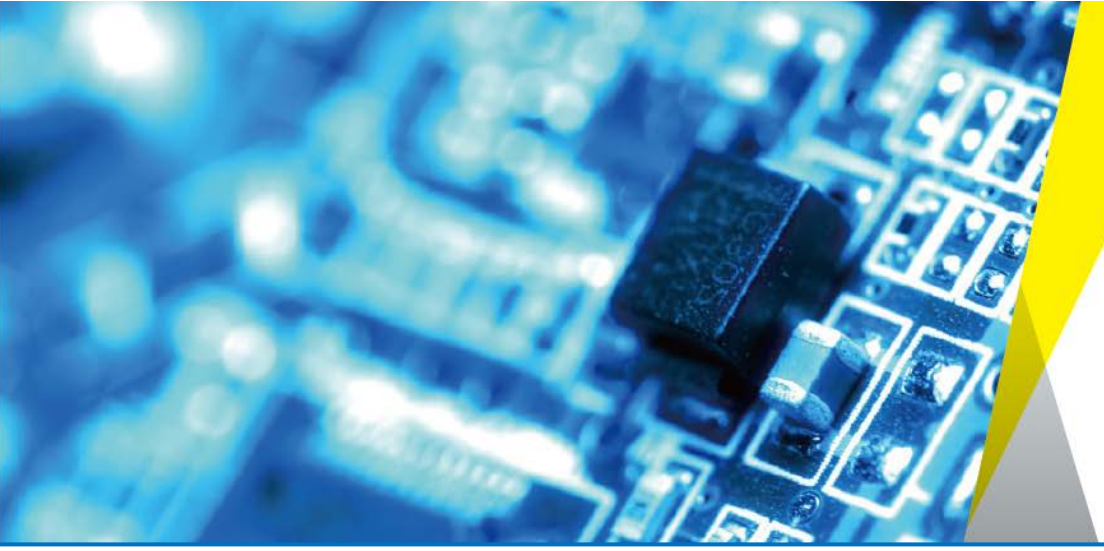

DATASHEET

Product Name	**Vitreous Enamel Power Wire-wound Resistors**
Part Name	**VWT1 90W~375W ±5%、±10% Series**
Part No.	**VWT1************
File No.	**DIP-SP-121**

Uniroyal Electronics Global Co., Ltd.

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	Royal Electronic Factory (Thailand) Co., Ltd.
	Royal Technology (Thailand) Co., Ltd.

1. Scope

1.1 This datasheet is the characteristics of Vitreous Enamel Power Wire-wound Resistors manufactured by UNI-ROYAL.

1.2 It is moisture-resistant, has high insulation, strong overload capacity, good thermal stability and long service life.

1.3 Good thermal stability and reliability.

1.4 Strong resistance to corrosion and harsh environment.

1.5 It is applicable to power supply testing,circuit load,frequency converter, lifting,braking,power,shipbuilding,industrial automation and other electromechanical equipment.

2. Part No. System

The standard Part No. includes 14 digits with the following explanation:

2.1 1^{st}~4^{th} codes: Product type. E.g.: VWT1=Tubular Ceramic, Fixed, 1 High Bracket;

2.2 The 5^{th} digits:

The 5^{th} digit indicates the type of bracket

Example: C=C Slotted type bracket ; L=Elongated type bracket

2.2 The 6^{th} digits: Special features.

Example: 0=Standard ; S=Special

2.3 The 7^{th} digit is to denote the Resistance Tolerance. The following letter code is to be used for indicating the standard Resistance Tolerance.

J=±5% K= ±10%

2.4 The 8^{th} to 11^{th} digits is to denote the Resistance Value.

2.4.1 If value belongs to standard value of E-24 series 5%&10%, the 8^{th} code is zero, 9^{th}~10^{th} codes are the significant figures of resistance value, and the11^{th} code is the power of ten.

