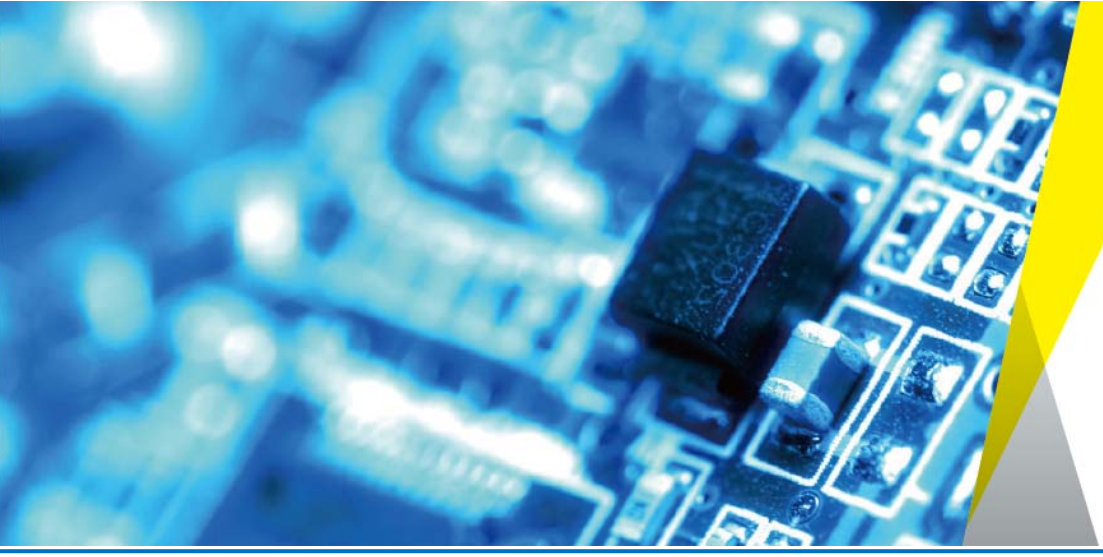

DATASHEET

Product Name	**Thermal Fuse Wire-wound Resistors**
Part Name	**ASSY Series**
File No.	**DIP-SP-071**

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1. Scope

1.1 This datasheet is the characteristics of Thermal Fuse Wire-wound Resistors manufactured by UNI-ROYAL.

1.2 High quality non-flame coating

1.3 Self fusing

1.4 High current load and pulse capacity

1.5 Application：Automobile

1.6 Compliant with RoHS directive.

1.7 Halogen free requirement.

2. Part No. System

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

2.1 Resistors the 1st to 4rd digits are to indicate the product type.

Example: ASSY= ASSY type

2.2 5th digits are to indicate the Voltage :

Example: 1=12V

2.3 6th digits are to indicate the Cut off temp :

Example: A=92℃ ; B=167℃ ; C=184℃ ; D=216℃ ; E=227℃ ; F=240℃

2.4 The 7th digit is to denote the Resistance Tolerance. The following letter code is to be used for indicating the standard Resistance Tolerance.

K= ±10%

2.5 The 8th to 11th digits is to denote the Schematic style and resistance.

Example: 2A00=2 resistors circuit A

2B00=2 resistors circuit B

3A00=3 resistors circuit A

3B00=3 resistors circuit B

3C00=3 resistors circuit C

2.6 The 12th, 13th & 14th digits.

2.6.1The 12th digit is to denote the Packaging Type with the following codes:

B=Bulk /Box

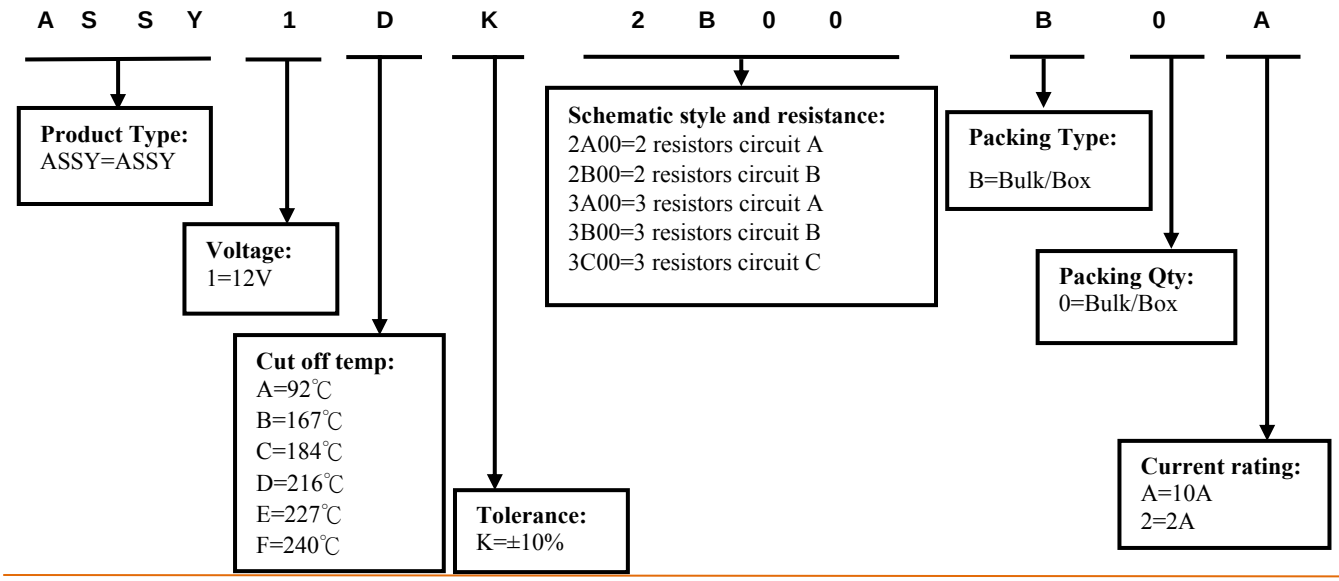
2.6.2 The 12th digit is to denote the packing qty . B=Bulk/Box

