
				ERA8AEB	±0.1	±15	470 to 100 k (E24, E96)	
				ERA8APB	±0.1		1 k to 100 k (E24, E96)	
				ERA8ARB	±0.1	±10	1 k to 100 k (E24, E96)	
				ERA8ARW	±0.05			

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

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

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

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.

