

# High precision Thin film, High stability and reliability type

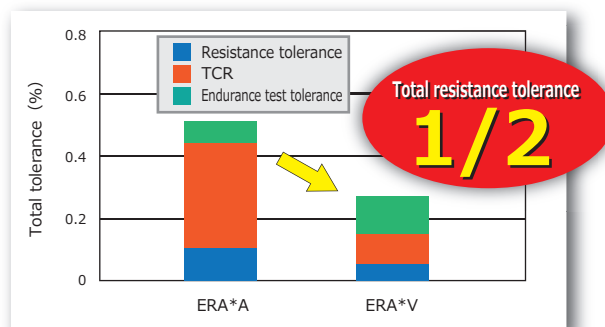
- High precision
- Low TCR
- Anti solder joint crack
- Anti-Sulfurated
- Anti-Surge
- AEC-Q200

## 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  $\pm 0.1\%$



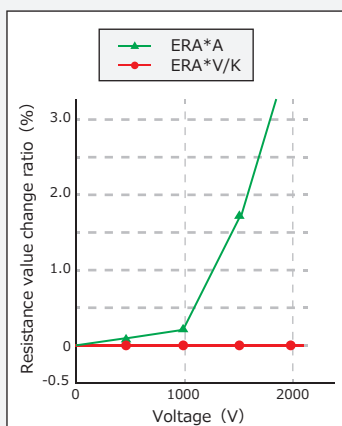
### Half total tolerance from thin film chip resistors (Conventional series)

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

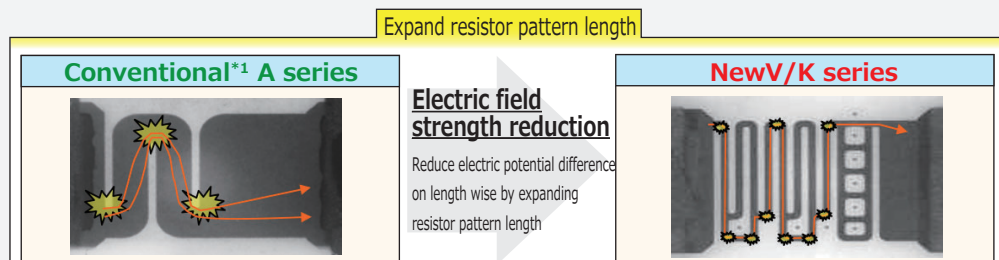
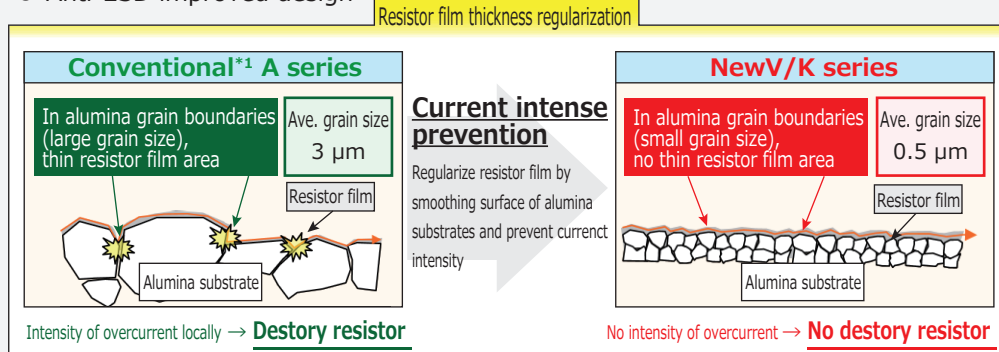
**Point** Highest level of ESD resistance by preventing current concentration and reducing electric field strength

