

# Specifications

Products Name	Low Resistance Chip Resistor
Product Series	FLRV6432WCR***F
Classification	Generic specification

# FLRV6432W Low Resistance Chip Resistor Specification

## 1. Application

This specification is applicable to FLRV6432W series for low resistance chip resistors.

## 2. Part numbering system

**FLR V6432 W C R\*\*\* F**

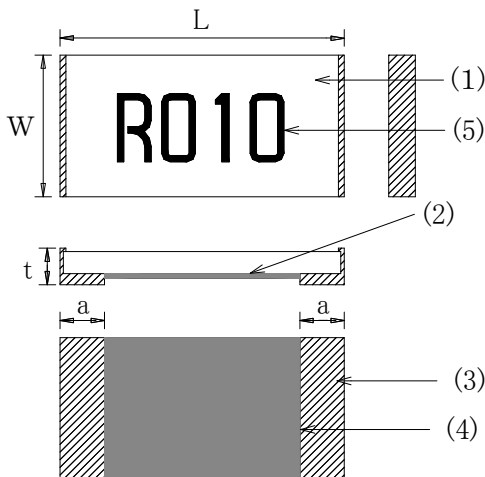
(1)      (2)      (3)      (4)      (5)      (6)

(1) Product series	Foil Low Resistance
(2) Size	Short-side electrode 6.4*3.2mm size
(3) Side-electrode type	Wrap around
(4) Characteristic type	High operating temperature type
(5) Nominal Resistance	(example) 100mΩ → R100
(6) Resistance tolerance	F (±1.0%) G(±2.0%) J(±5.0%)

## 3. Structure

Ceramic substrate is adhered to metal foil resistive element.  
Terminals are formed on top of the foil.

## 4. Dimensions



- (1) Substrate : Alumina
- (2) Resistive element : Ni-Cu alloy
- (3) Terminal : Plated Ni/Sn over Cu
- (4) Protective coating : Epoxy (green)
- (5) Marking : Epoxy (black)

Symbol	Dimensions (mm)		
	~4m ohm	5~8m ohm	9m ohm~
L	6.3±0.2	6.3±0.2	6.3±0.2
W	3.1±0.2	3.1±0.2	3.1±0.2
a	2.5±0.2	1.9±0.2	1.0±0.2
t	0.5±0.2	0.5±0.2	0.5±0.2

## 5. Marking

Resistance value code is marked on the top surface.      Example) 100mΩ → R100

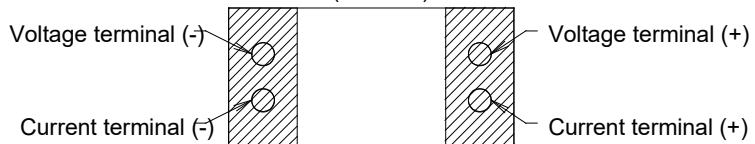
## 6. Schematic Diagram, Measurement Point

Schematic diagram



Measurement point

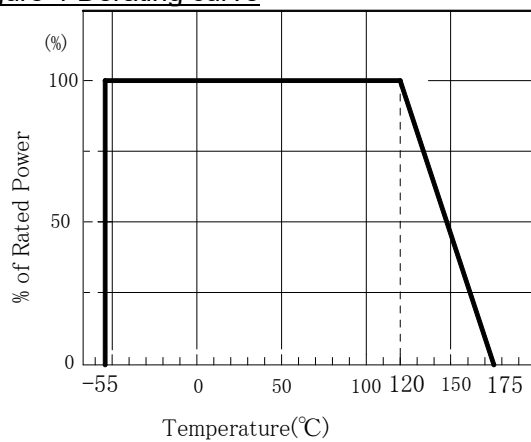
( bottom )



## 7. Specification

Parameter	Specification
Resistance Value	3 to 680mΩ (possible state of Value)
Resistance Tolerance	±1.0% (F), ±2.0% (G), ±5.0% (J)
Temperature Coefficient of Resistance	±50ppm/°C
Power Rating	2W (Derating Curve···Figure-1)
Maximum Over Current	Which smaller between: $I = \sqrt{36/R}$ [ A ] Power:36(W) R:Resistance(Ω) I=70A (10m sec. max.) Interval 60 sec. Minimum. 10times.
Operating Temperature Range	-55 ~ +175°C
Rated Ambient Temperature	+120°C

