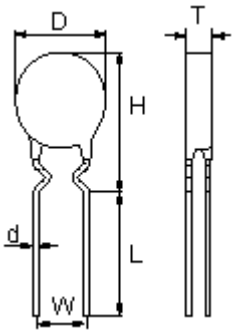
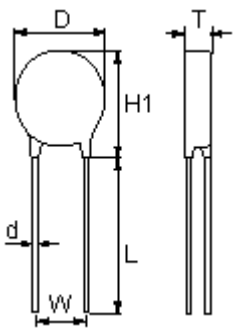
# Metal Oxide Disc Thermistors

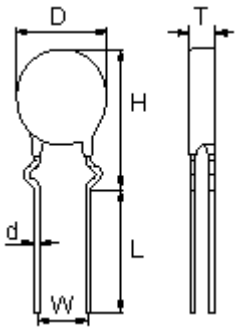
**Inward Crimped**



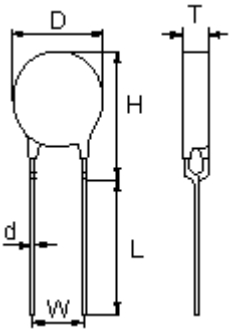

**Straight Lead**




**Outward Crimped**




**Inline Crimped**




**Remark** : The lead length (L) is 20 mm minimum unless requested by customers; please refer to lead cutting code in “How to Order”

## Dimensions Quick Reference

| Series (Maximum) | 5D | 7D | 10D | 14D | 20D |
|---|---|---|---|---|---|
| D | 7 | 9.5 | 12 | 16.5 | 22.5 |
| d* | 0.6 | 0.6 | 0.8 | 0.8 | 1 |
| W** | 5 | 5 | 7.5 | 7.5 | 10 |
| H | 12.5 | 14.5 | 19 | 22.5 | 29 |
| H1 | 10 | 12 | 17 | 20.5 | 28 |
| T | 4.9 | 4.9 | 8.5 | 8.5 | 9 |

* ±0.02
** ±1

Dimensions : Millimetres

## Characteristics

High performance transient voltage suppression
Short response time to surge voltage
Low standby power dissipation
Excellent clamping characteristics
High performance withstanding surge currents
High reliability
Disk type : Standard
Lead type : Straight

## Definition of Varistor Terms

**Rated RMS Voltage, Rated DC Voltage**

The maximum designated values of power system voltage that may be applied continuously between the terminals of a device

**Varistor Voltage**

Test characteristic that is used to classify varistors by type. A test current of 1 mA DC is typically used to determine varistor voltage classification type. Varistor voltage clamping characteristics can be defined at various test levels

**Rated Peak Single Pulse Transient Current**

Maximum surge current, 8 / 20 µs waveform which a varistor is rated to withstand for a single surge

**Rated Single Pulse Transient Energy**

Maximum allowable energy for a single impulse (see specified waveforms)

**Maximum Clamping Voltage**

Measured peak voltage across the device terminals when a current impulse of specified amplitude and waveform is conducted through the varistor

**Typical Capacitance**

Typical capacitance values are measured at a test frequency of 1 kHz. Capacitance values are only for reference purpose only, not object to outgoing inspection

## Applications

**Surge protection in**

Consumer electronics
Industrial electronics
Communication electronics
Measuring and controlling systems
Electronic home appliances

Protection against surges induced by lighting striking incoming power lines
Suppression of surges caused by switching inductive loads such as transformers, relays and coils
Protection of rectification diodes, SCRs, power transistors, semiconductor devices, etc

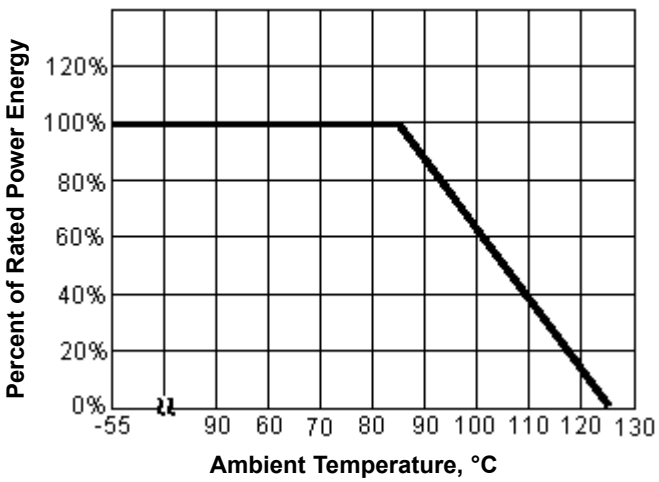
## General Characteristics

| | |
|---|---|
| Storage Temperature | : -55°C to +125°C |
| Operating Surface Temperature | : 125°C |
| Operating Ambient Temperature | : -55°C to +85°C (without derating) |
| Maximum Voltage-Temperature Coefficient | : < -0.05% / °C |
| Minimum Insulation Resistance | : 1,000 M |
| Hi Pot (Leads To Case, 1 Minimum) | : 2,500 V dc |
| Typical Response Time | : <15 Nero-seconds |
| Epoxy Rating | : 94V-0 |
| Current / Energy Derating (>85 °C) | : -2.5% / °C |
| DC Leakage Current | : 200 µA maximum (at rated DC working voltage) |
| Solderability | : MIL-STD-202F |

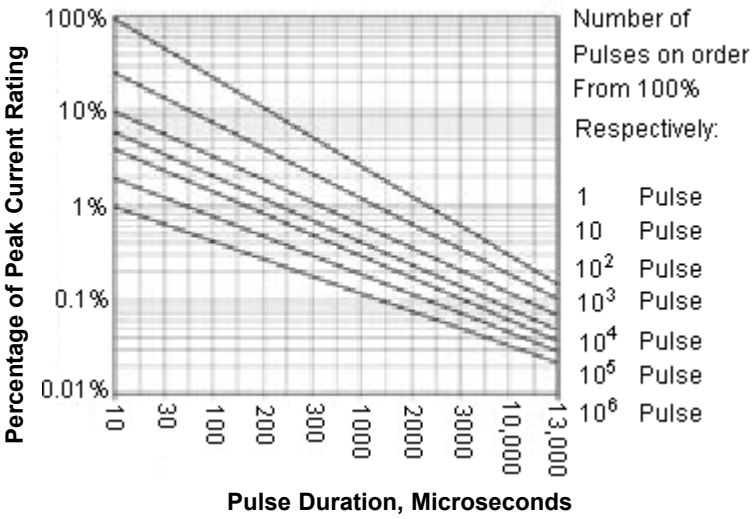
## Power Dissipation Ratings (P, in-watts)

| Disc Size (mm) | 11 V ac to 40 V ac | 50 V ac to 680 V ac |
|---|---|---|
| 5 | 0.01 | 0.15 |
| 7 | 0.02 | 0.25 |
| 10 | 0.05 | 0.4 |
| 14 | 0.1 | 0.6 |
| 18 | - | 0.8 |
| 20 | 0.2 | 1 |
| 25 | - | 1.2 |
| 32 | - | 1.6 |
| 34 (Single) | - | 2.1 |
| 34 (Dual) | - | 2.73 |
| 40 | - | 2.1 |
| 53 | - | 2.5 |