#### Anti-ESD

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



- Anti-ESD improved design

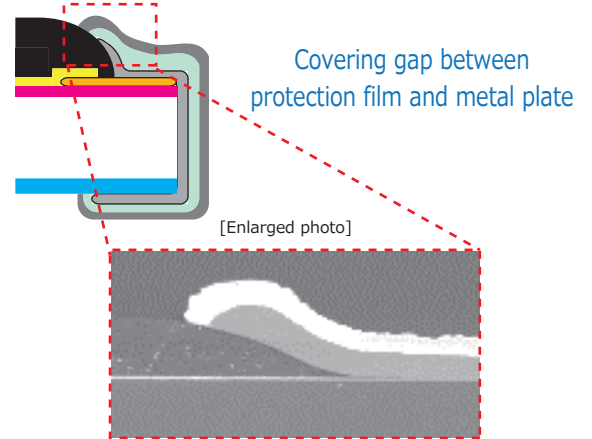
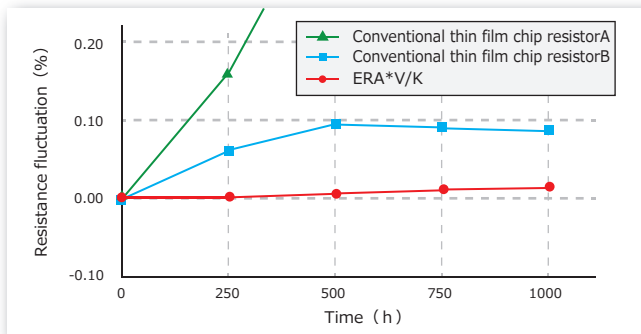




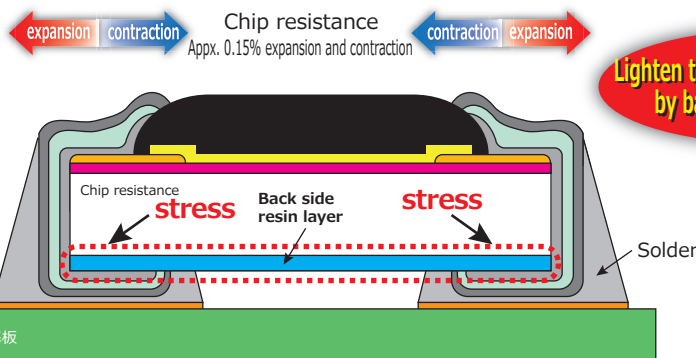
## Improve anti-sulfurated by the introduction of edge sputtering electrode covering gap between protection film and electrode

### Anti-sulfurated

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



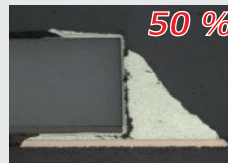
## Achieve excellent anti solder joint crack by back side resin layer



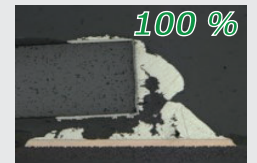
Lighten the stress at solder fillet by back side resin layer

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 ( $\Omega$ )	TCR ( $\times 10^{-6} / ^\circ\text{C}$ )	ESD withstand voltage (kV)	Category temp. range ( $^\circ\text{C}$ )	AEC-Q200
ERA2V	0402	0.100	75	$\pm 0.1$ $\pm 0.05$	$1\text{ k} \leq R \leq 10\text{ k}$ $47 \leq R \leq 10\text{ k}$	$\pm 10(\text{R})$ $\pm 15(\text{P})$ $\pm 25(\text{E})$	1.0	-55 to 155	Grade 0
ERA3V ERA3K (100 k $\Omega$ over)	0603	0.125	100	$\pm 0.1$ $\pm 0.05$	$1\text{ k} \leq R \leq 100\text{ k}$ $47 \leq R \leq 240\text{ k}$	$\pm 10(\text{R})$ $\pm 15(\text{P})$ $\pm 25(\text{E})$	1.5		
ERA6V ERA6K (100 k $\Omega$ over)	0805	0.250	150	$\pm 0.1$ $\pm 0.05$	$1\text{ k} \leq R \leq 100\text{ k}$ $47 \leq R \leq 750\text{ k}$	$\pm 10(\text{R})$ $\pm 15(\text{P})$ $\pm 25(\text{E})$	2.0		
Under development ERA8V ERA8K (100 k $\Omega$ over)	1206	0.250	150	$\pm 0.1$ $\pm 0.05$	$1\text{ k} \leq R \leq 100\text{ k}$ $47 \leq R \leq 1\text{ M}$	$\pm 10(\text{R})$ $\pm 15(\text{P})$ $\pm 25(\text{E})$	2.0		

Please visit our website for details !