Figure-1 Derating curve



## 8. Performance

Test Item	Test Conditions	Specification
Short Time Over Load	Voltage of 1.5 times the rated power shall be applied for 5s.	±1.0%
Load life	Rated power on for 90 min, off for 30 min at 70±3°C for 1000h.	±1.0%
Moisture Load life	Rated power for 90 min, off for 30 min at 60±2°C, relative humidity of 90% for 1000h.	±2.0%
Temperature Cycle	[-55°C 30 min → R.T. 3min → +155°C 30 min → R.T. 3min]	±1.0%
		±2.0%
Resistance to soldering heat	260±5°C solder, 10±1sec dip	±0.5%
Board Bending	Test board length: 90mm Bend depth: 2mm Test board: Glass-Epoxy t=1.6mm	±1.0%
Solderability	245±5°C solder, 3+1/-0 sec dip.	90% terminal surface coverage by fresh solder

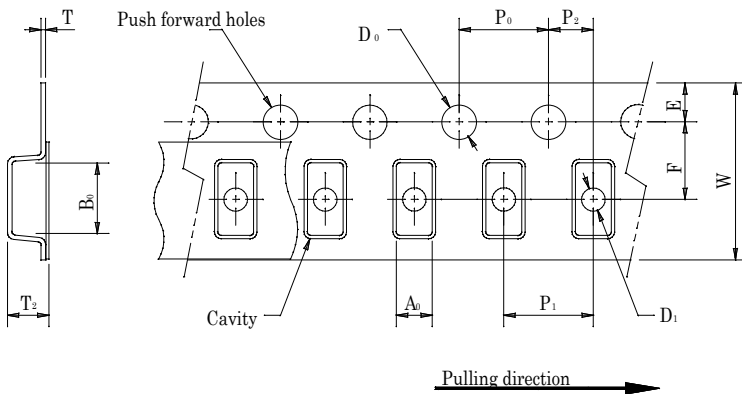
9. Packaging

Packing quantity	5,000 pieces/reel
Taping form	Figure-2
Peeling strength of seal tape	Figure-3
Reel form	Figure-4
Taping direction	Figure-5

Label contents: The following items shall be printed on the reel label. (Figure-6)

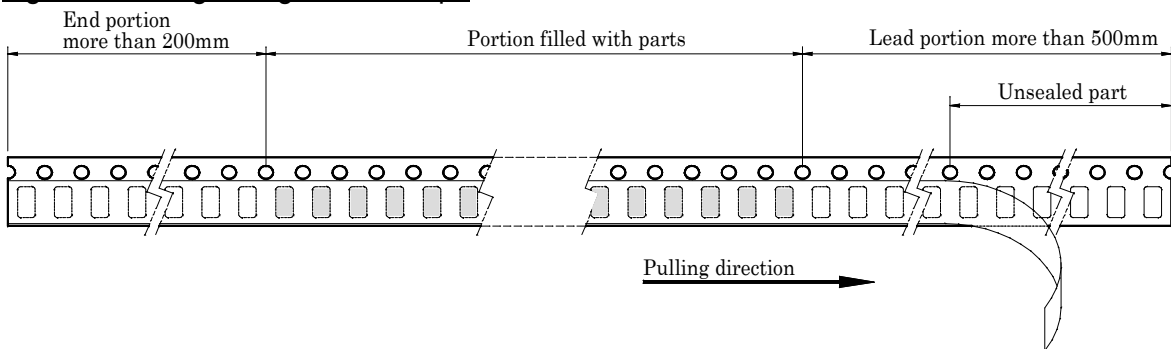
Part number
Quantity for each reel
Manufacturing month code
Manufacturer
Inspection number (Lot number)
The country of origin
Double dashed line which shows lead free

Figure-2 Plastic Tape···Taping form



Symbol	Dimensions (mm)
A <sub>0</sub>	3.43 ±0.2
B <sub>0</sub>	6.63 ±0.2
W	12.0 ±0.3
F	5.50 ±0.05
E	1.75 ±0.1
P <sub>0</sub>	4.00 ±0.1
P <sub>1</sub>	4.00 ±0.1
P <sub>2</sub>	2.00 ±0.05
D <sub>0</sub>	1.50 +0.1/-0
D <sub>1</sub>	1.50 +0.2/-0
T	0.20 ±0.05
T <sub>2</sub>	0.76 ±0.1