### Energy Derating Versus Temperature




### Peak Current Per Pulse Versus Pul Seduration



## Specifications Table

| Maximum Allowable Voltage | | Varistor Voltage | | Withstanding Surge Current (8 / 20 µs) | Maximum Claming Voltage (8 / 20 µs) | | Maximum Energy | | Typical Capacitance | Varistor Voltage | Tolerance (%) | Disk Size (mm) | Part Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Acrms | DC | DC Volts | | 1 Time | Vc | Ip | 2 ms | 10 / 100 µs | at1 KHz | | | | |
| Volts | | Min. | Max. | Amps | Volts | Amps | Joules | | PF | | | | |
| 11 | 14 | 16 | 20 | 100 | 36 | 1 | 0.4 | 0.6 | 1,500 | 18 V | ±10 | 5 | MCFT000215 |
| 14 | 18 | 20 | 24 | | 43 | | 0.6 | 0.8 | 1,260 | 22 V | | | MCFT000216 |
| 17 | 22 | 24 | 30 | | 53 | | 0.7 | 0.9 | 1,050 | 27 V | | | MCFT000217 |
| 20 | 26 | 30 | 36 | | 65 | | 0.9 | 1.2 | 850 | 33 V | | | MCFT000218 |
| 25 | 31 | 35 | 43 | | 77 | | 1.1 | 1.3 | 600 | 39 V | | | MCFT000219 |
| 30 | 38 | 42 | 52 | | 93 | | 1.4 | 1.6 | 500 | 47 V | | | MCFT000220 |
| 35 | 45 | 50 | 62 | | 110 | | 1.5 | 1.9 | 400 | 56 V | | | MCFT000221 |
| 40 | 56 | 61 | 75 | | 135 | | 1.8 | 2.3 | 360 | 68 V | | | MCFT000222 |
| 50 | 66 | 74 | 90 | 400 | 135 | 5 | 2.4 | 3 | 350 | 82 V | | | MCFT000223 |
| 75 | 102 | 108 | 132 | | 200 | | 3 | 5 | 250 | 120 V | | | MCFT000224 |
| 95 | 127 | 135 | 165 | | 250 | | 3.5 | 5.5 | 180 | 150 V | | | MCFT000225 |
| 130 | 175 | 185 | 225 | | 340 | | 5 | 8.5 | 140 | 200 V | | | MCFT000226 |
| 150 | 200 | 216 | 264 | | 395 | | 6.5 | 10 | 115 | 240 V | | | MCFT000227 |
| 230 | 300 | 324 | 396 | | 595 | | 9 | 13 | 80 | 360 V | | | MCFT000228 |
| 250 | 330 | 351 | 429 | | 650 | | 10 | 15 | 75 | 390 V | | | MCFT000229 |
| 275 | 370 | 387 | 473 | | 710 | | 11 | 16 | 65 | 430 V | | | MCFT000230 |
| 300 | 385 | 423 | 517 | | 775 | | 13 | 19 | 55 | 470 V | | | MCFT000231 |
| 420 | 560 | 612 | 748 | | 1120 | | 21 | 30 | 30 | 680 V | | | MCFT000232 |
| 11 | 14 | 16 | 20 | 250 | 36 | 2.5 | 0.8 | 1 | 2,900 | 18 V | | 7 | MCFT000233 |
| 14 | 18 | 20 | 24 | | 43 | | 0.9 | 1.3 | 2,400 | 22 V | | | MCFT000234 |
| 17 | 22 | 24 | 30 | | 53 | | 1 | 1.4 | 1,800 | 27 V | | 5 | MCFT000235 |
| 20 | 26 | 30 | 36 | | 65 | | 1.2 | 1.7 | 1,500 | 33 V | | 7 | MCFT000236 |
| 25 | 31 | 35 | 43 | | 77 | | 1.5 | 2.1 | 1,230 | 39 V | | | MCFT000237 |
| 30 | 38 | 42 | 52 | | 93 | | 1.8 | 2.5 | 950 | 47 V | | | MCFT000238 |
| 35 | 45 | 50 | 62 | | 110 | | 2.2 | 3.1 | 890 | 56 V | | | MCFT000239 |
| 40 | 56 | 61 | 75 | | 135 | | 2.5 | 3.8 | 850 | 68 V | | | MCFT000240 |
| 50 | 66 | 74 | 90 | 1,200 | 135 | 10 | 3.5 | 5.5 | 830 | 82 V | | | MCFT000241 |
| 75 | 102 | 108 | 132 | | 200 | | 5 | 7.8 | 570 | 120 V | | | MCFT000242 |
| 95 | 127 | 135 | 165 | | 250 | | 6.5 | 9.7 | 400 | 150 V | | | MCFT000243 |
| 130 | 175 | 185 | 225 | | 340 | | 10 | 13 | 275 | 200 V | | | MCFT000244 |
| 150 | 200 | 216 | 264 | | 395 | | 11 | 16 | 230 | 240 V | | | MCFT000245 |

