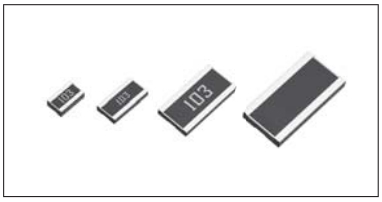
High Power Chip Resistors < Wide Terminal type >

LTR Series

●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. (LTR18/50)



●Products List

Part No.	Size (mm)	Size (inch)	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)
LTR10	2012	0805	0.25	150	300	±200	J(±5%)	1Ω to 1MΩ	E24	–55 to +155
						±100	F(±1%)			
						±100	D(±0.5%)	10Ω to 1MΩ		
LTR18	3216	1206	0.5 ＊	200	400	±200	J(±5%)	1Ω to 1MΩ		
						±100	F(±1%)			
						±100	D(±0.5%)	10Ω to 1MΩ		
LTR50	5025	2010	1	200	400	±200	J(±5%)	1Ω to 1MΩ		
						±100	F(±1%)			
						±100	D(±0.5%)	10Ω to 1MΩ		
LTR100	6432	2512	2	200	400	±200	J(±5%)	1Ω to 1MΩ		
						±100	F(±1%)			
						±100	D(±0.5%)	10Ω to 1MΩ		

＊Please contact ROHM sales representative for high power type.
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	1 8	E Z P	J	1 0 5

Part No.
LTR
(High Power Chip Resistors / Wide Terminal type)

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

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

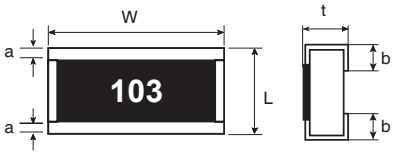
Resistance Tolerance
D (±0.5%)
F (±1%)
J (±5%)

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

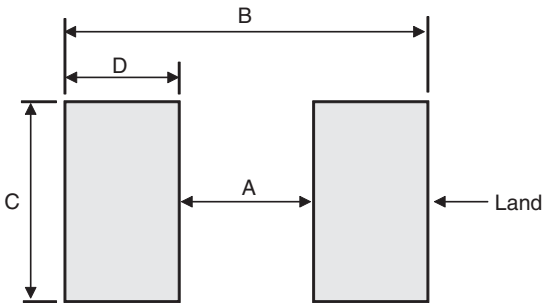


<Marking method>
There are three or four digits used for the calculation number according to IEC code and “R”is used for the decimal point.

(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



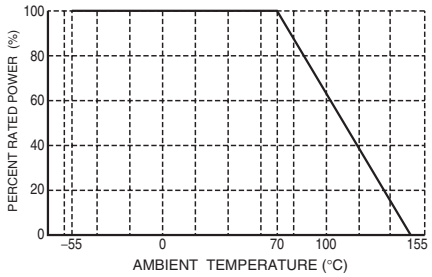
(Unit : mm)

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 Resistor Type	Test Conditions
Resistance	See P.1	20°C
Variation of resistance with temperature	See P.1	Measurement : +20 / –55 / +20 / +125°C
Overload	± (2.0%+0.1Ω)	Rated voltage (current) ×2.5, 2s 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±5°C Duration of immersion : 2.0±0.5s
Resistance to soldering heat	± (1.0%+0.05Ω) No remarkable abnormality on the appearance.	Soldering condition : 260±5°C Duration of immersion : 10±1s
Rapid change of temperature	± (1.0%+0.05Ω)	Test temp. : –55°C to +125°C 5cycle
Damp heat, steady state	± (3.0%+0.1Ω)	40°C, 93%RH (Relative Humidity) Test time : 1,000h to 1,048h
Endurance at 70°C	± (3.0%+0.1Ω)	70°C Rated voltage (current) 1.5h : ON – 0.5h : OFF Test time : 1,000h to 1,048h
Endurance	± (3.0%+0.1Ω)	155°C Test time : 1,000h to 1,048h
Resistance to solvent	± (1.0%+0.05Ω)	23±5°C, Immersion cleaning, 5±0.5min Solvent : 2–propanol
Bend strength of the end face plating	± (1.0%+0.05Ω) Without mechanical damage such as breaks.	–
Static electric characteristics	± (5.0%+0.05Ω)	EIAJ ED-4701 / 300 TEST METHOD304 Voltage : 3kV C : 100pF R : 1.5kΩ Apply cycle : 1time

