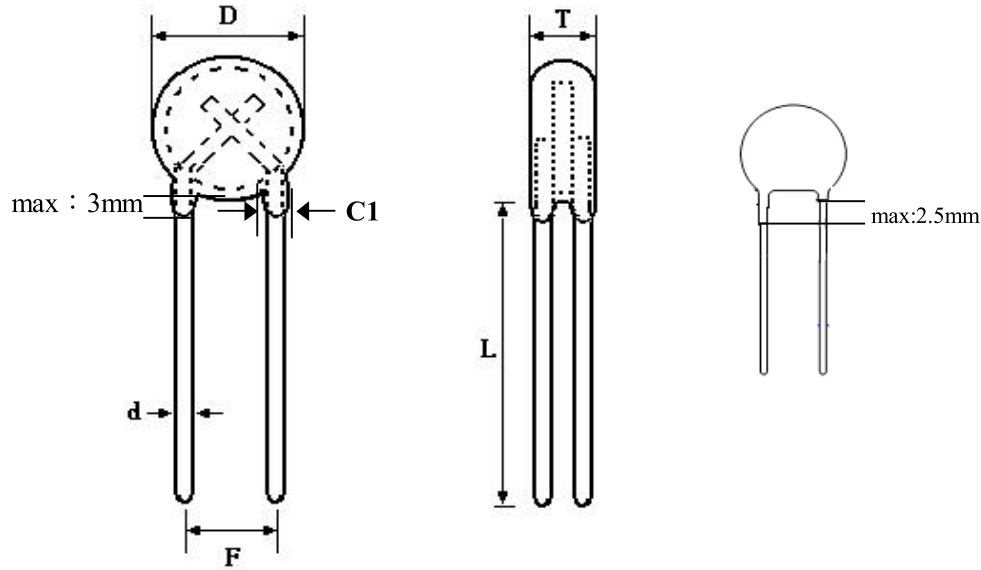
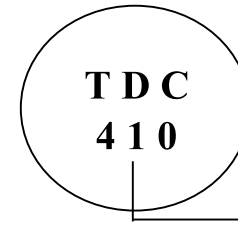


1. Dimensions



- D** : Diameter with coating
- F** : Forming Pitch
- T** : Thickness of thermistor with coating
- L** : Length of leads
- d** : Diameter of leads

2. Marking




Resistance of 25°C

Example: $410 : 10^4 * 10 = 100K\Omega$

$045 : 10^0 * 45 = 45\Omega$

| 5Φ | D | F | T | L | C1 | d |
|-----------|-----|-----|-----|------|------|------|
| max. | 6.5 | 4.5 | 4.0 | - | 1.60 | 0.52 |
| \bar{X} | - | 3.5 | - | - | - | 0.50 |
| min. | - | 2.5 | - | 25.0 | 0.50 | 0.48 |

UNIT : mm

| | |
|---|---|
| NTC THERMISTORS | |
| PART NO : | RN3444 |
|  | UPPERMOST ELECTRONIC INDUSTRIES CO., LTD. |

PART NO.: RN3444

SPECIFICATION :

1. STYLE : Disc Type Thermistor (Negative Temperature Coefficient)

- 1-1 Color of Coating : Blue
- 1-2 Material of Coating : Epoxy Resin
- 1-3 Material of Lead : (Cu,Fe,Sn) Material

2. Maximum Ratings (Ambient Ta = 25°C)

| | Item | Symbol | Conditions | Max. Rated Value | Unit |
|---|----------------------------------|--------|--------------|------------------|------|
| a | Rated Temperature | Ta | in still air | -20 ~ + 125 | °C |
| b | Max. Permissible Current | I25 | Ta : 25 °C | 15 | mA |
| c | Max. Permissible Working Current | Iw25 | Ta : 25 °C | 1.5 | mA |

3. Electrical Characteristics

| | Item | Symbol | Conditions | Standard Ratings | | | Unit |
|---|---|--------|-----------------------------|------------------|--------|------|-------|
| | | | | Min. | Normal | Max. | |
| a | Resistance (25°C) | R25 | Ta : 25 ±0.2 °C , I ≤ 0.5mA | 90 | 100 | 110 | KΩ |
| b | Beta Constant | β | 8876*log(R25/R50) | 4092 | 4400 | 4708 | ° K |
| c | Thermal Dissipation Constant | G | Ta : 25 °C | - | 6 | - | mW/°C |
| d | Thermal Time Constant | - | Ta : 25 °C | - | 16 | - | sec |
| e | UL Test Temperature (Min. 0°C) | | | | | | |
| f | <p style="text-align: center;">Maximum power rating(Pmax.)</p> <p style="text-align: center;">The customer makes the test according to the actual design demand temperature</p> | | | | | | |

Resistance : Thermistor shall be tested in constant temperature oil bath .

