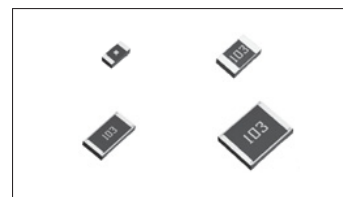


### ●Features

- 1) Twice the rated voltage of conventional products..
- 2) Perfect for use in high voltage circuit. (Camera Flash circuit, etc)
- 3) ROHM resistors have obtained ISO9001 / ISO / TS16949 certification.
- 4) Corresponds to AEC-Q200. (KTR18)



### ●Products List

Part No.	Size		Rated Power (70°C) (W)	Limiting Element Voltage (V)	Temperature Coefficient (ppm / °C)	Resistance Tolerance (%)	Resistance Range	Operating Temperature Range (°C)	Automotive Grade Available
	(mm)	(inch)							
KTR03	1608	0603	0.1	350	±200	J(±5%)	1Ω to 10MΩ (E24 Series)	-55 to +155	YES
					±100	F(±1%)	1Ω to 10MΩ (E24,96 Series)		
KTR10	2012	0805	0.125	400	±200	J(±5%)	1Ω to 30MΩ (E24 Series)		YES
					±100	F(±1%)	1Ω to 10MΩ (E24,96 Series)		
KTR18	3216	1206	0.25	500	±200	J(±5%)	1Ω to 15MΩ (E24 Series)		YES
					±100	F(±1%)	1Ω to 10MΩ (E24,96 Series)		
KTR25	3225	1210	0.33	600	±200	J(±5%)	1Ω to 10MΩ (E24 Series)		YES
					±100	F(±1%)	1Ω to 10MΩ (E24,96 Series)		

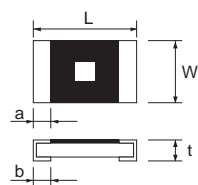
\*E24 : Standard products, E96 : Custom products.

### ●Part Number Description

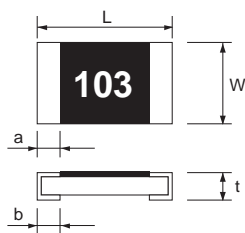
<div><div>K</div><div>T</div><div>R</div></div>	<div><div>1</div><div>0</div></div>	<div><div>E</div><div>Z</div><div>P</div></div>	<div><div>J</div></div>	<div><div>1</div><div>0</div><div>0</div></div>																													
<div><div>Part No.</div><div>KTR (High Voltage Resistance Chip Resistors)</div></div>	<div><div>Size (mm [inch])</div><div>03 (1608 [0603]) 10 (2012 [0805]) 18 (3216 [1206]) 25 (3225 [1210])</div></div>	<div><div>Packaging Specifications Code</div><table><tr><td>Part No.</td><td>Code</td><td>Packaging specifications</td><td>Quantity / Reel</td></tr><tr><td>KTR03</td><td>EZP</td><td>Paper tape (4mm Pitch)</td><td>5,000</td></tr><tr><td>KTR10</td><td>EZP</td><td>Paper tape (4mm Pitch)</td><td>5,000</td></tr><tr><td>KTR18</td><td>EZP</td><td>Paper tape (4mm Pitch)</td><td>5,000</td></tr><tr><td>KTR25</td><td>JZP</td><td>Embossed tape (4mm Pitch)</td><td>4,000</td></tr></table></div>	Part No.	Code	Packaging specifications	Quantity / Reel	KTR03	EZP	Paper tape (4mm Pitch)	5,000	KTR10	EZP	Paper tape (4mm Pitch)	5,000	KTR18	EZP	Paper tape (4mm Pitch)	5,000	KTR25	JZP	Embossed tape (4mm Pitch)	4,000	<div><div>Resistance Tolerance</div><div>F ( ±1% ) J ( ±5% )</div></div>	<div><div>Nominal Resistance</div><div>Resistance code, 3 or 4 digits. 000 denotes jumper type.</div><table><tr><td>Resistance tolerance</td><td></td><td>Resistance code</td></tr><tr><td>F</td><td>:</td><td>4 digits</td></tr><tr><td>J</td><td>:</td><td>3 digits</td></tr></table><div>Ex.)<div><div>1Ω = 1R00 ( ±1% ) 1R0 ( ±5% )</div><div>10Ω = 10R0 ( ±1% ) 100 ( ±5% )</div><div>1MΩ = 1004 ( ±1% ) 105 ( ±5% )</div></div></div></div>	Resistance tolerance		Resistance code	F	:	4 digits	J	:	3 digits
Part No.	Code	Packaging specifications	Quantity / Reel																														
KTR03	EZP	Paper tape (4mm Pitch)	5,000																														
KTR10	EZP	Paper tape (4mm Pitch)	5,000																														
KTR18	EZP	Paper tape (4mm Pitch)	5,000																														
KTR25	JZP	Embossed tape (4mm Pitch)	4,000																														
Resistance tolerance		Resistance code																															
F	:	4 digits																															
J	:	3 digits																															

