

# High precision Thin film, High stability and reliability type

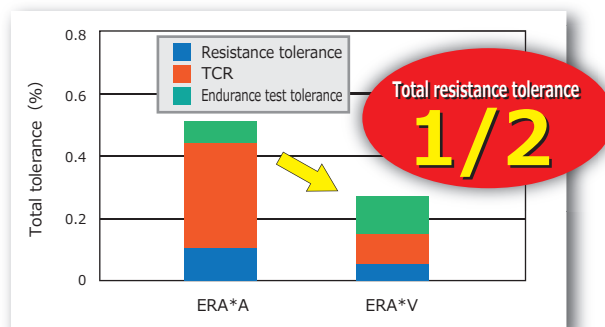
- High precision
- Low TCR
- Anti solder joint crack
- Anti-Sulfurated
- Anti-Surge
- AEC-Q200

## ERA\*V/K series



Achieving higher-precision and longer-life than conventional\*1 series

- ✓ Resistance tolerance  $\pm 0.05\%$
- ✓ TCR  $\pm 10 \text{ ppm}/^\circ\text{C}$
- ✓ Endurance test tolerance  $\pm 0.1\%$



### Half total tolerance from thin film chip resistors (Conventional series)

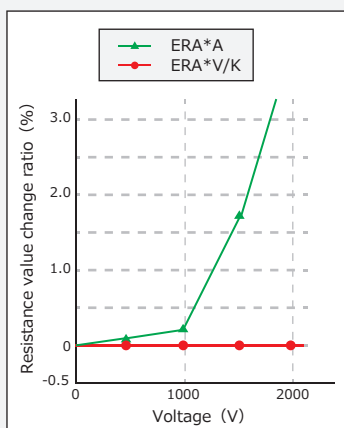
1. High-precision, design margin securing and improve performance
2. Improve reliability in severe conditions



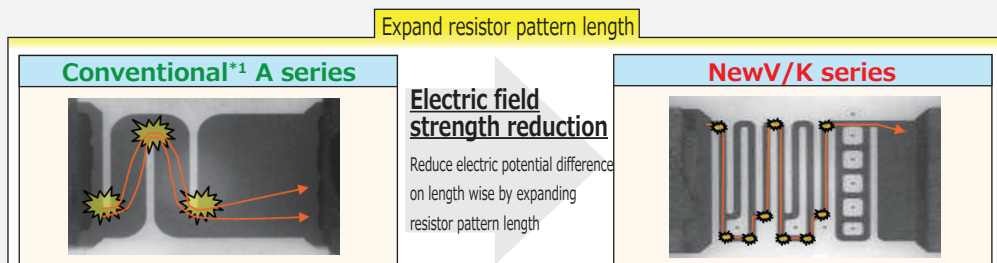
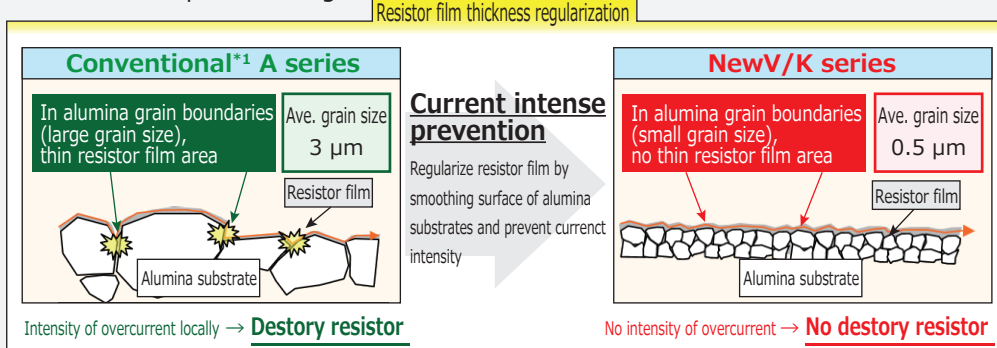
**Point** Highest level of ESD resistance by preventing current concentration and reducing electric field strength

### Anti-ESD

- ESD test (1 kΩ)  
HBM : 150 pF, 2 kV,  $\pm 5$  times  
0603 Thin film chip resistors