2.4.3 The following number s and the letter codes are to be used to indicate the number of zeros in the 11^{th} digit:

$0=10^0$ $1=10^1$ $2=10^2$ $3=10^3$ $4=10^4$ $5=10^5$ $6=10^6$ $J=10^{-1}$ $K=10^{-2}$ $L=10^{-3}$ $M=10^{-4}$

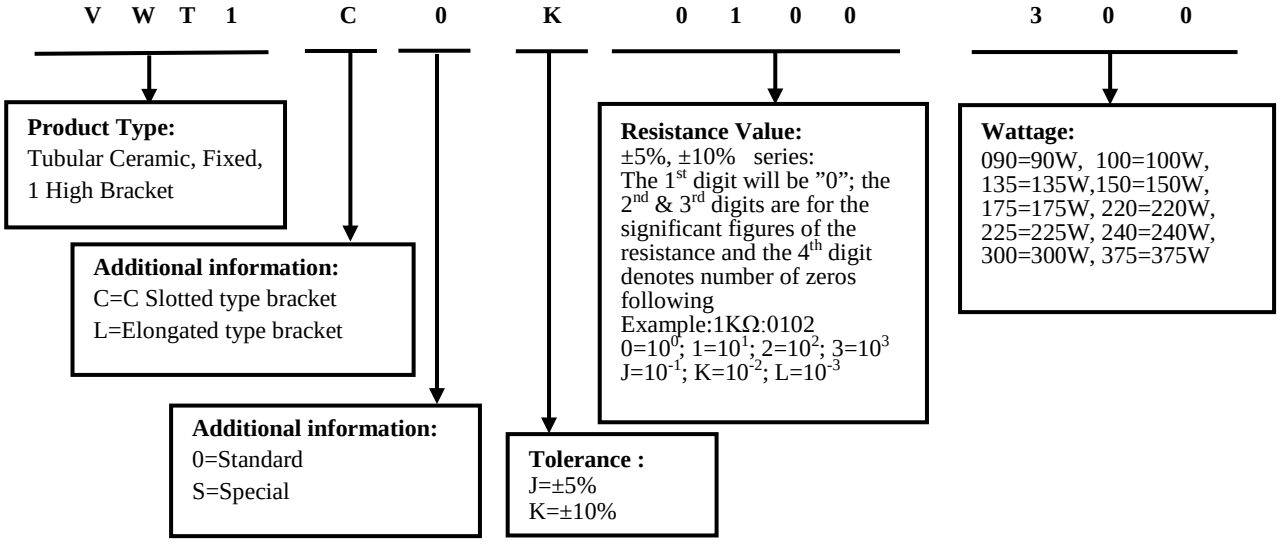
2.5 The 12^{th}, 13^{th} & 14^{th} digits.

2.5.1 The 12^{th} to the 14^{th} digits are to denote the actual wattage of the products.

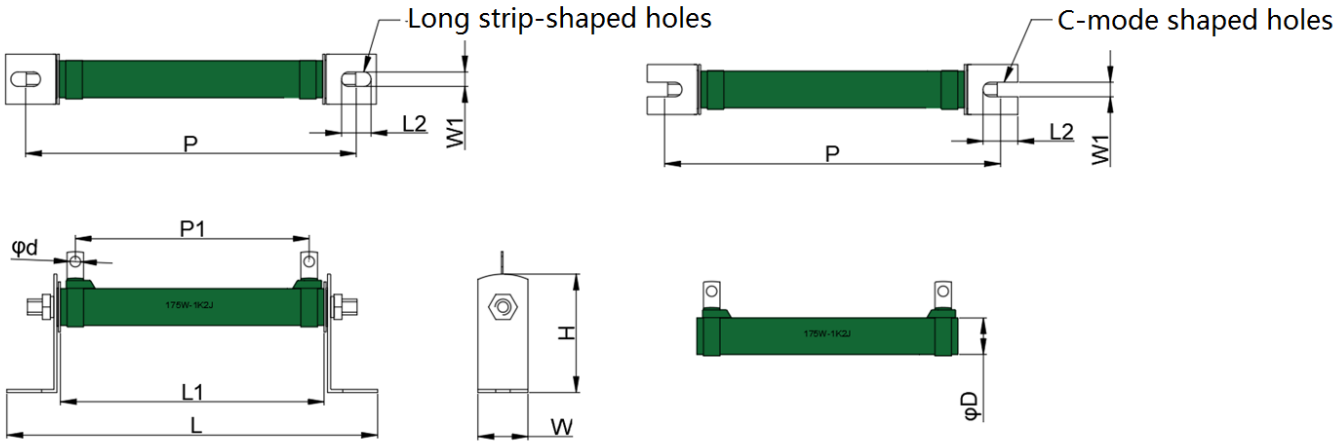
Example: 090 = 90W 100 = 100W 220=220W

3. Ordering Procedure

(Example: VWT1 300W ±10% 10Ω B/B)



