

Metal Film Chip Resistors, Rectangular Type

Type: **ERA**

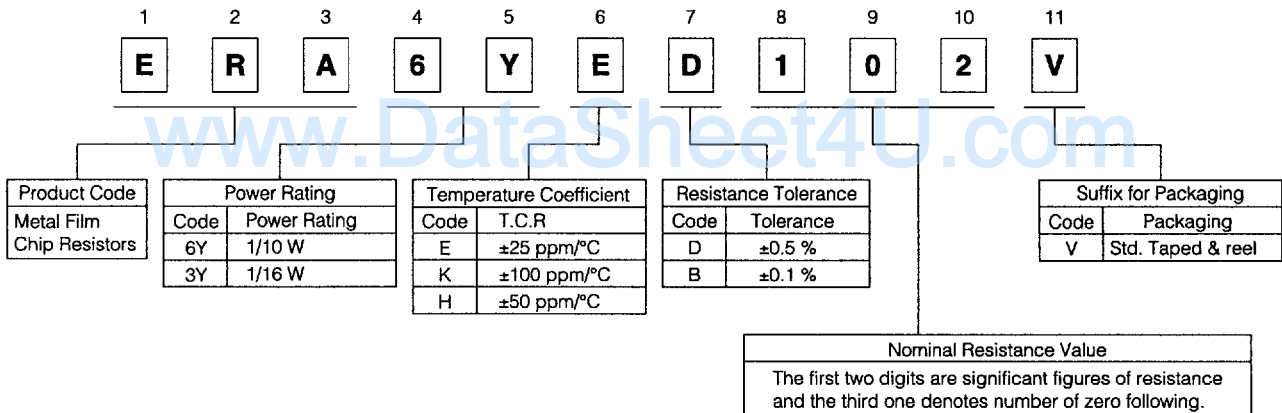
■ Features

- Small size and lightweight
PWB size reduction and lightweight products
- High reliability
Low T.C.R & current noise, excellent non-linearity.
- Matching with placement machines
Taping packagings for automatic placement machine
- Solderability
Suitable for both reflow soldering and flow soldering
- Approved under the ISO-9001 system

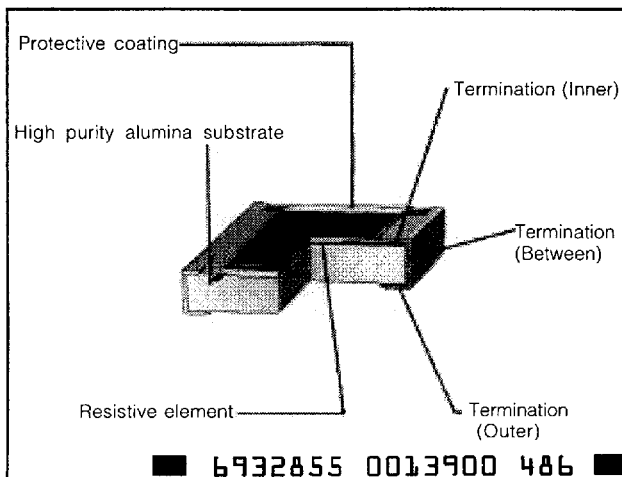
■ Conforming to

IEC115-8, JIS C5223

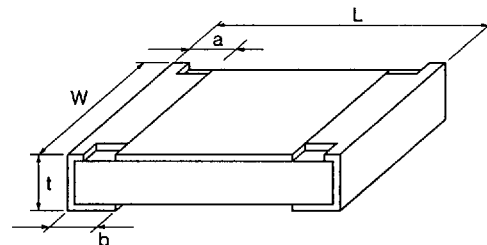
■ Explanation of Part Numbers



■ Construction



■ Dimensions in mm (not to scale)



Part No.	Dimensions (mm)					Net Weight (1000 pcs.)
	L	W	a	b	t	
ERA6Y	2.00 ^{+0.20}	1.25 ^{+0.10}	0.40 ^{+0.25}	0.40 ^{+0.25}	0.50 ^{+0.10}	4 g
ERA3Y	1.60 ^{+0.20}	0.80 ^{+0.20}	0.30 ^{+0.20}	0.30 ^{+0.20}	0.45 ^{+0.10}	2 g

■ Ratings

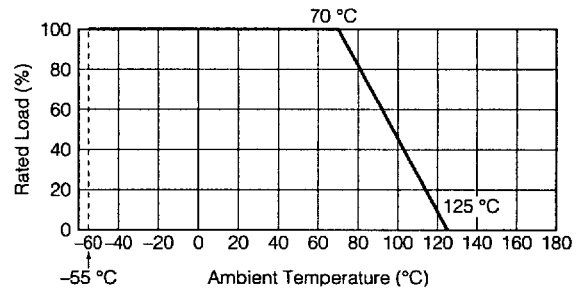
Part No.	Power Rating at 70 °C	Maximum RCWV*	Maximum Overload Voltage**	Resistance Tolerance (%)	Resistance Range (Ω)		T.C.R (ppm/°C)	Standard Resistance Values
					min.	max.		
ERA6Y	1/10 W	100 V	200 V	±0.5	10	91	±50	E-24
					100	100 K	±25	
				±0.1	110 K	1 M	±100	
					560	100 K	±25	
ERA3Y	1/16 W	75 V	150 V	±0.5	10	91	±50	E-24
					100	33 K	±25	
				±0.1	36 K	330 K	±100	
					560	33 K	±25	

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

** 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.

Power Derating Curve

For resistors operated in ambient temperatures above 70 °C, power rating must be derated in accordance with the curve right.