Suggested that every three months enter UEI the website downloading electrical specification related news or contact with the Sales Dept. to demand the new electrical specification related news.

4. Terminal Strength

| | Test | Conditions | Post Test Limits | Results |
|---|---------|---------------------------------|---|---------|
| a | Bending | Load : 0.25 kg, bend : 2 times. | no physical damage and electrical characteristic normal | OK |
| b | Pull | Load : 0.50 kg, time : 5 sec. | | OK |

Testing Method :

1. Thermistor shall be placed vertically with a load applied to leads and shall consist one bend 90° from the point of egress and back to the original position.
2. Thermistor shall be placed vertically with a load applied to leads for a period of time as specified.

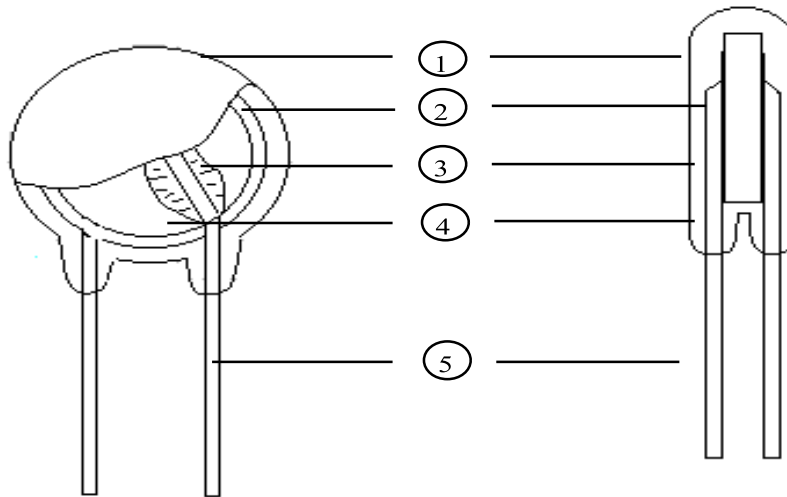
5. Reliability Test

| | Item | Conditions | Results |
|---|--------------------------|---|-----------------------------|
| | | | Variable Rate of Resistance |
| a | High Temperature Storage | 125°C ± 5 °C * 1000 Hours | Max.+15% |
| b | Low Temperature Storage | -20°C ± 2 °C * 1000 Hours | Max.+15% |
| c | Thermal Shock | -20°C *30' → +25°C *30' → +125°C *30' → + 25°C *30' *8 Cycles | Max.+15% |
| d | Humidity | 45°C, 95% R.H.*1000 Hours | Max.+15% |
| e | Continuous Load Life | 15 mA±10% * 1000 Hours of max. rate Current | Max.+15% |

* Note : Each test shall be performed with new sample individually.

Different sample shall be used for each of the above tests.

6. Construction Diagram



| No. | Component | Material |
|-----|----------------|-----------------------|
| 1 | Coating | Powder Epoxy |
| 2 | NTC Thermistor | Mn,Ni,Cu,Fe,Oxide |
| 3 | Solder | Sn-Ag |
| 4 | Electrode | Ag |
| 5 | Lead Wire | (Cu,Fe,Sn) Material |

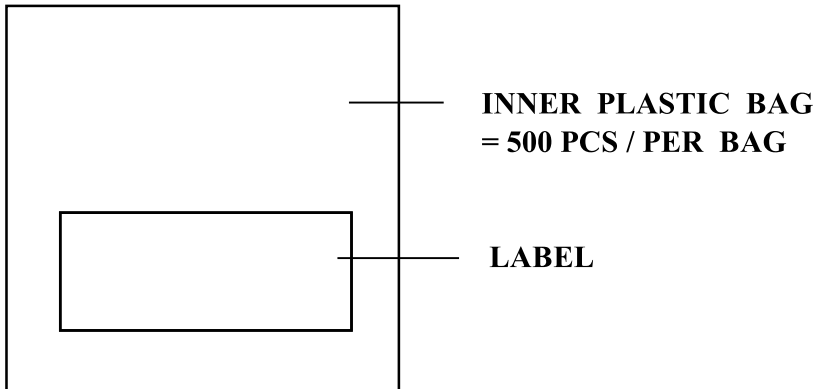
| | | |
|--------------|-------------|-----------|
| Powder Epoxy | Flame Class | 94V-0 |
| | UL File No. | E50219(S) |

