High Power Chip Resistors <Wide Terminal type><Anti-surge>

LTR100 JZP series

Datasheet

[PRODUCT SPECIFICATIONS]

1. SCOPE

This specification defines the High Power Chip Resistors <Wide Terminal type><Anti-surge>
"LTR100 JZP (including jumper type)", which is a product of ROHM Co., Ltd.

2. CLASSIFICATION

LTR100	JZP	□	□	□□□□ *
TYPE	PACKAGING CODE	TOLERANCE	SPECIAL CODE	RESISTANCE VALUE (IEC CODE)

* Jumper is 「LTR100 JZP J 000」

PACKAGING CODE

CODE	PACKAGE	QUANTITY
JZP	180mm (7inch) reel, embossed tape (4mm pitch)	4,000pcs/reel

TOLERANCE

CODE	D (±0.5%)	F (±1%)	J (±5%)

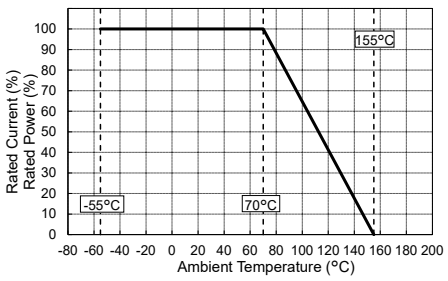
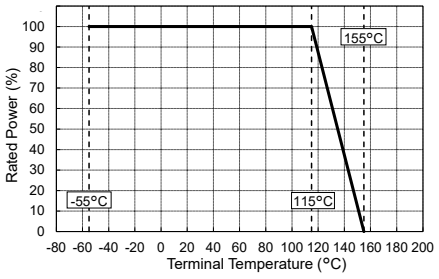
SPECIAL CODE

CODE	L	Resistance range (100mΩ≦R<1Ω)

RESISTANCE VALUE

4 digits	D	F
3 digits	J	

3. RATING

ITEMS	CONDITIONS	SPECIFICATIONS
RATED POWER	For resistors operated at the ambient temperature in excess of 70°C, the load shall be derated in accordance with Fig.1 For resistors operated at the terminal part temperature in excess of 115°C, the load shall be derated in accordance with Fig.2 The measurement part of terminal temperature is center of fillet's surface with load. Fig.1  Fig.2 	3W at Ta=70°C at Tk=115°C Ta : Ambient temperature Tk : Terminal temperature
RATED VOLTAGE	Rated voltage is determined from the following. When rated voltage exceeds the limiting element voltage, the limiting element voltage shall be the rated voltage. $E = \sqrt{P \times R}$ E : RATED VOLTAGE (V) P : RATED POWER (W) R : RESISTANCE (Ω)	LIMITING ELEMENT VOLTAGE: 200 V
RESISTANCE	See Table 1	
OPERATING TEMPERATURE		-55°C～+155°C

Jumper follows the derating curve in Fig 1.

Jumper type

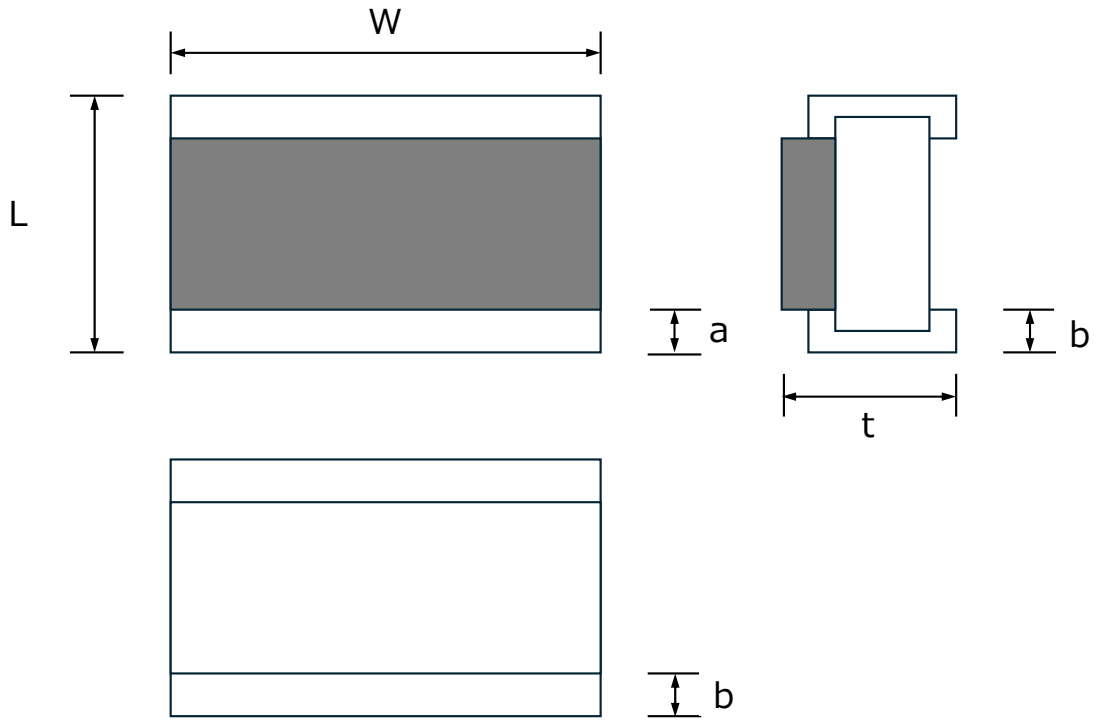
RESISTANCE	MAX. 10mΩ
RATED CURRENT	17.3A
TEMPERATURE RANGE	-55°C～+155°C

