

# High Power Chip Resistors<Wide Terminal type>

## LTR50 (5025 size : 1W)

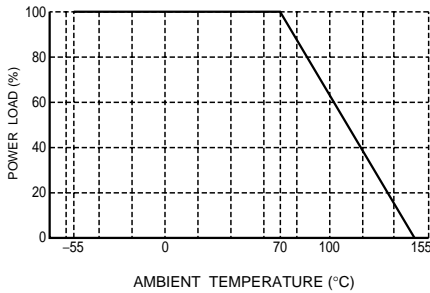
### ●Features

- 1) Improved welding strength  
The structure of longer electrodes provides the wider welding area than the chip resistors with normal electrodes, and this enhanced the solder welding strength.
- 2) Increased surge-resistance  
This is achieved by Rohm's original trimming technology plus resistive element patterning.
- 3) High-power tolerance  
Two times of the rated power is guaranteed than the normal-electrode resistors.
- 4) ROHM resistors are ISO-9001 & ISO/TS16949 certified.  
Design and specifications are subject to change without notice. Carefully check the specification sheet before using or ordering it.

### ●Applications

Automotive, industrial and power supply.

### ●Ratings

Item	Conditions	Specifications		
Rated power	<p>Power must be derated according to the power derating curve in Figure 1 when ambient temperature exceeds 70°C.</p>  <p style="text-align: center;">Fig.1</p>	1W at 70°C		
Rated voltage	<p>The voltage rating is calculated by the following equation. If the value obtained exceeds the limiting element voltage, the voltage rating is equal to the maximum operating voltage.</p> $E = \sqrt{P \times R}$ <p style="text-align: center;">E: Rated voltage (V) P: Rated power (W) R: Nominal resistance (Ω)</p>	<table border="1" style="width: 100%;"> <tr> <td>Limiting element voltage</td> <td>200V</td> </tr> </table>	Limiting element voltage	200V
Limiting element voltage	200V			
Nominal resistance	See Table 1.			
Operating temperature	D(±0.5%) F(±1%) J(±5%)	-55°C to + 155°C		

## Resistors

Table 1

Resistance tolerance	Resistance range ( $\Omega$ )	Resistance temperature coefficient (ppm/ $^{\circ}$ C)
D ( $\pm 0.5\%$ )	10 $\leq$ R $\leq$ 130k (E24)	$\pm 100$
F ( $\pm 1\%$ )		$\pm 100$
J ( $\pm 5\%$ )		$\pm 200$

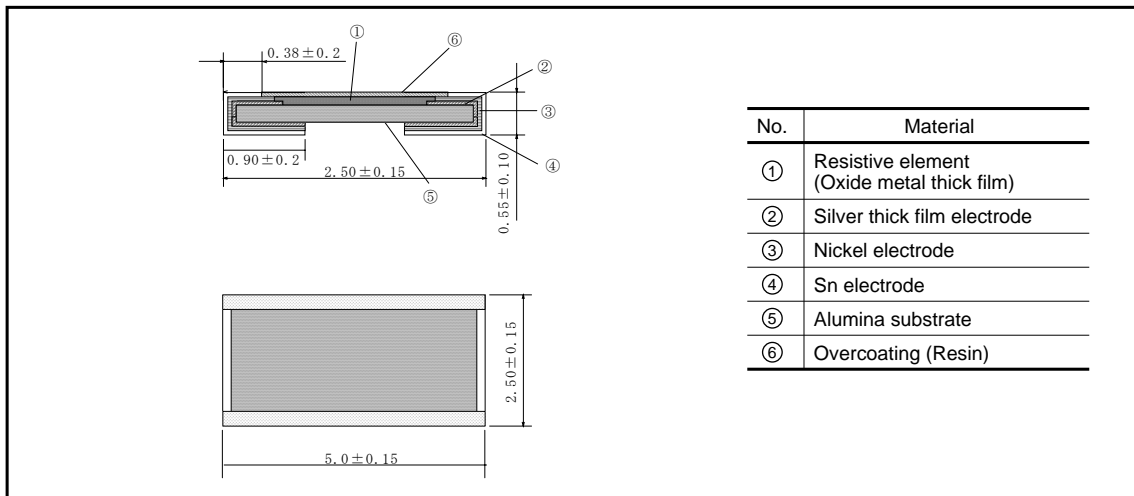
- Before using components in circuits where they will be exposed to transients such as pulse loads (short-duration, high-level loads), be certain to evaluate the component in the mounted state. In addition, the reliability and performance of this component cannot be guaranteed if it is used with a steady state voltage that is greater than its rated voltage.