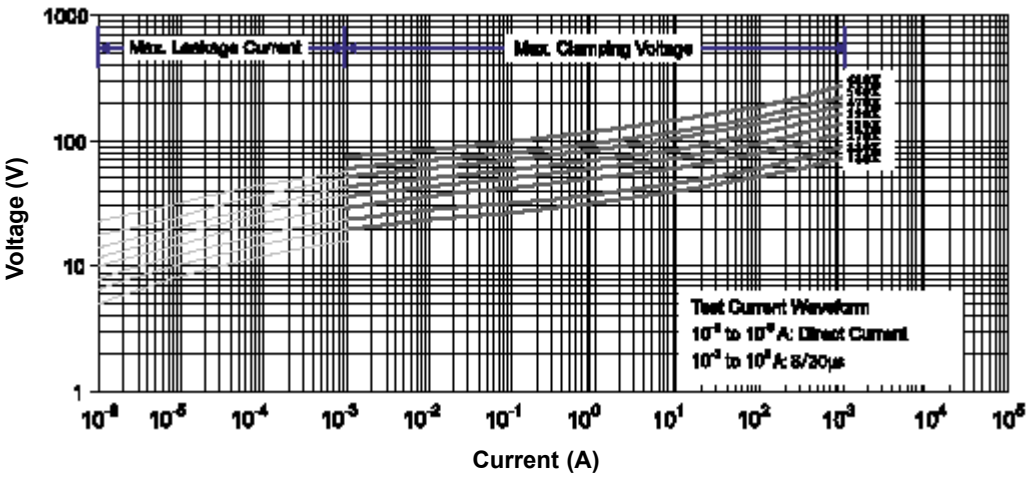
## Specifications Table

| Maximum Allowable Voltage | | Varistor Voltage | | Withstanding Surge Current (8 / 20 µs) | Maximum Claming Voltage (8 / 20 µs) | | Maximum Energy | | Typical Capacitance | Varistor Voltage | Tolerance (%) | Disk Size (mm) | Part Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Acrms | DC | DC | Volts | 1 Time | Vc | Ip | 2ms | 10 / 100 µs | at1 KHz | | | | |
| Volts | | Min. | Max. | Amps | Volts | Amps | Joules | | PF | | | | |
| 230 | 300 | 324 | 396 | 1,200 | 595 | 10 | 15 | 25 | 155 | 360 V | ±10 | 7 | MCFT000246 |
| 250 | 330 | 351 | 429 | | 650 | | 17 | 26 | 145 | 390 V | | | MCFT000247 |
| 275 | 370 | 387 | 473 | | 710 | | 20 | 28 | 130 | 430 V | | | MCFT000248 |
| 300 | 385 | 423 | 517 | | 775 | | 21 | 30 | 115 | 470 V | | | MCFT000249 |
| 420 | 560 | 612 | 748 | | 1120 | | 32 | 45 | 78 | 680 V | | | MCFT000250 |
| 11 | 14 | 16 | 20 | 500 | 36 | 5 | 1.5 | 2.1 | 6,000 | 18 V | | 10 | MCFT000251 |
| 14 | 18 | 20 | 24 | | 43 | | 2 | 2.5 | 5,000 | 22 V | | | MCFT000252 |
| 17 | 22 | 24 | 30 | | 53 | | 2.5 | 3 | 4,000 | 27 V | | | MCFT000253 |
| 20 | 26 | 30 | 36 | | 65 | | 3 | 4 | 3,500 | 33 V | | | MCFT000254 |
| 25 | 31 | 35 | 43 | | 77 | | 3.5 | 4.6 | 3,100 | 39 V | | | MCFT000255 |
| 30 | 38 | 42 | 52 | | 93 | | 4.5 | 5.5 | 2,800 | 47 V | | | MCFT000256 |
| 35 | 45 | 50 | 62 | | 110 | | 5.5 | 7 | 2,400 | 56 V | | | MCFT000257 |
| 40 | 56 | 61 | 75 | | 135 | | 6.5 | 8.2 | 2,100 | 68 V | | | MCFT000258 |
| 50 | 66 | 74 | 90 | 2,500 | 135 | 25 | 8 | 12 | 1,600 | 82 V | | | MCFT000259 |
| 75 | 102 | 108 | 132 | | 200 | | 12 | 18 | 1,200 | 120 V | | | MCFT000260 |
| 95 | 127 | 135 | 165 | | 250 | | 16 | 22 | 1,100 | 150 V | | | MCFT000261 |
| 130 | 175 | 185 | 225 | | 340 | | 20 | 30 | 640 | 200 V | | | MCFT000262 |
| 150 | 200 | 216 | 264 | | 395 | | 25 | 35 | 560 | 240 V | | | MCFT000263 |
| 230 | 300 | 324 | 396 | | 595 | | 35 | 47 | 380 | 360 V | | | MCFT000264 |
| 250 | 330 | 351 | 429 | | 650 | | 40 | 60 | 350 | 390 V | | | MCFT000265 |
| 275 | 370 | 387 | 473 | | 710 | | 45 | 65 | 310 | 430 V | | | MCFT000266 |
| 300 | 385 | 423 | 517 | | 775 | | 46 | 70 | 280 | 470 V | | | MCFT000267 |
| 11 | 14 | 16 | 20 | 1,000 | 36 | 10 | 3.5 | 4 | 15,000 | 18 V | | 14 | MCFT000268 |
| 14 | 18 | 20 | 24 | | 43 | | 4 | 5 | 12,000 | 22 V | | | MCFT000269 |
| 17 | 22 | 24 | 30 | | 53 | | 5 | 6 | 8,500 | 27 V | | | MCFT000270 |
| 20 | 26 | 30 | 36 | | 65 | | 6 | 7.5 | 7,200 | 33 V | | | MCFT000271 |
| 25 | 31 | 35 | 43 | | 77 | | 7 | 8.6 | 6,300 | 39 V | | | MCFT000272 |
| 30 | 38 | 42 | 52 | | 93 | | 8.5 | 10 | 5,500 | 47 V | | | MCFT000273 |
| 35 | 45 | 50 | 62 | | 110 | | 10 | 11 | 4,800 | 56 V | | | MCFT000274 |
| 40 | 56 | 61 | 75 | | 135 | | 12 | 14 | 4,000 | 68 V | | | MCFT000275 |
| 50 | 66 | 74 | 90 | 4,500 | 135 | 50 | 5 | 22 | 3,300 | 82 V | | | MCFT000276 |