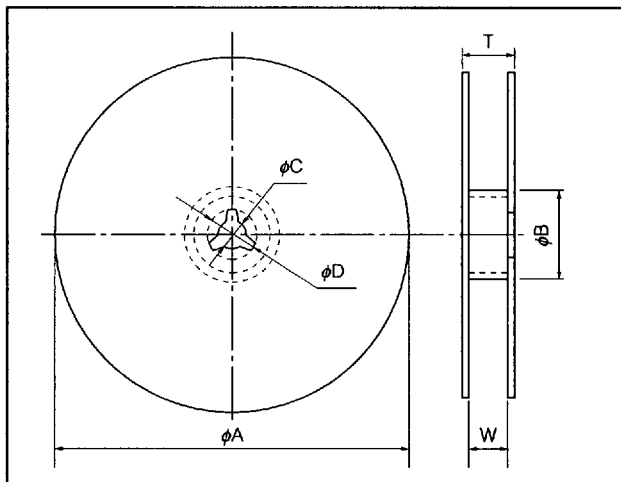


■ Packaging Methods

- Standard Quantity

Type	Thickness	Paper Taping
ERA6Y	0.5 mm	5000 pcs./reel
ERA3Y	0.45 mm	5000 pcs./reel

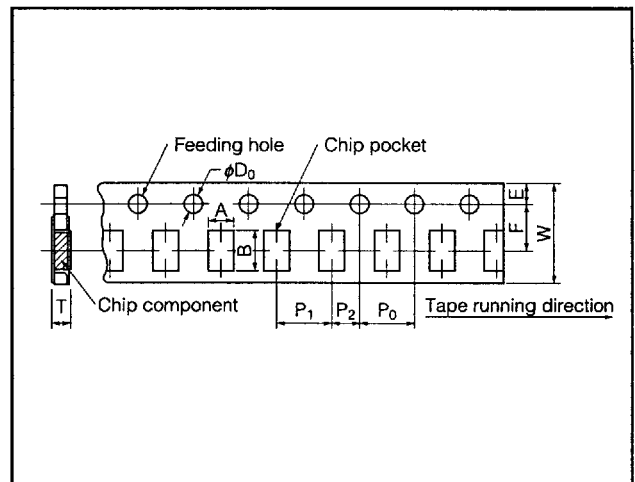
- Taping Reel



(mm) Dimensions	Type	φA	φB	φC
	6Y	180.0 ^{+0.30}	60 min.	13.0 ^{±1.0}
	3Y			

(mm) Dimensions	Type	W	T
	6Y	9 ^{±1.0}	11.4 ^{±1.0}
	3Y		

- Paper Taping



(mm) Dimensions	Type	A	B	W	F	E
	6Y	1.65 ^{±0.15}	2.50 ^{±0.20}	8.00 ^{±0.20}	3.50 ^{±0.05}	1.75 ^{±0.10}
	3Y	1.10 ^{±0.10}	1.90 ^{±0.10}			

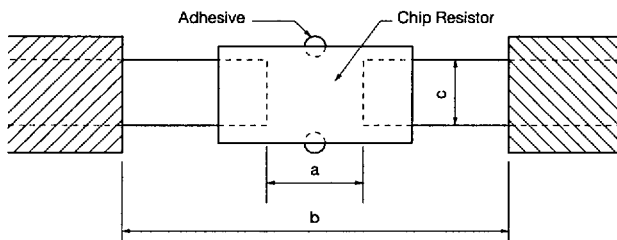
(mm) Dimensions	Type	P ₁	P ₂	P ₀	φD ₀	T
	6Y	4.00 ^{±0.10}	2.00 ^{±0.05}	4.00 ^{±0.10}	1.50 ^{±0.10}	0.84 ^{±0.05}
	3Y					0.64 ^{±0.05}

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⚠ Cautions for Safety

In the case of flow soldering, the land width must be smaller than the Chip Resistor width to properly control the solder amount properly. Generally, the land width should be chip resistor width (W) 0.7 to 0.8 times of the width of chip resistor. In the case of reflow soldering, solder amount can be adjusted, therefore the land width should be set to 1.0 to 1.3 times chip resistor width (W).

Part No.	Dimensions (mm)		
	a	b	c
ERA6Y	1.0 to 1.4	3.2 to 3.8	0.9 to 1.4
ERA3Y	0.7 to 0.9	2.0 to 2.2	0.8 to 1.0



1. Rated Power and Ambient Temperature

Keep the rated power and ambient temperature within the specified derating curve.

- * Place and fit resistors and other heating components on board, taking into consideration of temperature rise due to approaching of these components with each other.

2. External Shock

Mechanical shock during automatic mounting or handling of board after chip being mounted may cause break, flaw or fall-off of paint film of resistor that may impair initial characteristics.

Avoid nipping of resistor with hard tool (a pair of pliers or tweezers) as it may damage protective film or electrode of resistor and may affect resistor's performance.

3. Application of Pulse

When pulse is applied to a resistor, the peak value of the pulse shall be within rated value.

- The resistor is neither non-combustible nor flame-retardant.
- When soldering with soldering iron, never touch the body of the chip resistor with a tip of the soldering iron. When using a soldering iron with a tip at high temperature, solder for a time as short as possible (three seconds or less up to 350 °C).
- Avoid immersion of chip resistor in solvent for a long time. Use solvent after the effect of immersion is confirmed.
- Do not use the product in dewy atmospheres.