7. PACKING METHOD

1.MATERIAL OF PACKING

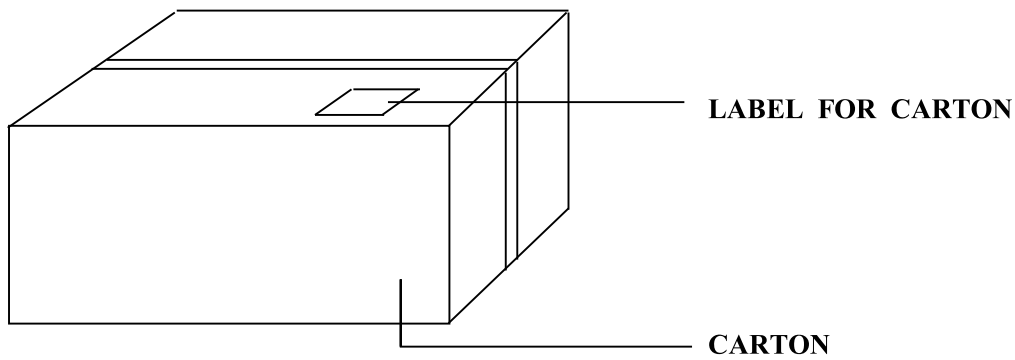
| ITEM | MATERIAL | SIZE (L*W*H) mm |
|-------------------|--------------|------------------|
| INNER PLASTIC BAG | POLYESTER | 200 * 130 * 0.08 |
| CARTON | CARTON PAPER | 310 * 255 *240 |

2.PACKING DETAIL



3.PACKING METHOD

500 PCS / BAG * 40 BAG / CARTON = 20000 PCS / CARTON



Part Number Code.

Example :

T D C 05 D 410 K - 5
 (1) (2) (3) (4) (5) (6) (7) (8)

(1) T : (UEI NTC Thermistor)

(2) D : (Disc Type)

(3) C : (Epoxy Coated)

(4) Nominal Diameter :

03 : 3mm

05 : 5mm

(5) Beta Value

| | | |
|--------|---|--------|
| | S | ≤ 1600 |
| 1600 < | A | ≤ 3300 |
| 3300 < | B | ≤ 3600 |
| 3600 < | C | ≤ 4200 |
| 4200 < | D | |