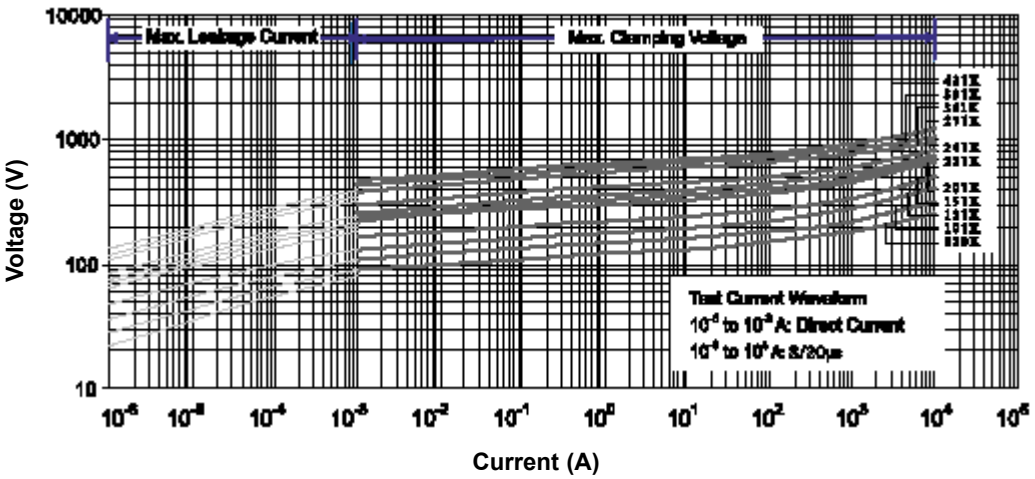
## Specifications Table

| Maximum Allowable Voltage | | Varistor Voltage | | Withstanding Surge Current (8 / 20 µs) | Maximum Claming Voltage (8 / 20 µs) | | Maximum Energy | | Typical Capacitance | Varistor Voltage | Tolerance (%) | Disk Size (mm) | Part Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Acrms | DC | DC | Volts | 1 Time | Vc | Ip | 2ms | 10 / 100 µs | at1 KHz | | | | |
| Volts | | Min. | Max. | Amps | Volts | Amps | Joules | | PF | | | | |
| 75 | 102 | 108 | 132 | 4,500 | 200 | 50 | 22 | 34 | 2,600 | 120 V | ±10 | 14 | MCFT000277 |
| 95 | 127 | 135 | 165 | | 250 | | 30 | 45 | 2,000 | 150 V | | | MCFT000278 |
| 130 | 175 | 185 | 225 | | 340 | | 38 | 60 | 1,370 | 200 V | | | MCFT000279 |
| 150 | 200 | 216 | 264 | | 395 | | 45 | 66 | 1,060 | 240 V | | | MCFT000280 |
| 230 | 300 | 324 | 396 | | 595 | | 70 | 98 | 725 | 360 V | | | MCFT000281 |
| 250 | 330 | 351 | 429 | | 650 | | 72 | 102 | 665 | 390 V | | | MCFT000282 |
| 275 | 370 | 387 | 473 | | 710 | | 75 | 115 | 600 | 430 V | | | MCFT000283 |
| 300 | 385 | 423 | 517 | | 775 | | 80 | 125 | 570 | 470 V | | | MCFT000284 |
| 11 | 14 | 16 | 20 | 2,000 | 36 | 20 | 10 | 12 | 27,000 | 18 V | | 20 | MCFT000285 |
| 14 | 18 | 20 | 24 | | 43 | | 13 | 15 | 20,000 | 22 V | | | MCFT000286 |
| 17 | 22 | 24 | 30 | | 53 | | 15 | 17 | 15,000 | 27 V | | | MCFT000287 |
| 20 | 26 | 30 | 36 | | 65 | | 22 | 22 | 12,200 | 33 V | | | MCFT000288 |
| 25 | 31 | 35 | 43 | | 77 | | 24 | 26 | 10,000 | 39 V | | | MCFT000289 |
| 30 | 38 | 42 | 52 | | 93 | | 30 | 33 | 9,350 | 47 V | | | MCFT000290 |
| 35 | 45 | 50 | 62 | | 110 | | 35 | 38 | 8,000 | 56 V | | | MCFT000291 |
| 40 | 56 | 61 | 75 | | 135 | | 40 | 43 | 6,800 | 68 V | | | MCFT000292 |
| 50 | 66 | 74 | 90 | 6,500 | 135 | 100 | 37 | 48 | 5,600 | 82 V | | | MCFT000293 |
| 75 | 102 | 108 | 132 | | 200 | | 40 | 55 | 4,100 | 120 V | | | MCFT000294 |
| 95 | 127 | 135 | 165 | | 250 | | 50 | 70 | 3,200 | 150 V | | | MCFT000295 |
| 130 | 175 | 185 | 225 | | 340 | | 70 | 95 | 2,200 | 200 V | | | MCFT000296 |
| 150 | 200 | 216 | 264 | | 395 | | 82 | 110 | 1,900 | 240 V | | | MCFT000297 |
| 230 | 300 | 324 | 396 | | 595 | | 120 | 163 | 1,320 | 360 V | | | MCFT000298 |
| 250 | 330 | 351 | 429 | | 650 | | 130 | 180 | 1,210 | 390 V | | | MCFT000299 |
| 275 | 370 | 387 | 473 | | 710 | | 140 | 190 | 1,120 | 430 V | | | MCFT000300 |
| 300 | 385 | 423 | 517 | | 775 | | 50 | 220 | 1,000 | 470 V | | | MCFT000301 |

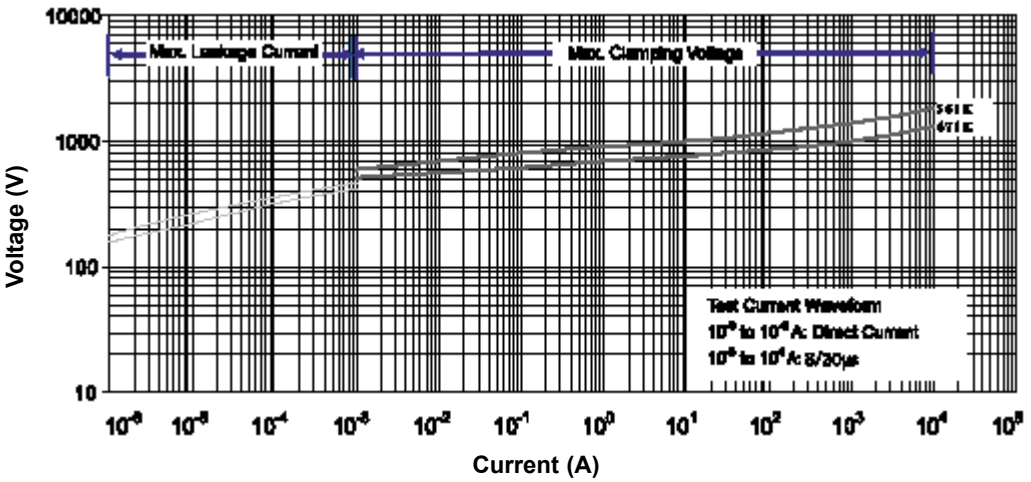
V-I Curve for SR180K to 680K05D(E) Series