Table 1

RESISTANCE RANGE (Ω)	TOLERANCE	SPECIAL CODE	TEMPERATURE COEFFICIENT (ppm/°C) +25°C/-55°C, +25°C/+125°C
10≦R≦1M (E24)	D (±0.5%)	-	±100
100m≦R＜200m (E24)	F (±1%)	L	0~+150
200m≦R＜1 (E24)	F (±1%)	L	0~+100
1≦R≦1M (E24)	F (±1%)	-	±100
100m≦R＜1 (E24)	J (±5%)	L	±200
1≦R≦1M (E24)	J (±5%)	-	±200

4. DIMENSIONS (UNIT : mm)

Simplified outline of external dimensions.

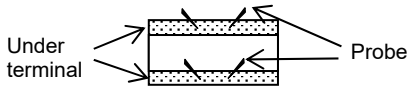


L	W	t	a	b
3.20±0.15	6.40±0.15	0.55±0.15	0.40±0.25	1.13±0.25

5. MARKINGS

There is no marking on the chip resistor.

6. CHARACTERISTICS

ITEMS	GUARANTEED VALUE		TEST CONDITIONS (JIS C 5201-1)
	RESISTOR TYPE	JUMPER TYPE	
6.1 RESISTANCE	D : ±0.5% F : ±1% J : ±5%	MAX. 10mΩ	JIS C 5201-1 6.1 Measuring method : 4 probes per terminal 
6.2 VARIATION OF RESISTANCE WITH TEMPERATURE	See Table 1	MAX. 10mΩ	JIS C 5201-1 6.2 Measurement : +25°C/-55°C, +25°C/+125°C
6.3 OVERLOAD	±(2.0%+0.1Ω)	MAX. 10mΩ	JIS C 5201-1 8.1 Rated voltage(current)×2.0, 5s ×2.5, 5s (Jumper) Max. overload voltage : 400V
6.4 SOLDERABILITY	A new uniform coating of minimum of 95% of the surface being immersed and no soldering damage.		JIS C 5201-1 11.1 Rosin-Ethanol solution 25%(mass) Soldering condition : 245±5°C Duration of immersion : 2.0±0.5s.
6.5 RESISTANCE TO SOLDERING HEAT	±(1.0%+0.05Ω) No remarkable abnormality on the appearance.	MAX. 10mΩ	JIS C 5201-1 11.2 Soldering condition : 260±5°C Duration of immersion : 10±1s.
6.6 RAPID CHANGE OF TEMPERATURE	±(1.0%+0.05Ω)	MAX. 10mΩ	JIS C 5201-1 10.1 Test temp. : -55°C～+125°C Test time : 1,000cycles
6.7 DAMP HEAT, STEADY STATE	±(3.0%+0.1Ω)	MAX. 10mΩ	JIS C 5201-1 10.4 Test temp. : 85°C Relative Humidity : 85% Test time : 1,000h
6.8 ENDURANCE AT 70°C	±(1.0%+0.05Ω)	MAX. 10mΩ	JIS C 5201-1 7.1 Test temp. : Ta=70°C Tk=115°C Rated voltage(current) : 1.5h ON / 0.5h OFF Test time : 1,000h
6.9 ENDURANCE AT MAXIMUM TEMPERATURE	±(1.0%+0.05Ω)	MAX. 10mΩ	JIS C 5201-1 7.3 Test temp. : 155°C Test time : 1,000h
6.10 RESISTANCE TO SOLVENT	±(1.0%+0.05Ω)	MAX. 10mΩ	JIS C 5201-1 11.3 23±5°C, Immersion cleaning, 5±0.5min Solvent : Isopropyl alcohol
6.11 BEND STRENGTH OF THE END FACE PLATING	±(1.0%＋0.05Ω) Without mechanical damage such as breaks.	MAX. 10mΩ	JIS C 5201-1 9.8 Endurance with 90mm width Deflection : 3mm
6.12 STATIC ELECTRIC CHARACTERISTICS	±(5.0%+0.05Ω)	MAX. 10mΩ	EIAJ ED–4701/300 TEST METHOD304 Voltage : 3kV C : 100pF R : 1.5kΩ Apply cycle : 1 time