(6) Resistance of 25°C

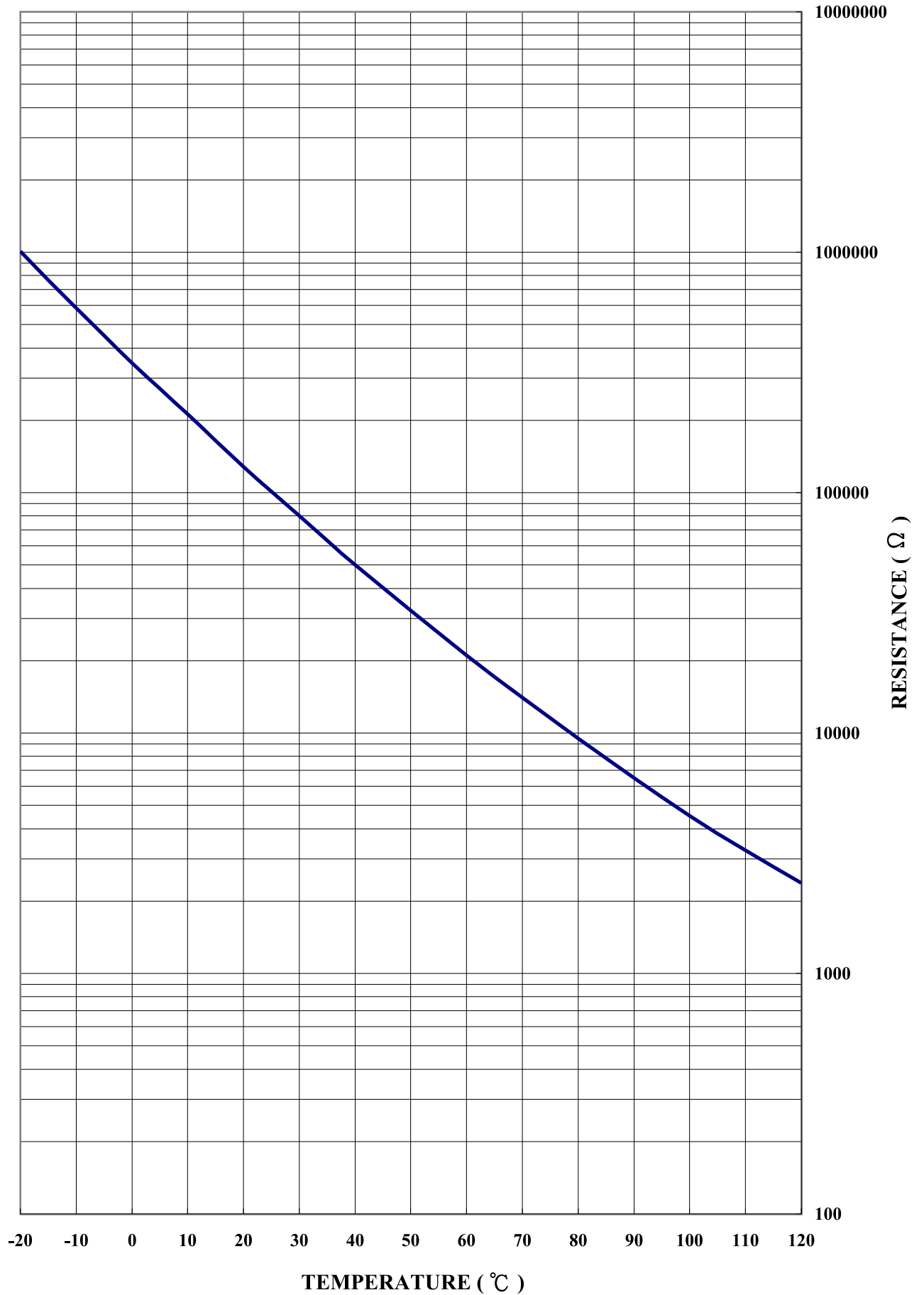
| | | |
|---------|---|-------------|
| 010~090 | : | 10~90 Ω |
| 110~190 | : | 100~900 Ω |
| 210~260 | : | 1K~6K Ω |
| 310~350 | : | 10K~50K Ω |
| 410~447 | : | 100K~470K Ω |

(7) Tolerance of Resistance

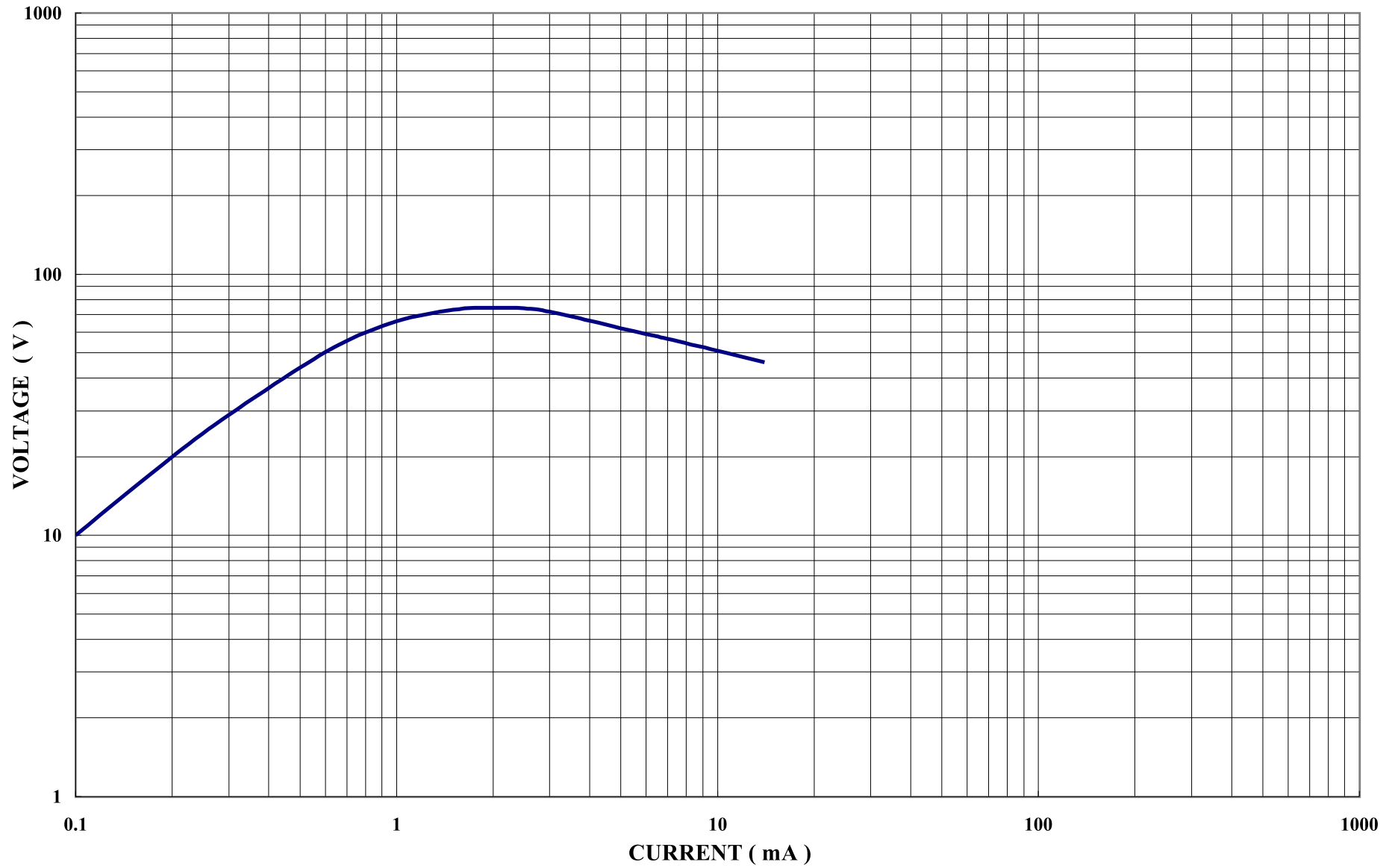
| | | |
|---|---|-------|
| J | : | ± 5% |
| K | : | ± 10% |
| L | : | ± 15% |