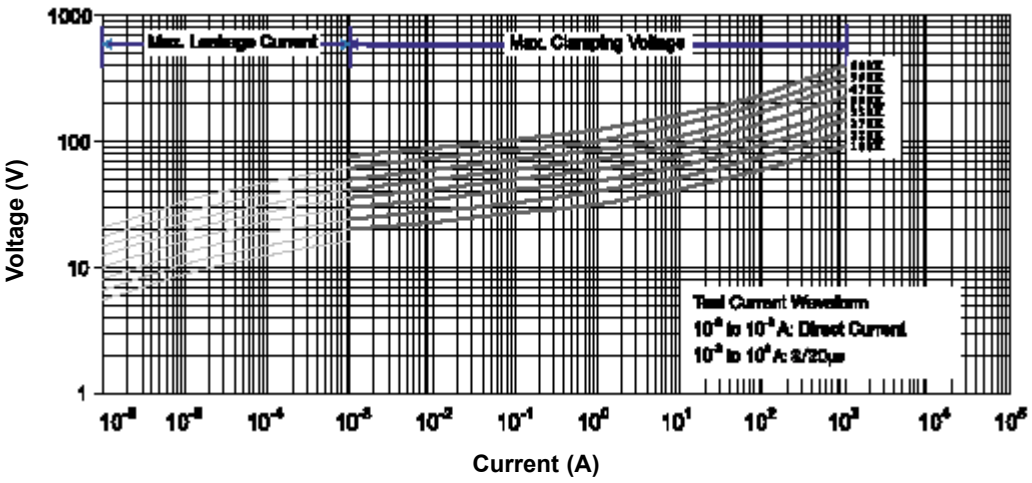

V-I Curve for SR820K to 431K05D(E) Series



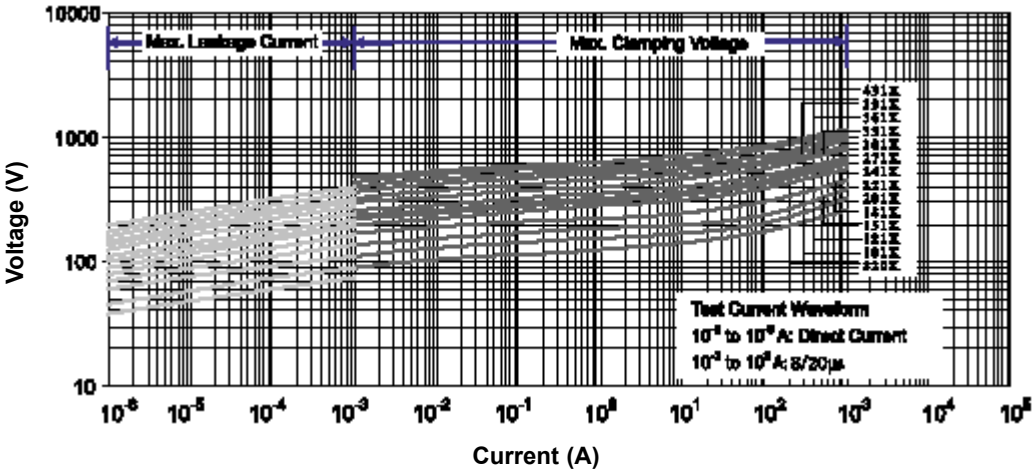

V-I Curve for SR471K to 6811K05D(E) Series



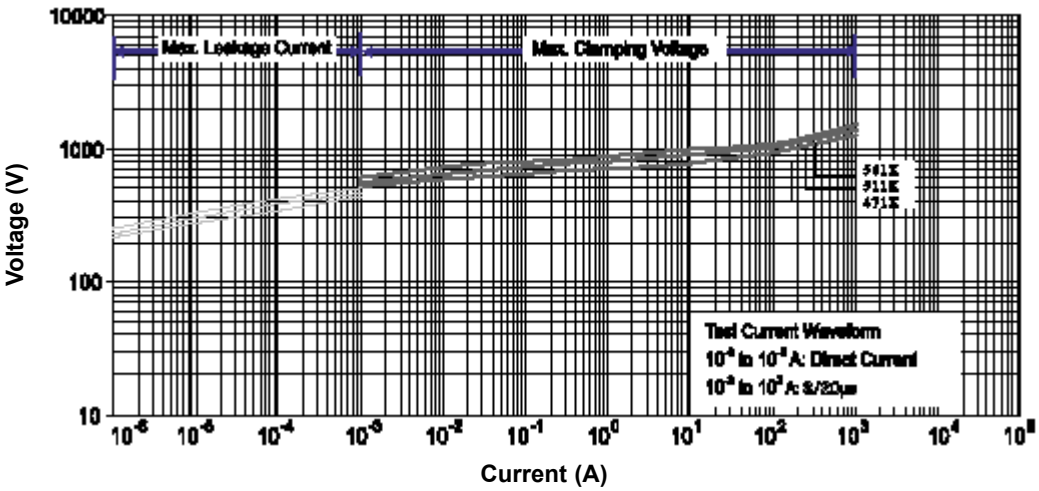
V-I Curve for SR180K to 680K07D(E) Series