Figure-3 Peeling strength of seal tape



F = peeling strength: 0.1 - 0.7N (10 - 71gf)

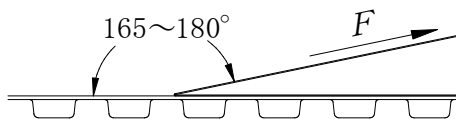
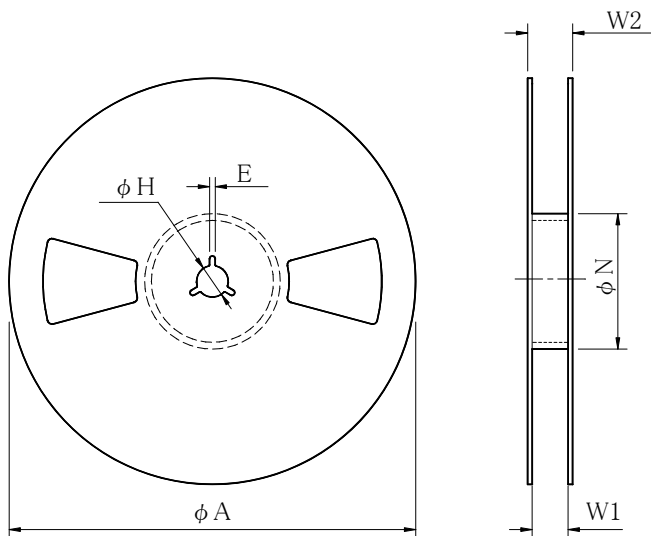


Figure-4 Reel form



Symbol	Dimensions
	T5
$\Phi A$	180+0.0/-3.0
$\Phi H$	13.0±0.2
$\Phi N$	60±1.0
E	2.0±0.5
W1	13.0±0.3
W2	Less than 18.4

(unit: mm)  
Material: Plastic

Figure-5 Taping direction

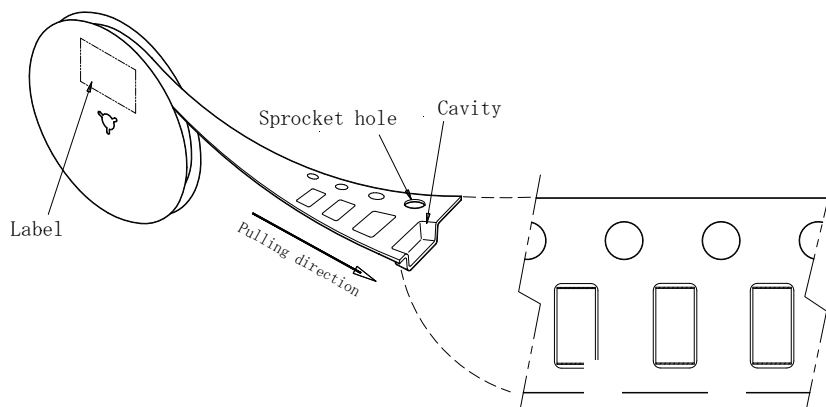
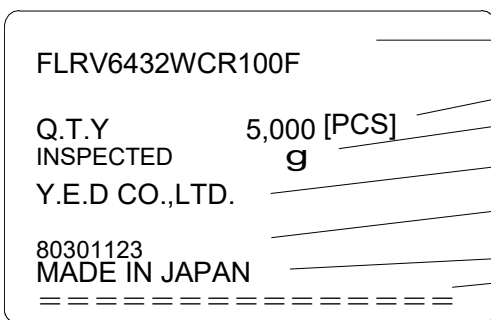