[PACKAGE SPECIFICATIONS]

1. SCOPE

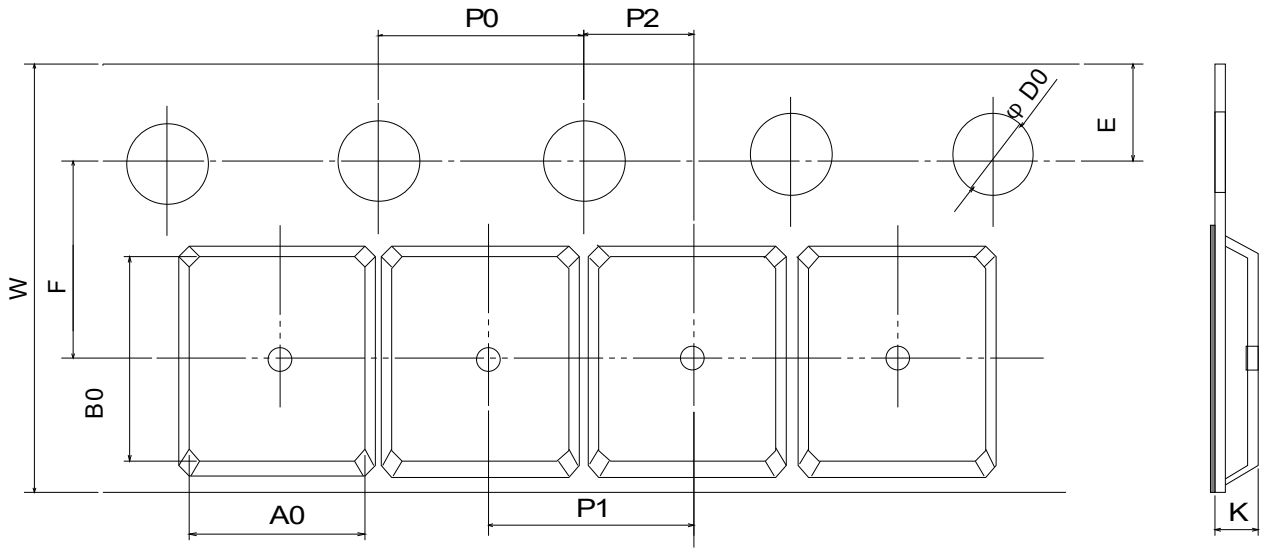
This specification defines the taping specifications for High Power Chip Resistors <Wide Terminal type><Anti-surge> "LTR100 JZP (including jumper type)".

2. PACKAGING CODE

LTR100	JZP	□	□	□□□□
TYPE	PACKAGING CODE	TOLERANCE	SPECIAL CODE	RESISTANCE VALUE (IEC CODE)

PACKAGING CODE : See page 1/8.

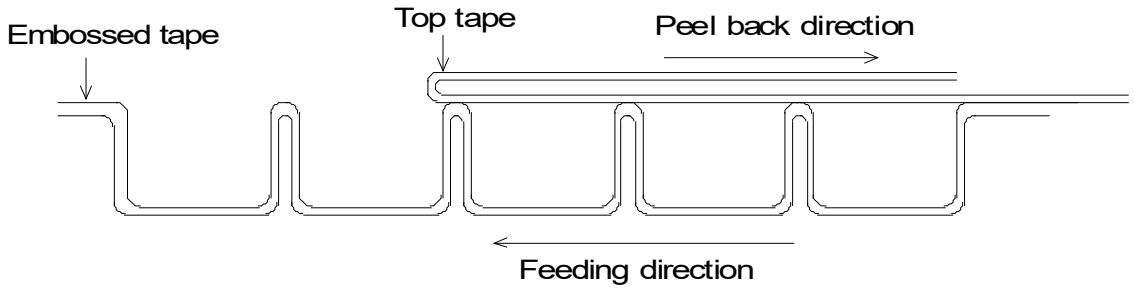
3. TAPE DIMENSION (UNIT : mm)