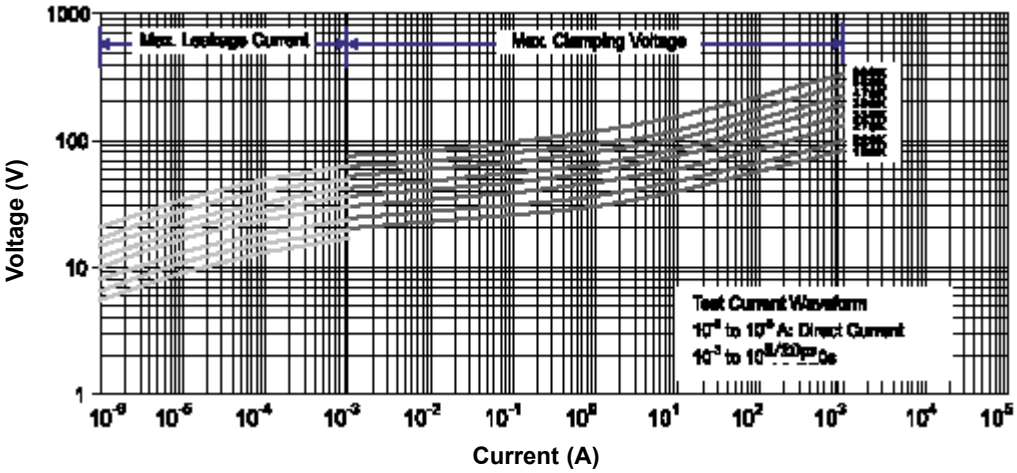

V-I Curve for SR820K to 431K07D(E) Series



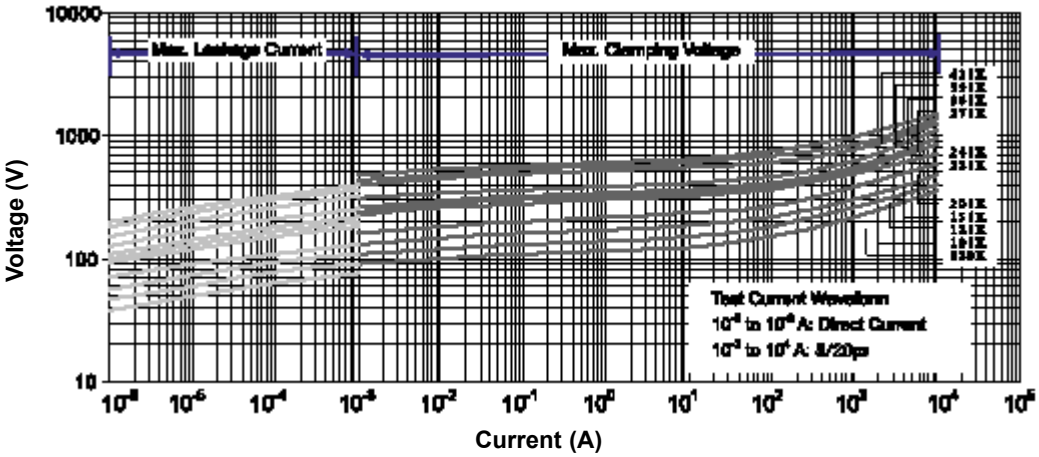

V-I Curve for SR471K to 6811K07D(E) Series



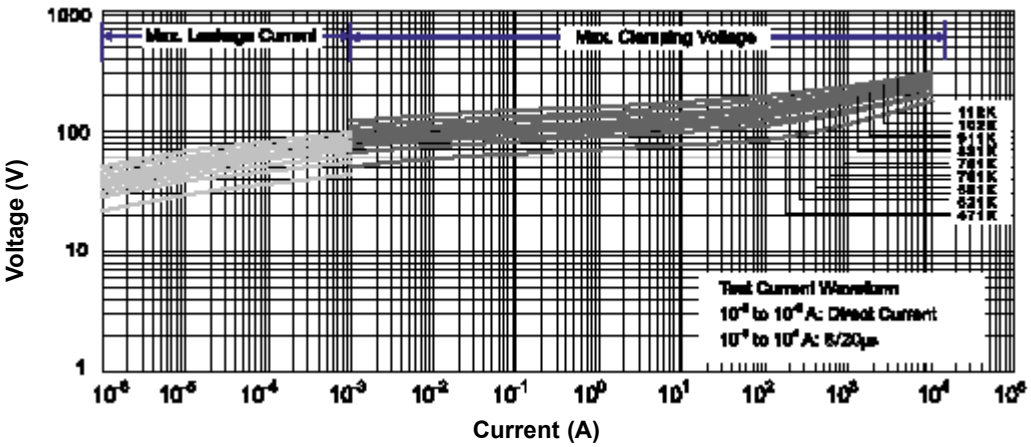
V-I Curve for SR180K to 680K10D(E) Series



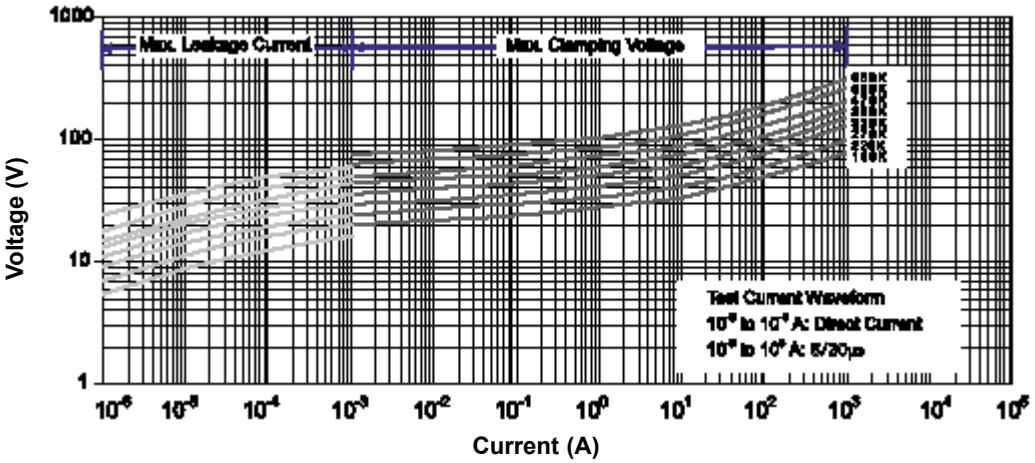

V-I Curve for SR820K to 431K10D(E) Series



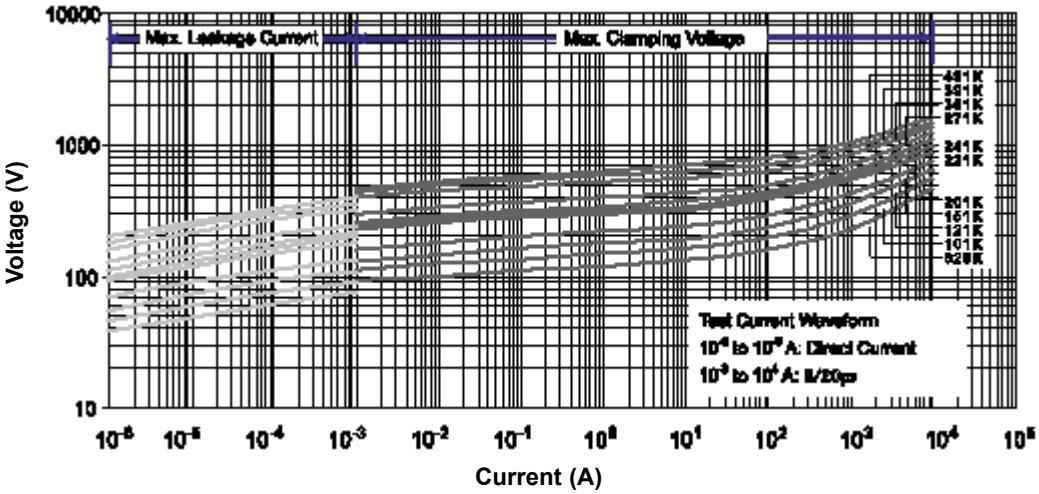

V-I Curve for SR471K to 112K10D(E) Series



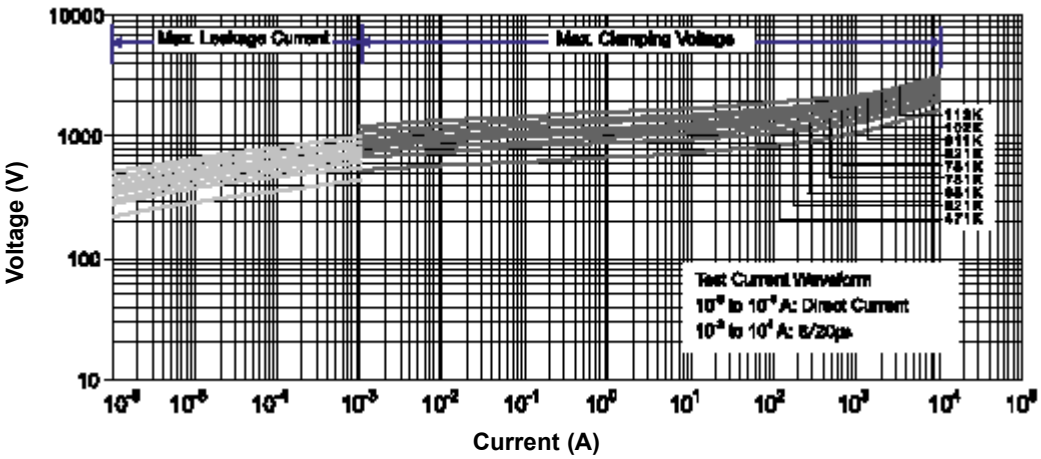
V-I Curve for SR180K to 680K14D(E) Series