(8) RoHS Type

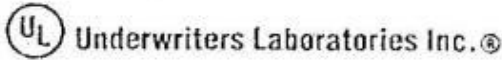
R-T Curve (Nominal) Part No : RN3444



V-I Curve (Nominal) Part No. : RN3444



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UPPERMOST ELECTRONIC INDUSTRIES CO LTD
 MR S Y SHIH
 TA FA INDUSTRIAL DISTRICT
 28 HUA SHI RD
 KAOHSIUNG HSIEN TAIWAN



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XGPU2 February 10, 1999
 Component - Thermistor Type Devices

UPPERMOST ELECTRONIC INDUSTRIES CO LTD E133510
 TA FA INDUSTRIAL DISTRICT 28 HUA SHI RD, KAOHSIUNG
 HSIEN TAIWAN

NTC surge protectors, Models 08SP005, 08SP006, 08SP008, 08SP010, 08SP015, N10SP2R5, N10SP003, N10SP004, N10SP005, N10SP006, N10SP007, N10SP008, N10SP010, N10SP012, N10SP016, N10SP020, N10SP025, N10SP050, N10SP080, N10SP120, N13SP005, N13SP008, N13SP010, N13SP016, N15SP1R3, N15SP1R5, N15SP2R5, N15SP003, N15SP004, N15SP005, N15SP006, N15SP007, N15SP008, N15SP010, N15SP012, N15SP015, N15SP016, N15SP020, N15SP025, N15SP040, N15SP047, N15SP080, N15SP120, N20SP0R7, N20SP1R3, N20SP005, N20SP006, N20SP010, N20SP012, N20SP120, where prefix N is optional; Models TDC03A210, TDC03C222, TDC03C268, TDC03C310, TDC03C312, TDC03C315, TDC03C330, TDC03C333, TDC03C347, TDC03C350, TDC03C368, TDC03D410, TDC03D422, TDC05A015, TDC05A045, TDC05A090, TDC05A110, TDC05A120, TDC05A125, TDC05A130, TDC05A135, TDC05C150, TDC05C210, TDC05C215, TDC05C220, TDC05C222, TDC05C225, TDC05C230, TDC05C233, TDC05C235, TDC05C240, TDC05C247, TDC05C250, TDC05C310, TDC05C312, TDC05C315, TDC05C320, TDC05D330, TDC05D347, TDC05D350, TDC05D410, TDC05D415, TDC05D422, TDC05D433, TDC05D440, TDC05D447.

Marking: Company name or trademark and model designation.

See General Information Preceding These Recognitions.

For use only in equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.
 Report: January 25, 1993.

Replaces E133510 dated August 5, 1996.

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