Figure-6 Label contents

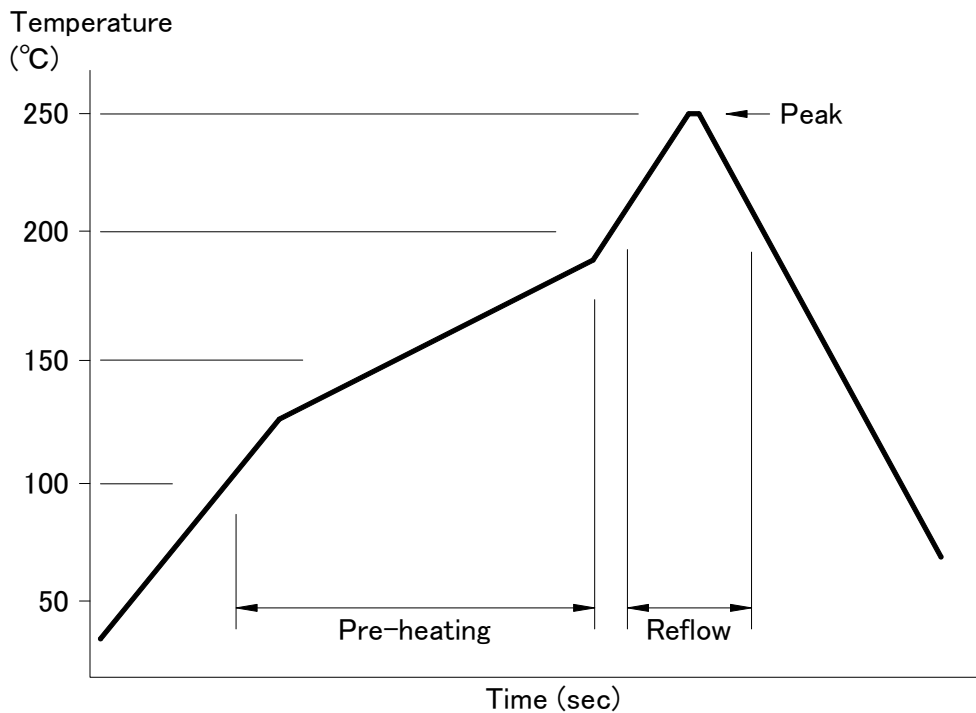


- Part number \_\_\_\_\_
- Quantity for each reel \_\_\_\_\_
- Manufacturing month code \_\_\_\_\_
- Manufacturer \_\_\_\_\_
- Inspection number (Lot number) \_\_\_\_\_
- The country of origin \_\_\_\_\_
- Double dashed line shows lead free \_\_\_\_\_

10. Recommended implementation temperature profile

10.1 Reflow temperature profile

Twice reflows are allowed by the following temperature profile



Pre-heating	130~180°C	60~90sec
Reflow	220°C Max	30~90sec
Peak	240~260°C	10sec Max

10.2 Flow temperature profile

Less than 260°C 10sec Max

10.3 Hand solder attachment conditions

Work in 3 seconds or less is [temperature of 350°C] possible.

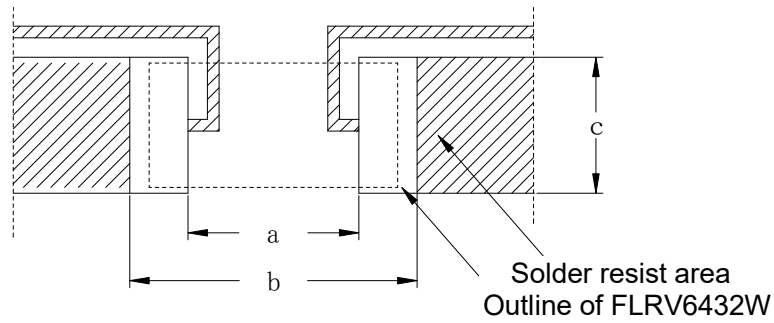
When soldering with a soldering iron, heating is performed on a land and the point does not hit the main part of a product. Please carry out.

11. Recommended land pattern (for current sensing)

Substrate material: Glass epoxy (FR-4)

Thickness: 0.6mm

Copper thickness (both sides): 100µm



Resistance	Dimensions (mm)		
	a	b	c
~4mΩ	1.20	7.40	3.50
5 to 8mΩ	2.50	7.40	3.50
9mΩ~	4.40	7.40	3.50

12. Storage note

- (1) To maintain good solderability, Store the components in the temperature and humidity controlled room.  
Temperature: 5~35°C Humidity: 45~85% RH
- (2) Store the components at the place avoiding moisture, dust and corrosive harmful gas (hydrogen chloride, sulfurous acid gas and hydrogen sulfide) that may cause the decrease in solderability.
- (3) Store the components at the place avoiding direct sunlight.