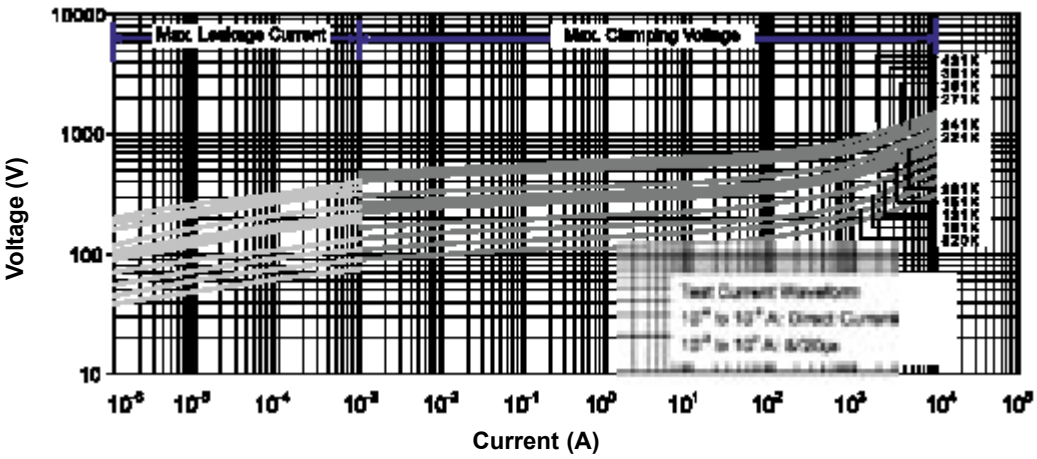

V-I Curve for SR820K to 431K14D(E) Series



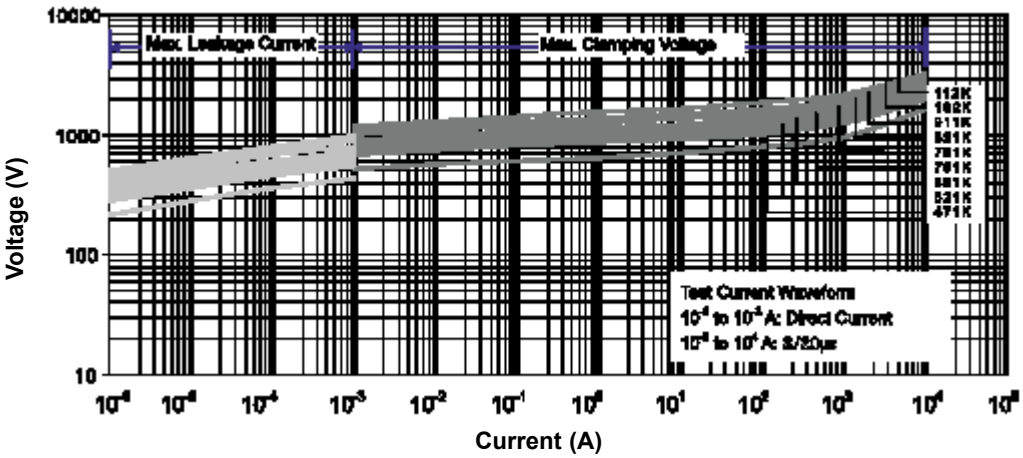

V-I Curve for SR471K to 112K14D(E) Series



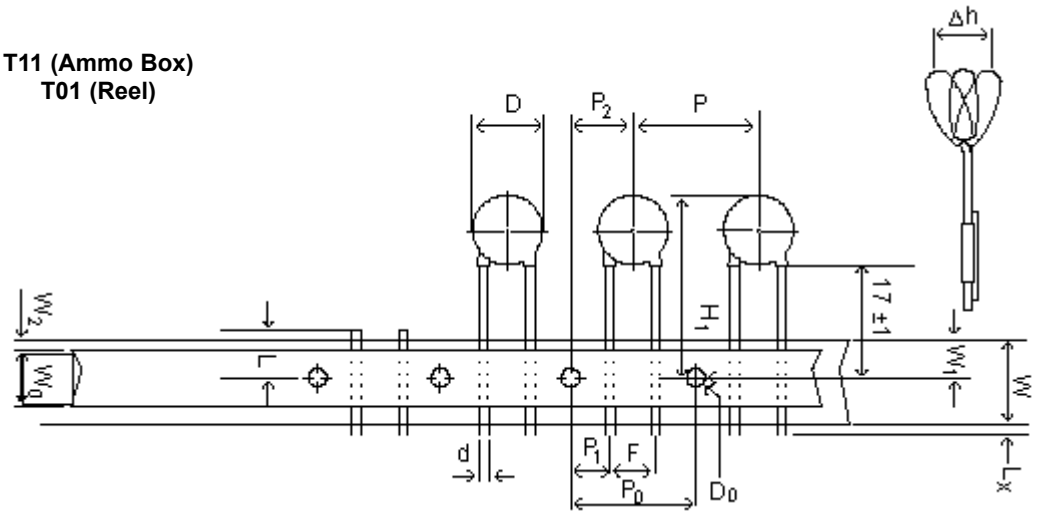
**V-I Curve for SR280K to 431K20D(E) Series**