4. Dimension& Ratings

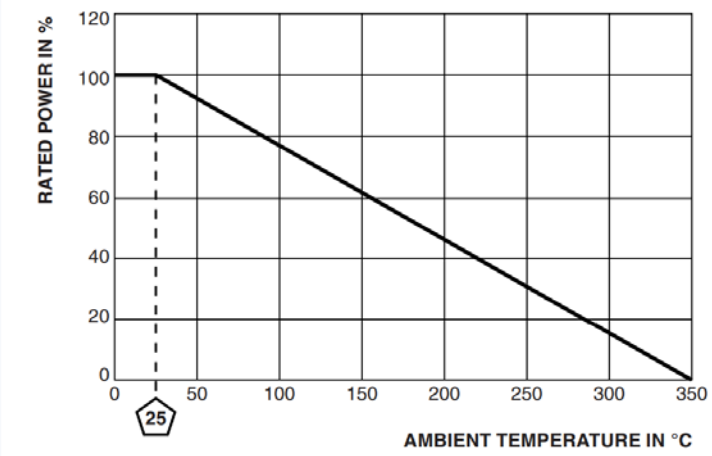


Unit：mm

Type	L ±5	L1 ±2	L2 ±1	ΦD ±2	W ±2	W1 ±0.5	H ±2	P ±5	P1 ±5	Φd +0.5/-0	Resistance Range	Remarks	Tolerance	Operating Temperature
VWT1 90W	144	101	11	14	13	5.6	35	126	87.5	5	0.1Ω~1.0KΩ	Elongated type bracket	±5% ±10%	-55℃~+350℃
VWT1 100W	130	90	11	19	19	5.5	45	116	70	5	0.1Ω~3.3KΩ			
VWT1 135W	169	127	11	19	19	5.5	45	152	110	5	0.1Ω~3.3KΩ			
VWT1 150W	140	102	11	25	26	6.5	48	128	85	5	0.1Ω~3.3KΩ	C Slotted type bracket		
VWT1 175W	267	216	11	25	26	6.5	48	248	190	5	1.0Ω~5.0KΩ			
VWT1 220W	204	153	14	25	26	6.5	48	182	131	5	1.0Ω~5.0KΩ	Elongated type bracket		
VWT1 225W	315	266	19	25	26	6.0	48	298	245	5	1.0Ω~10KΩ	C Slotted type bracket		
VWT1 240W	217	165	19	25	26	6.0	48	208	143	5	1.0Ω~10KΩ			
VWT1 300W	252	216	11	25	26	6.5	48	261	194	5	1.0Ω~10KΩ			
VWT1 375W	303	267	11	25	26	6.5	48	292	246	5	1.0Ω~10KΩ			

***Remark: Other sizes can be specially provided according to customer requirements, please contact our sales team.**

5. Derating Curve



6. Performance Specification

Characteristic	Limits	Test Method (GB/T5729&JIS-C-5201&IEC60115-1)
Short-time overload	ΔR≤±(5%+0.05Ω)	Apply 5 times rated power load for 5 seconds
Humidity (steady state)	ΔR≤±(5%+0.05Ω)	40±2℃, (93±3)%RH, 96h
Temperature Cycle	ΔR≤±(2% +0.05Ω)	-55℃~200℃, 5 cycles
Dielectric withstanding voltage	No evidence of flashover mechanical damage, arcing or insulation break down	Apply an AC voltage of 1000V for 60 seconds
Insulation resistance	≥1MΩ	Apply 500VDC, 1Min
Load life	ΔR≤±(5%+0.05Ω)	Apply rated power load for 1,000 hours at room temperature

7. Note

9.1. UNI-ROYAL recommend products store in warehouse with temperature between 15 to 35℃ under humidity between 25 to 75%RH.
Even under storage conditions recommended above, solder ability of products will be degraded stored over 1 year old.

7.2. Cartons must be placed in correct direction which indicated on carton, otherwise the reel or wire will be deformed.

7.3. Storage conditions as below are inappropriate:

a. Stored in high electrostatic environment

b. Stored in direct sunshine, rain, snow or condensation.

c. Exposed to sea wind or corrosive gases, such as Cl_2, H_2S, NH_3, SO_2, NO_2, Br, etc.

8. Record

Version	Description	Page	Date	Amended by	Checked by
1	First edition	1~4	Jun.03,2025	Haiyan Chen	Yuhua Xu
2	Modify the ordering procedure Modify the dimension Modify the derating curve	2 3 3	Aug.15,2025	Haiyan Chen	Yuhua Xu