2.6.3 The 14th digit is to denote the Current rating

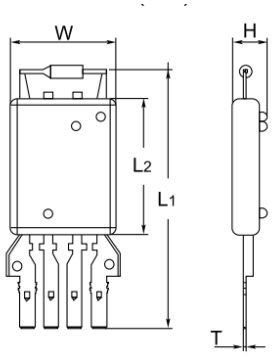
A=10A ； B=2A

3. Ordering Procedure

(Example: ASSY 12V 216℃ ±10% 10A 0.5Ω+0.5Ω B/B)



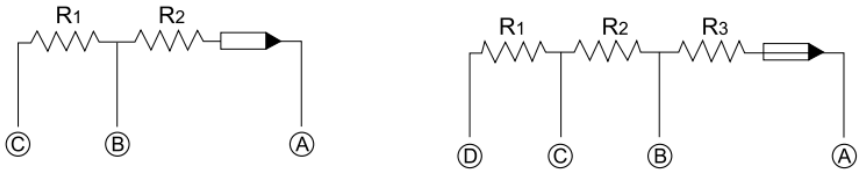
4. Dimension



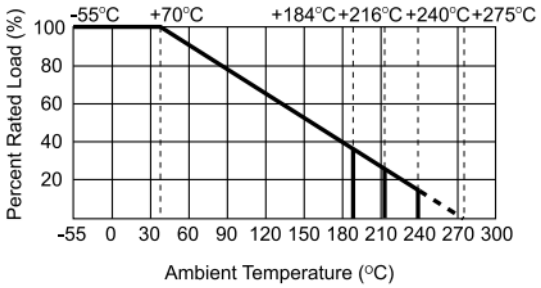
Unit：mm

Type	L1± 3	L2 ± 3	W ± 3	H (max)	T ± 0.2	Resistance Range
ASSY-4 Terminal	74	43	39	13	0.8	0.1Ω~10Ω
ASSY-5 Terminal	80	43	34	13	0.8	0.1Ω~10Ω

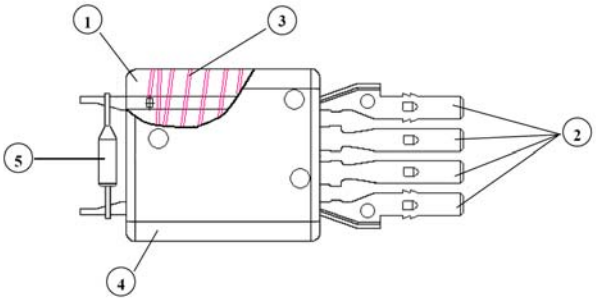
5. Circuit



6. Derating Curve



7. Construction



No.	Subpart Name	Material
①	Body	Rod Type Ceramics
②	Terminal	Nickel plated iron surface
③	Resistance wire	Alloy
④	Coating	Insulated & Non-Flame (Color : Green)
⑤	Thermal fuse	Thermal fuse

8. Performance Specification

Characteristic	Limits	Test Method (GB/T 5729&JIS-C-5201&IEC60115-1)
Temperature Coefficient	±400PPM/℃	4.8 Natural resistance changes per temp. Degree centigrade $\frac{R_2-R_1}{R_1(t_2-t_1)} \times 10^6$ (PPM/℃) R_1: Resistance Value at room temperature （t_1）; R_2: Resistance at test temperature （t_2） t_1: +25°C or specified room temperature t_2: Test temperature（+125℃）
Short-time overload	Resistance change rate is ±(5%+0.05Ω) Max. with no evidence of mechanical damage	4.13 Permanent resistance change after the application of a potential of 2.5 times RCWV or Max. Overload Voltage whichever less for 5 seconds.
Rapid change of temperature	Resistance change rate must be in ±(5%+0.05Ω), and no mechanical damage.	4.19 30 min at -55 °C and 30 min at 155°C; 5 cycles.
Load life in humidity	Resistance change rate must be in ±(5%+0.05Ω), and no mechanical damage.	7.9 Resistance change after 1000 hours (1.5 hours “ON” ，0.5 hours “OFF”) at RCWV or Max.Working Voltage whichever less in a humidity test chamber controlled at 40±2℃ and 93%±3% RH.
Load life	Resistance change rate must be in ±(5%+0.05Ω), and no mechanical damage.	4.25.1 Permanent Resistance change after 1000 hours operating at RCWV or Max.Working Voltage whichever less with duty cycle of 1.5 hours “ON” ，0.5 hour “OFF” at 70±2℃ ambient.

9. 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.

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

9.3. 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.

10. Record

Version	Description	Page	Date	Amended by	Checked by
1	First version	1~4	Jul.26, 2023	Haiyan Chen	Yuhua Xu