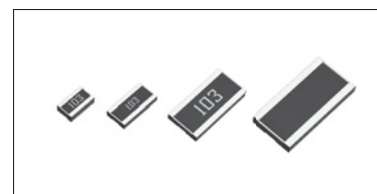


●Features

- 1) High joint reliability with long side terminations.
- 2) Highest power ratings in their class.
- 3) Guaranteed anti-surge characteristic in all series.
- 4) ROHM resistors have obtained ISO9001 / ISO / TS16949 certification.
- 5) Corresponds to AEC-Q200.



●Products List

Part No.	Size		Rated Power (70°C) (W)	Limiting Element Voltage (V)	Maximum Overload Voltage (V)	Temperature Coefficient (ppm / °C)	Resistance Tolerance (%)	Resistance Range	Series	Operating Temperature Range (°C)
	(mm)	(inch)								
LTR10	2012	0805	0.25	150	300	±200	J(±5%)	1Ω to 1MΩ	E24 E96*	-55 to +155
						±100	F(±1%)	10Ω to 1MΩ		
						±100	D(±0.5%)	10Ω to 1MΩ		
LTR18	3216	1206	0.75	200	400	±200	J(±5%)	1Ω to 1MΩ		
						±100	F(±1%)	10Ω to 1MΩ		
						±100	D(±0.5%)	10Ω to 1MΩ		
LTR50	5025	2010	1	200	400	±200	J(±5%)	1Ω to 1MΩ		
						±100	F(±1%)	10Ω to 1MΩ		
						±100	D(±0.5%)	10Ω to 1MΩ		
LTR100	6432	2512	2	200	400	±200	J(±5%)	1Ω to 1MΩ		
						±100	F(±1%)	10Ω to 1MΩ		
						±100	D(±0.5%)	10Ω to 1MΩ		

*E24 : Standard products, E96 : Custom products. (Class J is E24 series only)

Design and specifications are subject to change without notice.

Carefully check the specification sheet supplied with the product before using or ordering it.

●Part Number Description

L

T

R

Part No.

LTR
(High Power Chip Resistors
/ Wide Terminal type)

1

8

Size (mm [inch])

10 (2012 [0805])
18 (3216 [1206])
50 (5025 [2010])
100 (6432 [2512])

E

Z

P

Packaging Specifications Code

Part No.	Code	Packaging specifications	Quantity / Reel
LTR10	EZP	Paper tape (4mm Pitch)	5,000
LTR18	EZP	Paper tape (4mm Pitch)	5,000
LTR50	UZP	Embossed tape (4mm Pitch)	5,000
LTR100	JZP	Embossed tape (4mm Pitch)	4,000

J

Resistance Tolerance

D (±0.5%)
F (±1%)
J (±5%)

1

0

5

Nominal Resistance

Resistance code, 3 or 4 digits.
000 denotes jumper type.

Resistance tolerance	Resistance code
D,F	: 4 digits
J	: 3 digits

Ex.)

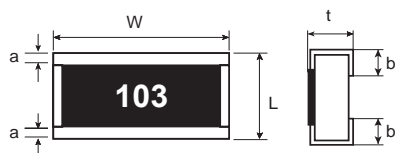
1Ω = 1R00 (±1%)
1R0 (±5%)

9.1Ω = 9R10 (±1%)
9R1 (±5%)

10Ω = 10R0 (±1%, ±0.5%)
100 (±5%)

1MΩ = 1004 (±1%, ±0.5%)
105 (±5%)

●Chip Resistor Dimensions and Markings



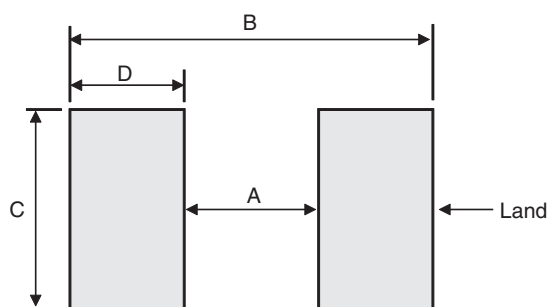
<Marking method>

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
LTR10	2012	0805	1.2±0.1	2.0±0.1	0.55±0.1	0.2±0.1	0.35±0.2	Yes
LTR18	3216	1206	1.6±0.15	3.2±0.15	0.55±0.1	0.3±0.2	0.5±0.2	Yes
LTR50	5025	2010	2.5±0.15	5.0±0.15	0.55±0.1	0.38±0.2	0.9±0.2	Yes
LTR100	6432	2512	3.2±0.15	6.4±0.15	0.55±0.15	0.4±0.25	1.13±0.25	No

●Land pattern Example



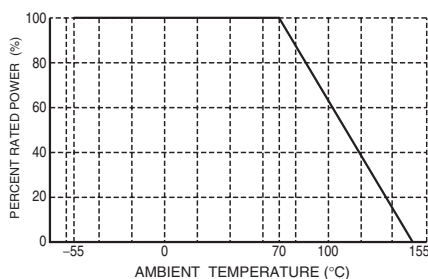
(Unit : mm)

Dimensions Part No.	A	B	C	D
LTR10	0.50	2.70	2.00	1.10
LTR18	0.60	2.90	3.20	1.15
LTR50	0.75	3.35	5.00	1.30
LTR100	0.83	3.69	6.40	1.43