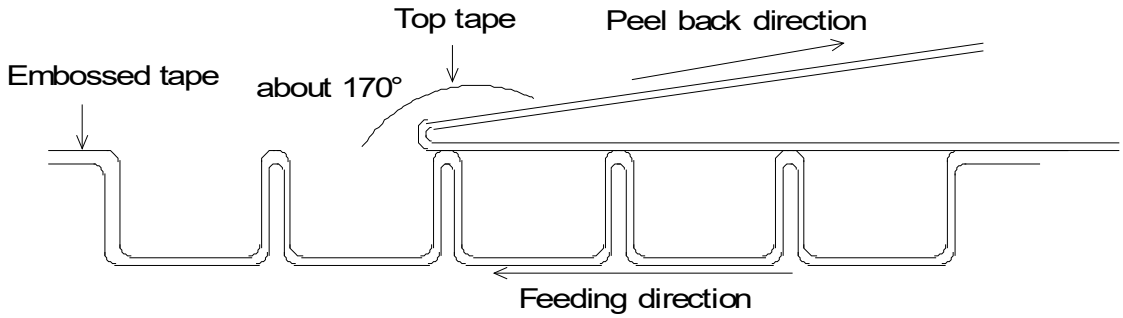
W	F	E	A0	B0
12.0±0.3	5.5±0.05	1.75±0.1	3.5±0.2	6.7±0.2
D0	P0	P1	P2	K
φ1.5 +0.1 0	4.0±0.1	4.0±0.1	2.0±0.05	MAX.1.1

4. MECHANICAL CHARACTERISTICS

4.1 COVER TAPE PEELING STRENGTH
: 0.1N ≦ PEELING STRENGTH ≦ 0.8N



4.2 Embossed tape should not adhere to top tape when top tape is peeled back, and peel back direction is as follows.



4.3 DURABILITY OF COVER TAPE (TOP TAPE)
Top tape shall not be off the base paper after 120h at the atmosphere of 60±3°C, 90～95%(Relative Humidity).

5. TAPE PACKAGING

5.1 Components are set in tape cavities with the same side (resistive paste upside).

5.2 The accumulated pitch tolerance shall be within ±0.2mm at 10 pitches.

5.3 Tape bent resistance
No damage on the tape and the cavity when tape is bent with the radius of 15mm.

5.4 Components in tape cavity shall not adhere to bottom / cover tape.

5.5 Components shall not be blocked by tape fragments or foreign materials when they are taken out from cavities.

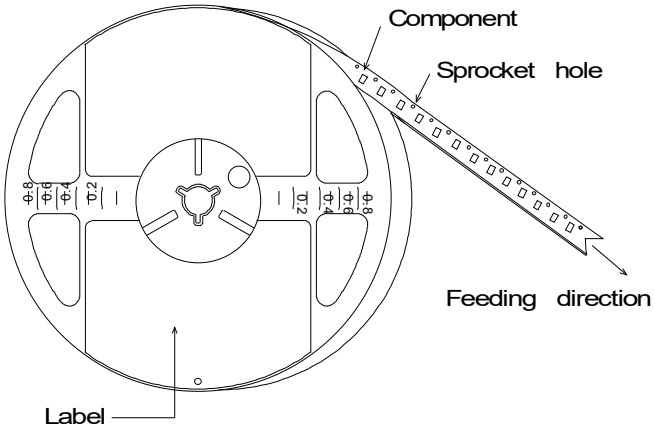
5.6 The top tape shall not cover up the sprocket holes of tape.

5.7 The number of missing components shall not exceed 0.1% of the total number of components (marked number) or one whichever is the larger, and no consecutive missing exceeding two is allowed.