## ●Chip Resistor Dimensions and Markings

### ■ KTR03



### ■ KTR10 / 18 / 25



<Marking method>

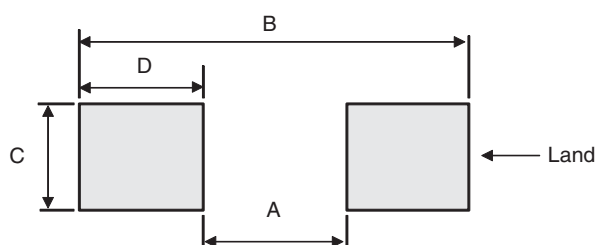
There are three or four digits used for the calculation number according to IEC code and "R" is used for the decimal point.

(Unit : mm)

Part No.	(mm)	(inch)	L	W	t	a	b	Marking existence
KTR03	1608	0603	1.6±0.1	0.8±0.1	0.45±0.1	0.3±0.2	0.3±0.2	No *
KTR10	2012	0805	2.0±0.1	1.25±0.1	0.55±0.1	0.3±0.2	0.4±0.2	Yes
KTR18	3216	1206	3.2±0.15	1.6±0.15	0.55±0.1	0.3±0.25	0.5±0.25	Yes
KTR25	3225	1210	3.2±0.15	2.5±0.15	0.55±0.1	0.3±0.25	0.5±0.25	Yes

\*Only with square mark

## ●Land pattern Example



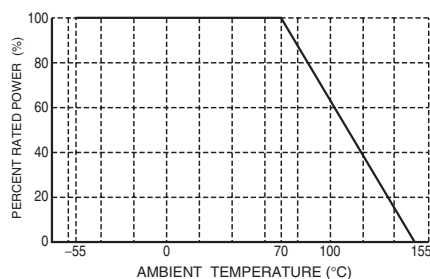
(Unit : mm)

Dimensions Part No.	A	B	C	D
KTR03	1.0	2.0	0.8	0.5
KTR10	1.2	2.6	1.15	0.7
KTR18	2.2	4.0	1.5	0.9
KTR25	2.2	4.0	2.3	0.9

## ●Derating Curve

When the ambient temperature exceeds 70°C, power dissipation must be adjusted according to the derating curves below.