●Derating Curve

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

■ LTR10 / 18 / 50 / 100



●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 : $235\pm 5^\circ\text{C}$ 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°C to $+125^\circ\text{C}$ 5cycle
Damp heat, steady state	$\pm (3.0\%+0.1\Omega)$	40°C , 93%RH (Relative Humidity) Test time : 1,000h to 1,048h
Endurance at 70°C	$\pm (3.0\%+0.1\Omega)$	70°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°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.	—
Static electric characteristics	$\pm (5.0\%+0.05\Omega)$	EIAJ ED-4701 / 300 TEST METHOD304 Voltage : 3kV C : 100pF R : 1.5k Ω Apply cycle : 1time

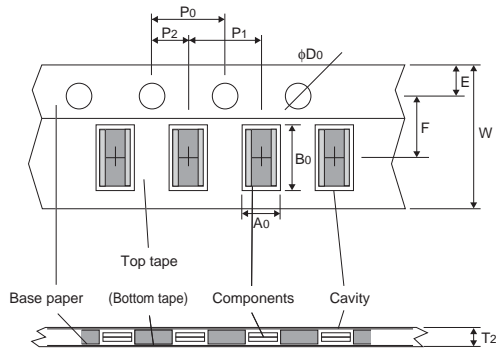
※ Maximum overload voltage (Test voltage)

LTR10	LTR18	LTR50	LTR100
300V	400V	400V	400V

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

●Tape Dimensions

■ Paper Tape

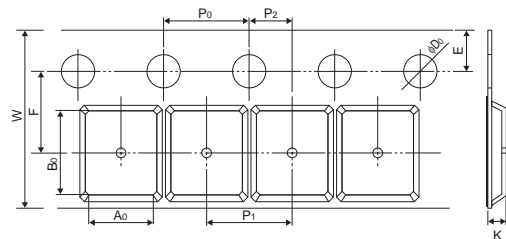


(Unit : mm)

Part No.	W	F	E	A0	B0
LTR10	8.0±0.3	3.5±0.05	1.75±0.1	1.45±0.1	2.3±0.1
LTR18	8.0±0.3	3.5±0.05	1.75±0.1	1.95 ^{+0.1} _{-0.05}	3.5 ^{+0.15} _{-0.05}

Part No.	D0	P0	P1	P2	T2
LTR10	ϕ1.5 ^{+0.1} ₀	4.0±0.1	4.0±0.1	2.0±0.05	Max 1.1
LTR18	ϕ1.5 ^{+0.1} ₀	4.0±0.1	4.0±0.1	2.0±0.05	Max 1.1

■ Embossed Tape

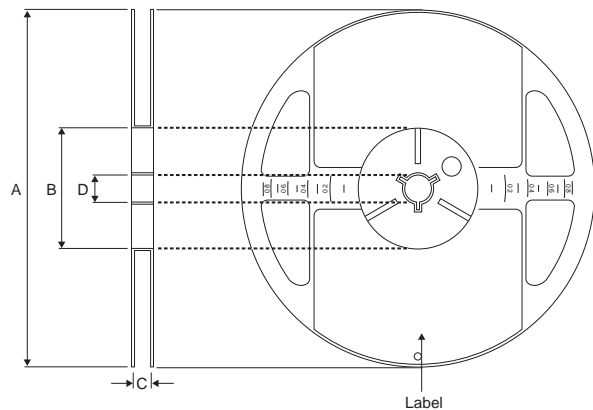


(Unit : mm)

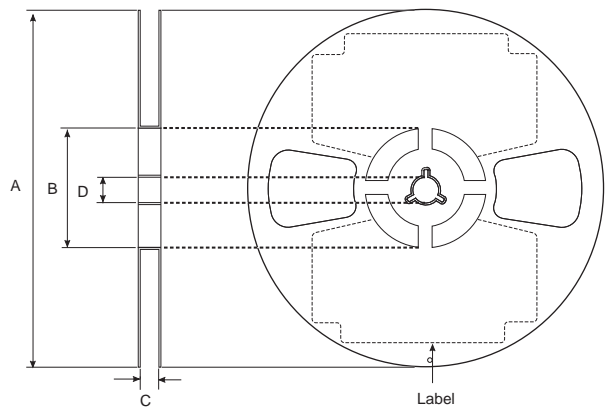
Part No.	W	F	E	A0	B0
LTR50	12.0±0.3	5.5±0.05	1.75±0.1	3.4±0.2	5.6±0.2
LTR100	12.0±0.3	5.5±0.05	1.75±0.1	3.5±0.2	6.7±0.2

Part No.	D0	P0	P1	P2	T2
LTR50	ϕ1.5 ^{+0.1} ₀	4.0±0.1	4.0±0.1	2.0±0.05	Max 1.1
LTR100	ϕ1.5 ^{+0.1} ₀	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
LTR10	$\phi 180 \begin{smallmatrix} 0 \\ -1.5 \end{smallmatrix}$	$\phi 60 \begin{smallmatrix} +1.0 \\ 0 \end{smallmatrix}$	$9 \begin{smallmatrix} +1.0 \\ 0 \end{smallmatrix}$	$\phi 13 \pm 0.2$
LTR18			$13 \begin{smallmatrix} +1.0 \\ 0 \end{smallmatrix}$	
LTR50				
LTR100				

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.
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- 9) Do not use our Products in applications requiring extremely high reliability, such as aerospace equipment, nuclear power control systems, and submarine repeaters.
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