

## WNCR Series

**OBSOLETE**

### Features

- Reduced placement cost
- Compact size
- Zero ohms also available
- Design flexibility



All parts are Pb-free and comply with EU Directive 2011/65/EU amended by (EU) 2015/863 (RoHS3)

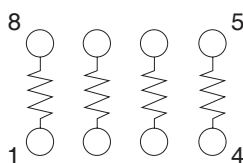
## Electrical Data

		WNCR
Power rating per resistor at 70°C	watts	0.063
Resistance range (E24)	ohms	10 to 1M
TCR -55 to 125°C	ppm/°C	±200
Resistance tolerance	%	±5
Maximum overload voltage	volts	100
Maximum working overload	volts	50
Ambient temperature range	°C	-55 to +125

## Physical Data

Dimensions (mm)										
Type	L	W	a	b	c	d	p	t		
<b>WNCR 164</b> Concave	3.20	1.60	0.50	0.5	0.35	0.40	0.8	0.45		
<b>Terminations</b>	±0.15	±0.15	±0.15		±0.15	±0.15		±0.10		
Type	L	W	a	b	c	d	p	t		
<b>WNCR 168</b> Convex	3.20	1.60	0.60	0.40	0.25	0.30	0.8	0.50		
<b>Terminations</b>	±0.10	±0.10	±0.15	±0.15	±0.15	±0.20		±0.10		

## Schematic



### Construction

**Substrate** Alumina  
**Resistor** Ruthenium Oxide  
**Terminations** Nickel & solder plated

### Solderability

At least 95% of the terminal area shall be covered by continuous smooth new solder.

### Marking

Normal resistance value is marked on the top of the resistor with three digits.

The first two digits are significant of the nominal value and the third digit is the multiplier.

#### General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

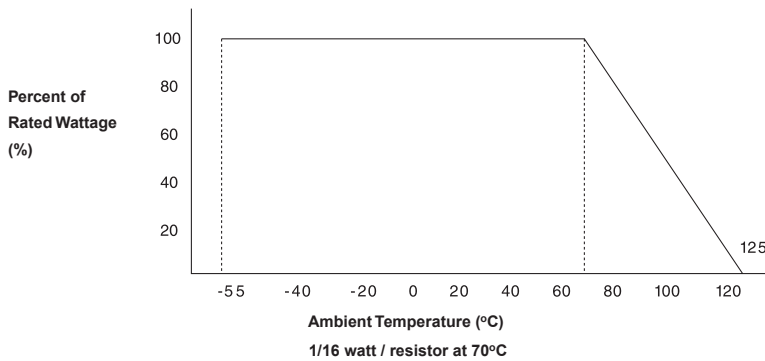
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## Performance Data

		Typical Performance
Short term overload	ΔR%	2.5
Resistance to solder heat	ΔR%	2.0
Temperature cycling	ΔR%	2.0
Moisture load life: 1000 hrs at 40°C	ΔR%	3.0
Load life: 1000 hrs at 70°C	ΔR%	3.0
Low temperature exposure: 1000 hrs at -55°C	ΔR%	3.0
High temperature exposure: 1000 hrs at 125°C	ΔR%	3.0
Humidity exposure: 1000 hrs at 40°C	ΔR%	3.0

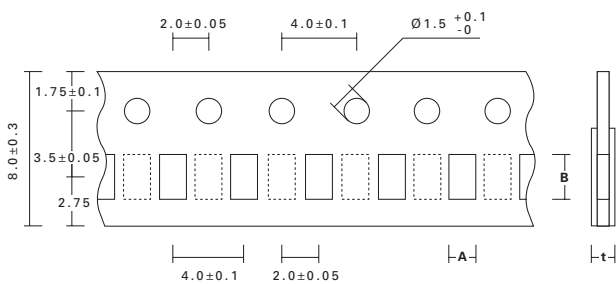
## Power Rating

For ambient temperature above 70°C, the power shall be derated as follows:



## Packaging

Taping Characteristics (mm)



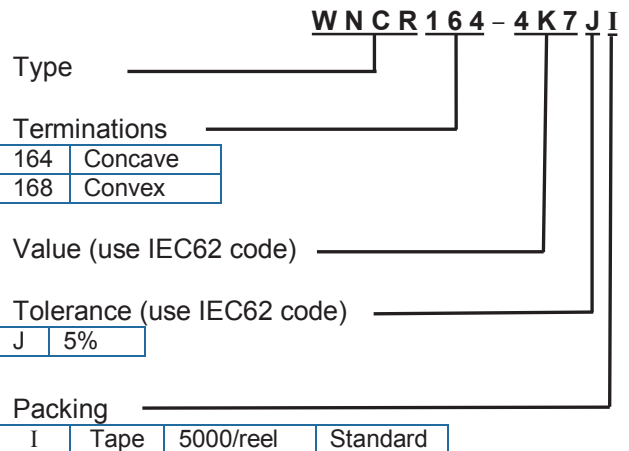
	A	t	B
WNCR	2.0 +0.1 -0.15	0.8 ±0.2	3.75 +0.1 -0.15

## Packaging

Resistor arrays are supplied tape and reel.  
Quantity 5,000 pcs per reel.

## Ordering Procedure

Example: WNCR with concave terminations at 4.7 kilohms and 5% tolerance on a reel of 5000 pieces



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