6. TAPE REEL

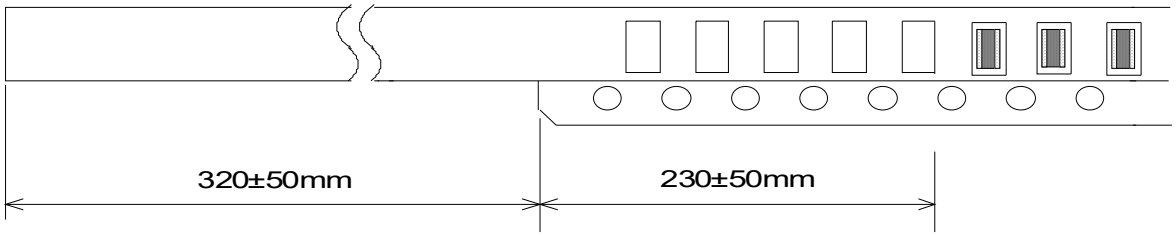
6.1 Tape feeding direction

Tape feeding direction shall be shown in the picture drawn below.



6.2 Leader tape

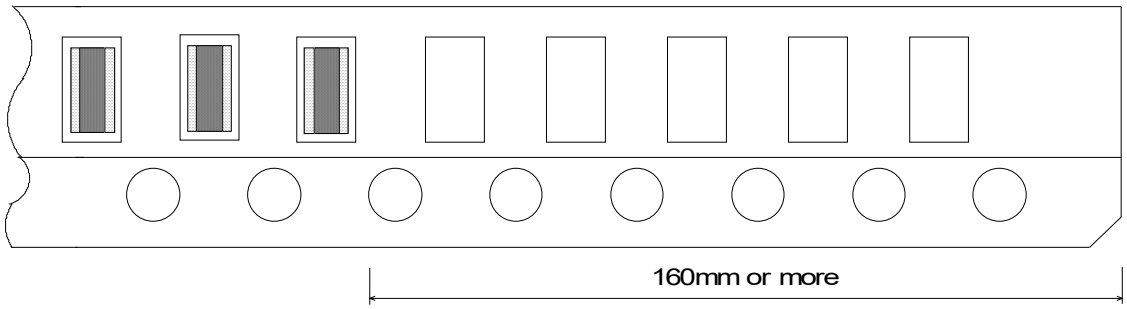
Leader tape is given a portion of only cover tape and of blank cavities. (no resistor.)



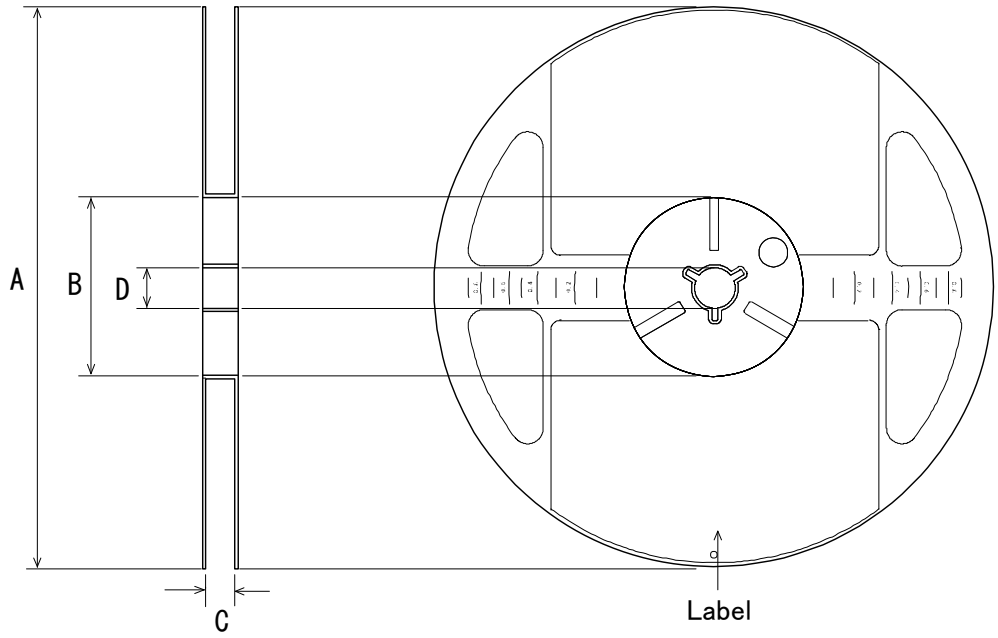
(Note) The leader portion of cover tape will not stick to embossed tape. (about 50～100mm)

6.3 Trail tape

Trail tape is given a portion of blank cavities (no resistor).
And the trail tape should not be fixed by adhesive to reel and must be the one which can be pulled out easily from the reel.



7. REEL DIMENSIONS (UNIT : mm)



A	B	C	D
φ180 0 -1.5	φ60 +1 0	13 +1.0 0	φ13±0.2

MATERIAL

REEL : POLYSTYRENE