■ KTR03 / 10 / 18 / 25



## ●Characteristics

Test Items	Guaranteed Value	Test Conditions
	Resistor Type	
Resistance	See P.1	20°C
Variation of resistance with temperature	See P.1	Measurement : +20 / -55 / +20 / +125°C
Overload	$\pm (2.0\%+0.1\Omega)$	Test voltage is the smaller one of ① or ② ① Rated voltage (current) $\times 2.5$ , 2s. ② Maximum overload voltage ※
Solderability	A new uniform coating of minimum of 95% of the surface being immersed and no soldering damage.	Rosin-Ethanol : 25% (Weight) Soldering condition : $245\pm 5^\circ\text{C}$ Duration of immersion : $2.0\pm 0.5\text{s}$
Resistance to soldering heat	$\pm (1.0\%+0.05\Omega)$ No remarkable abnormality on the appearance.	Soldering condition : $260\pm 5^\circ\text{C}$ Duration of immersion : $10\pm 1\text{s}$
Rapid change of temperature	$\pm (1.0\%+0.05\Omega)$	Test temp. : $-55^\circ\text{C}$ to $+125^\circ\text{C}$ 5cycle
Damp heat, steady state	$\pm (3.0\%+0.1\Omega)$	$40^\circ\text{C}$ , 93%RH (Relative Humidity) Test time : 1,000h to 1,048h
Endurance at 70°C	$\pm (3.0\%+0.1\Omega)$	$70^\circ\text{C}$ Rated voltage (current) 1.5h : ON – 0.5h : OFF Test time : 1,000h to 1,048h
Endurance	$\pm (3.0\%+0.1\Omega)$	$155^\circ\text{C}$ Test time : 1,000h to 1,048h
Resistance to solvent	$\pm (1.0\%+0.05\Omega)$	$23\pm 5^\circ\text{C}$ , Immersion cleaning, $5\pm 0.5\text{min}$ Solvent : 2-propanol
Bend strength of the end face plating	$\pm (1.0\%+0.05\Omega)$ Without mechanical damage such as breaks.	–

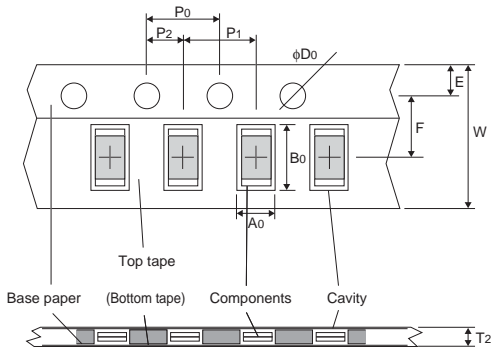
※ Maximum overload voltage (Test voltage)

KTR03	KTR10	KTR18	KTR25
500V	800V	1000V	1200V

Compliance Standard(s) : IEC60115-8  
JISC 5201-8

●Tape Dimensions

■ Paper Tape

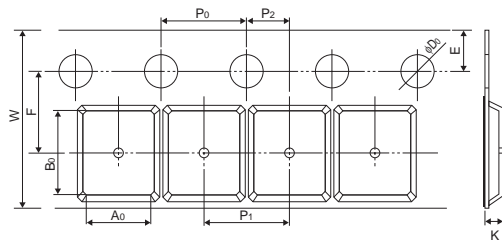


(Unit : mm)

Part No.	W	F	E	A0	B0
KTR03	8.0±0.3	3.5±0.05	1.75±0.1	1.1±0.1	1.9±0.1
KTR10	8.0±0.3	3.5±0.05	1.75±0.1	1.65 <sup>+0.2</sup> <sub>-0.1</sub>	2.4 <sup>+0.2</sup> <sub>-0.1</sub>
KTR18	8.0±0.3	3.5±0.05	1.75±0.1	1.95 <sup>+0.1</sup> <sub>-0.05</sub>	3.5 <sup>+0.15</sup> <sub>-0.05</sub>

Part No.	D0	P0	P1	P2	T2
KTR03	φ1.5 <sup>+0.1</sup> <sub>0</sub>	4.0±0.1	4.0±0.1	2.0±0.05	Max 1.1
KTR10	φ1.5 <sup>+0.1</sup> <sub>0</sub>	4.0±0.1	4.0±0.1	2.0±0.05	Max 1.1
KTR18	φ1.5 <sup>+0.1</sup> <sub>0</sub>	4.0±0.1	4.0±0.1	2.0±0.05	Max 1.1