- Anti-ESD improved design



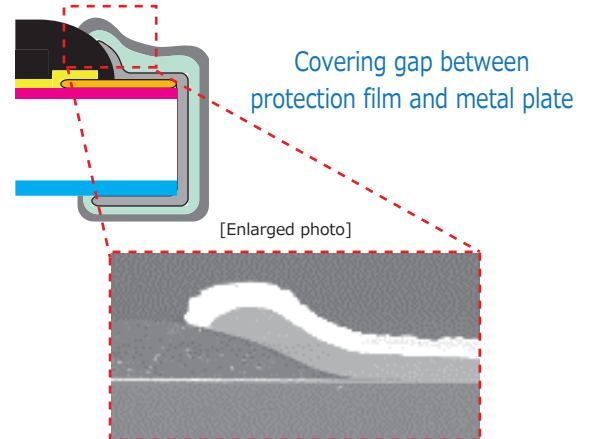
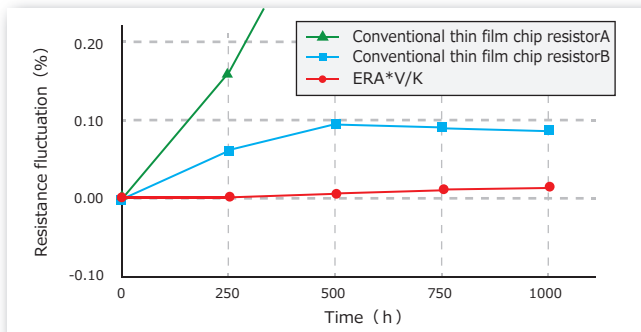
\*1:ERA\*A



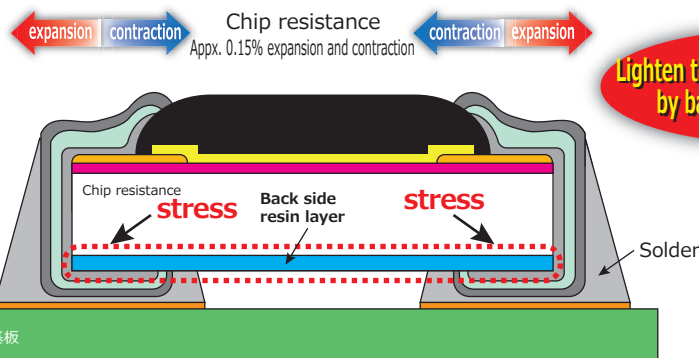
## Improve anti-sulfurated by the introduction of edge sputtering electrode covering gap between protection film and electrode

### Anti-sulfurated

- Sulfurization gas test  
ASTM B809 : 105 °C 0603 Thin film chip resistors



## Achieve excellent anti solder joint crack by back side resin layer



Lighten the stress at solder fillet by back side resin layer

2500 cycle crack ratio

ERA\*V/K



Conventional thin film chip resistors



### Specifications

Part No.	Size (inch)	Power rating (W)	Limiting element voltage (V)	Resistance tolerance (%)	Resistance range (Ω)	TCR (x10 <sup>-6</sup> / °C)	ESD withstand voltage (kV)	Category temp. range (°C)	AEC-Q200
ERA2V	0402	0.100	75	± 0.1 ±0.05	1 k ≤ R ≤ 47 k <sup>*1</sup> 47 ≤ R ≤ 100 k <sup>*1</sup>	±10(R) ±15(P) ±25(E)	1.0	-55 to 155	Grade 0
ERA3V ERA3K (100 kΩ over)	0603	0.125	100	± 0.1 ±0.05	1 k ≤ R ≤ 100 k 47 ≤ R ≤ 240 k	±10(R) ±15(P) ±25(E)	1.5		
ERA6V ERA6K (100 kΩ over)	0805	0.250	150	± 0.1 ±0.05	1 k ≤ R ≤ 100 k 47 ≤ R ≤ 750 k	±10(R) ±15(P) ±25(E)	2.0		
Under development ERA8V ERA8K (100 kΩ over)	1206	0.250	150	± 0.1 ±0.05	1 k ≤ R ≤ 100 k 47 ≤ R ≤ 1 M	±10(R) ±15(P) ±25(E)	2.0		

\*1: Expanded resistance range

Please visit our website for details !