## ● Characteristics

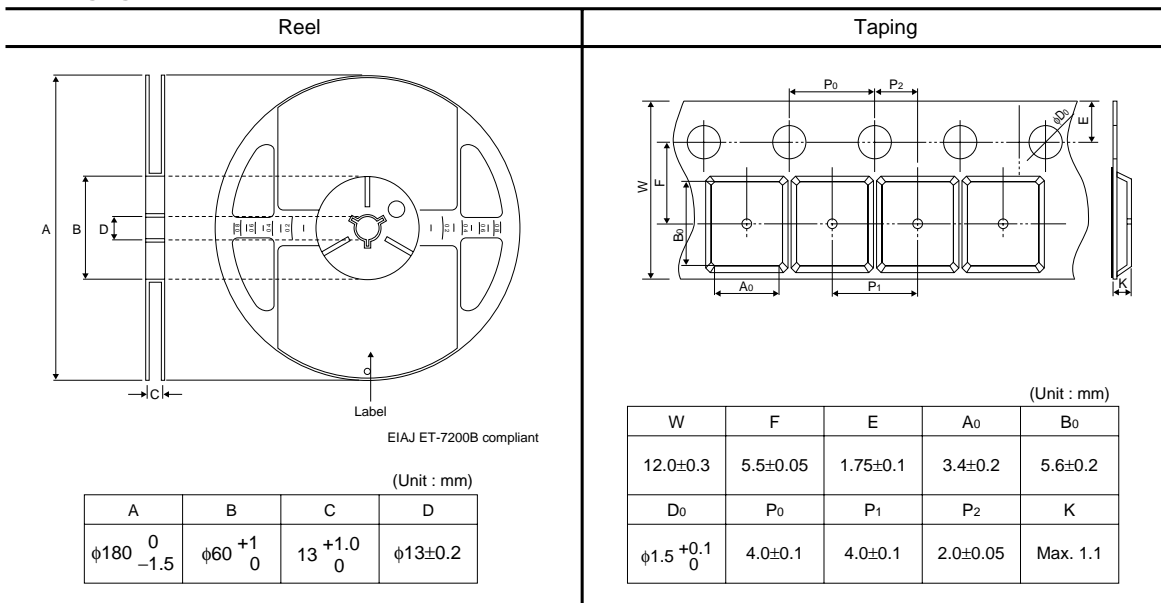
Item	Guaranteed value	Test conditions (JIS C 5201-1)
	Resistor type	
Resistance	J : $\pm 5\%$ F : $\pm 1\%$ D : $\pm 0.5\%$	JIS C 5201-1 4.5
Variation of resistance with temperature	See <a href="#">Table.1</a>	JIS C 5201-1 4.8 Measurement : $-55 / +25 / +125^{\circ}$ C
Overload	$\pm (2.0\%+0.1\Omega)$	JIS C 5201-1 4.13 Rated voltage (current) $\times 2.5$ , 2s. Maximum overload voltage : 200V
Solderability	A new uniform coating of minimum of 95% of the surface being immersed and no soldering damage.	JIS C 5201-1 4.17 Rosin-Ethanol (25%WT) Soldering condition : $235\pm 5^{\circ}$ C Duration of immersion : $2.0\pm 0.5$ s.
Resistance to soldering heat	$\pm (1.0\%+0.05\Omega)$ No remarkable abnormality on the appearance.	JIS C 5201-1 4.18 Soldering condition : $260\pm 5^{\circ}$ C Duration of immersion : $10\pm 1$ s.
Rapid change of temperature	$\pm (1.0\%+0.05\Omega)$	JIS C 5201-1 4.19 Test temp. : $-55^{\circ}$ C to $+125^{\circ}$ C 5cyc
Damp heat, steady state	$\pm (3.0\%+0.1\Omega)$	JIS C 5201-1 4.24 $40^{\circ}$ C, 93%RH Test time : 1,000h to 1,048h
Endurance at $70^{\circ}$ C	$\pm (3.0\%+0.1\Omega)$	JIS C 5201-1 4.25.1 Rated voltage (current), $70^{\circ}$ C 1.5h : ON – 0.5h : OFF Test time : 1,000h to 1,048h
Endurance	$\pm (3.0\%+0.1\Omega)$	JIS C 5201-1 4.25.3 $155^{\circ}$ C Test time : 1,000h to 1,048h
Resistance to solvent	$\pm (1.0\%+0.05\Omega)$	JIS C 5201-1 4.29 $23\pm 5^{\circ}$ C, Immersion cleaning, $5\pm 0.5$ min. Solvent : 2-propanol
Bend strength of the end face plating	$\pm (1.0\%+0.05\Omega)$ Without mechanical damage such as breaks.	JIS C 5201-1 4.33
Static electric characteristics	$\pm (5.0\%+0.05\Omega)$	EIAJ ED-4701/300 Test method 304 Voltage : 3kv C : 100pF R : 1.5k $\Omega$ Apply cycle : 1 time

Resistors

●Dimensions (Unit : mm)

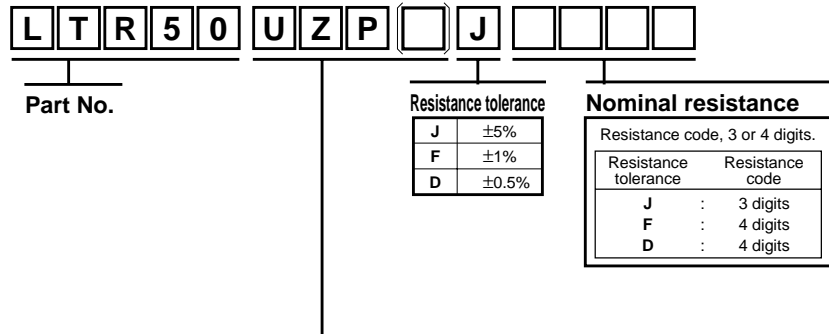


●Packaging



Resistors

●Part designation



**Packaging Specifications Code**

Part No.	Code	Resistance tolerance			Packaging specifications	Reel	Basic ordering unit (pcs)
		D(±0.5%)	F(±1%)	J(±5%)			
LTR50	UZP	⊙	⊙	⊙	Embossed tape (4mm Pitch)	φ180mm (7inch)	5,000

Reel (φ180mm) : Compatible with JEITA standard "EIAJ ET-7200B"  
 ⊙ : Standard product

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