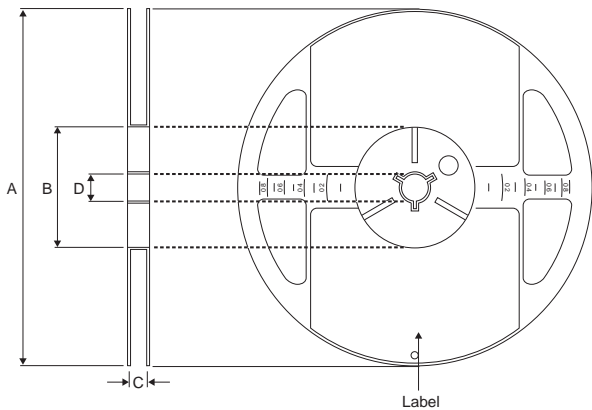
■ Embossed Tape



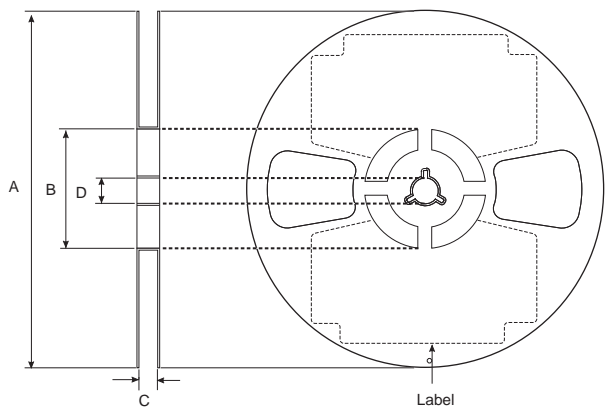
(Unit : mm)

Part No.	W	F	E	A0	B0
KTR25	8.0±0.3	3.5±0.05	1.75±0.1	3.0±0.1	3.5±0.1
	D0	P0	P1	P2	K
	φ1.5 <sup>+0.1</sup> <sub>0</sub>	4.0±0.1	4.0±0.1	2.0±0.05	Max 1.1

●Reel Dimensions



ACCORDING TO EIAJ ET-7200B



ACCORDING TO EIAJ ET-7200B (RRV)

(Unit : mm)

Part No.	A	B	C	D
KTR03	φ180 <sup>0</sup> <sub>-1.5</sub>	φ60 <sup>+1.0</sup> <sub>0</sub>	9 <sup>+1.0</sup> <sub>0</sub>	φ13±0.2
KTR10				
KTR18				
KTR25				

## Notes

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- 2) Before you use our Products, please contact our sales representative and verify the latest specifications :
- 3) Although ROHM is continuously working to improve product reliability and quality, semiconductors can break down and malfunction due to various factors.  
Therefore, in order to prevent personal injury or fire arising from failure, please take safety measures such as complying with the derating characteristics, implementing redundant and fire prevention designs, and utilizing backups and fail-safe procedures. ROHM shall have no responsibility for any damages arising out of the use of our Products beyond the rating specified by ROHM.
- 4) Examples of application circuits, circuit constants and any other information contained herein are provided only to illustrate the standard usage and operations of the Products. The peripheral conditions must be taken into account when designing circuits for mass production.
- 5) The technical information specified herein is intended only to show the typical functions of and examples of application circuits for the Products. ROHM does not grant you, explicitly or implicitly, any license to use or exercise intellectual property or other rights held by ROHM or any other parties. ROHM shall have no responsibility whatsoever for any dispute arising out of the use of such technical information.
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- 7) The Products specified in this document are not designed to be radiation tolerant.
- 8) For use of our Products in applications requiring a high degree of reliability (as exemplified below), please contact and consult with a ROHM representative : transportation equipment (i.e. cars, ships, trains), primary communication equipment, traffic lights, fire/crime prevention, safety equipment, medical systems, servers, solar cells, and power transmission systems.
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