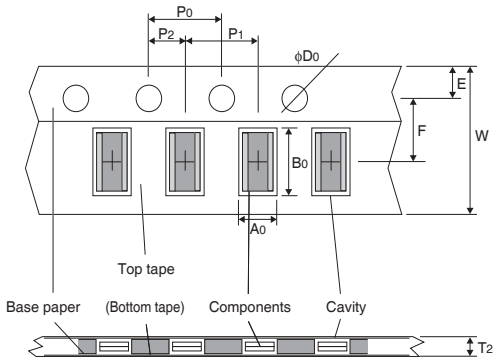
Compliance Standard(s) : IEC60115–8
JISC 5201–8

●Technical data

Parameter	Unit	LTR10	LTR18	LTR50	LTR100
Insulation resistance	MΩ	–	1000	1000	1000
Failure rate	Fit	–	0.4928	0.6698	–
Weight	mg/pc	5.58	10.02	24.18	38.15

●Tape Dimensions

■ Paper Tape

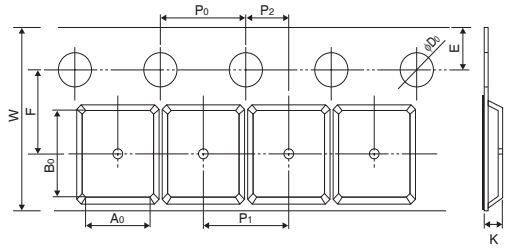


(Unit : mm)

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	$\phi1.5^{+0.1}_{0}$	4.0±0.1	4.0±0.1	2.0±0.05	Max 1.1
LTR18	$\phi1.5^{+0.1}_{0}$	4.0±0.1	4.0±0.1	2.0±0.05	Max 1.1

■ Embossed Tape

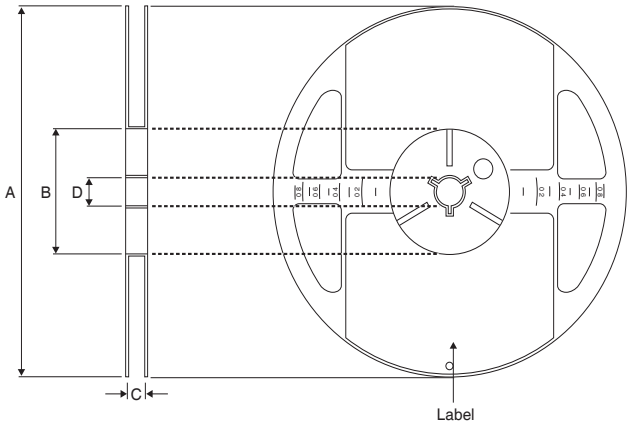


(Unit : mm)

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	$\phi1.5^{+0.1}_{0}$	4.0±0.1	4.0±0.1	2.0±0.05	Max 1.1
LTR100	$\phi1.5^{+0.1}_{0}$	4.0±0.1	4.0±0.1	2.0±0.05	Max 1.1

●Reel Dimensions



ACCORDING TO EIAJ ET-7200B

(Unit : mm)

Part No.	A	B	C	D
LTR10	$\phi180^{0}_{-1.5}$	$\phi60^{+1.0}_{0}$	$9^{+1.0}_{0}$	φ13±0.2
LTR18				
LTR50			$13^{+1.0}_{0}$	
LTR100				

Notes

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