**V-I Curve for SR471K to 112K14D(E) Series**

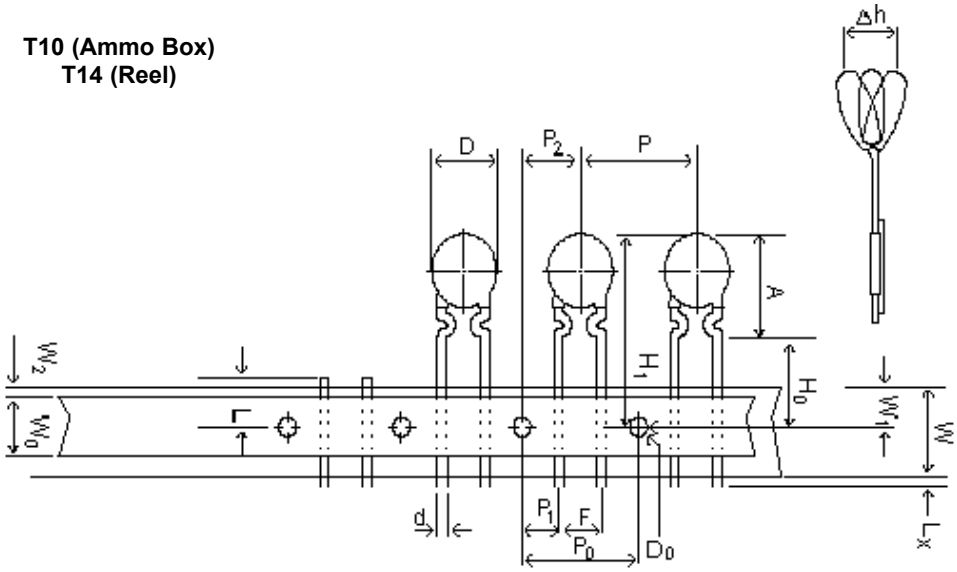



**T11 (Ammo Box)**
**T01 (Reel)**

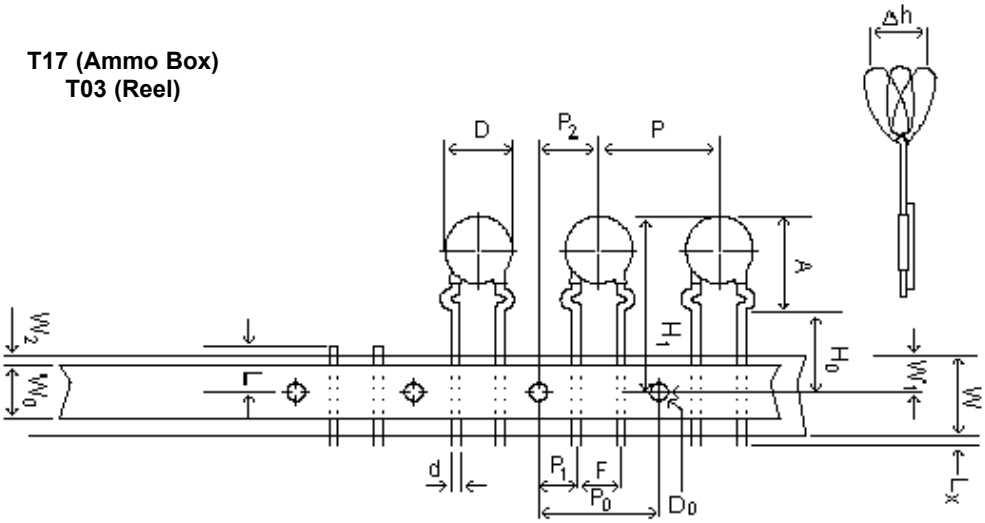



Dimensions : Millimetres

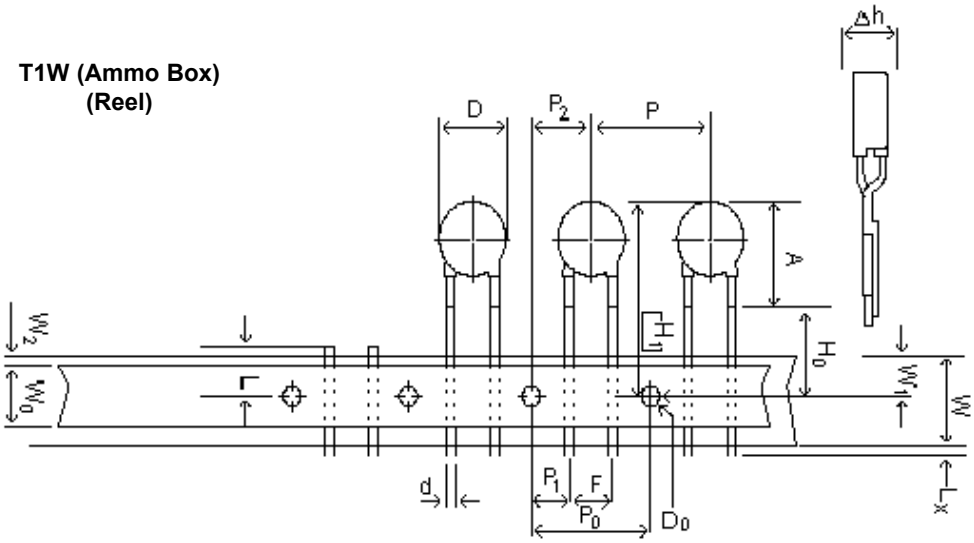
**T10 (Ammo Box)**
**T14 (Reel)**




**T17 (Ammo Box)**
**T03 (Reel)**




**T1W (Ammo Box)**
**(Reel)**



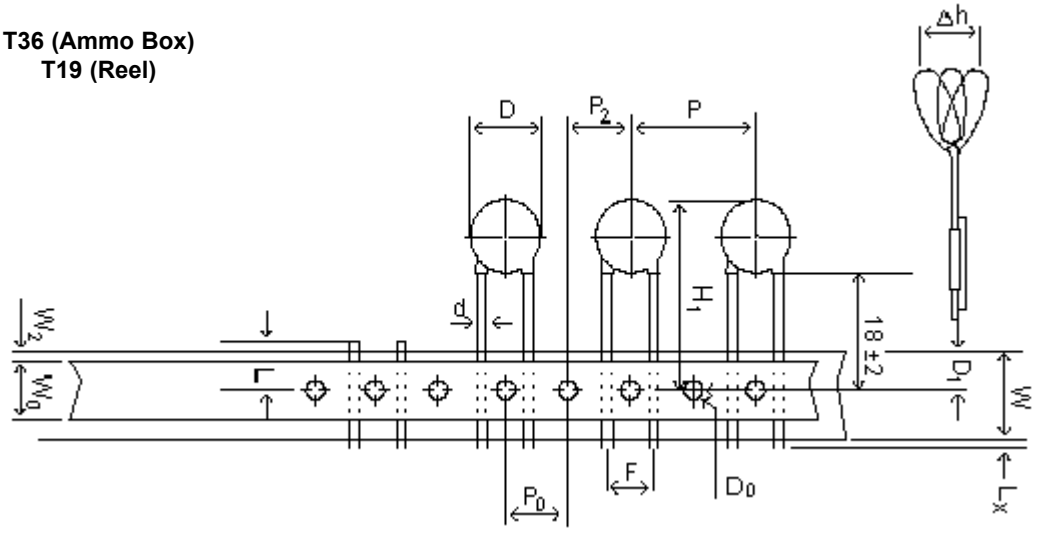

Dimensions : Millimetres

## Specification Table

| Item | | Disk Size | | | | | |
|---|---|---|---|---|---|---|---|
| | | 5D | | | 7D | | |
| Taping Code | | T11, T1 | T17, T03, T14, T1D | T32, T1W | T11, T01 | T17, T03, T14, T1D | T32, T1W |
| Body Diameter | D | 7 Maximum | | | 9 Maximum | | |
| Lead Wire Diameter | d | 0.6 | | | | | |
| Pitch of Component | P | 12.7 ±1 | | | | | |
| Feed Hole Pitch | $P_0$ | 12.7 ±0.3 | | | | | |
| Feed Hole Centre to Lead | $P_1$ | 3.85 ±0.7 | | | | | |
| Lead to Lead Distance (Centre to Centre) | F | 5 ±0.8 | | | | | |
| Component Alignment | Δh | 2 Maximum | | | | | |
| Base paper Tape Width | W | 18* | | | | | |
| Adhesive Tape Width | $W_0$ | 10 Minimum | | | | | |
| Hole Position | $W_1$ | 9 ±0.5 | | | | | |
| Adhesive Tape Border | $W_2$ | 1.5 Maximum | | | | | |
| Component Height | $H_1$ | 30 Maximum | | | 32 Maximum | | |
| Lead-Wire Clinch Height | $H_0$ | - | 16 ±0.5 | | - | 16 ±0.5 | |
| Lead-Wire Protrusion | $L_x$ | 1 Maximum | | | | | |
| Feed Hole Diameter | $D_0$ | 4 ±0.2 | | | | | |
| Total Tape Thickness | t | < 0.7 | | | | | |
| Length of Clipped Lead | L | 11 Maximum | | | | | |
| Component Height from Seating Plane | A | - | 13 Maximum | | - | 15 Maximum | |
| Hole Centre to Component Centre | $P_2$ | 6.35 ±0.7 | | | | | |

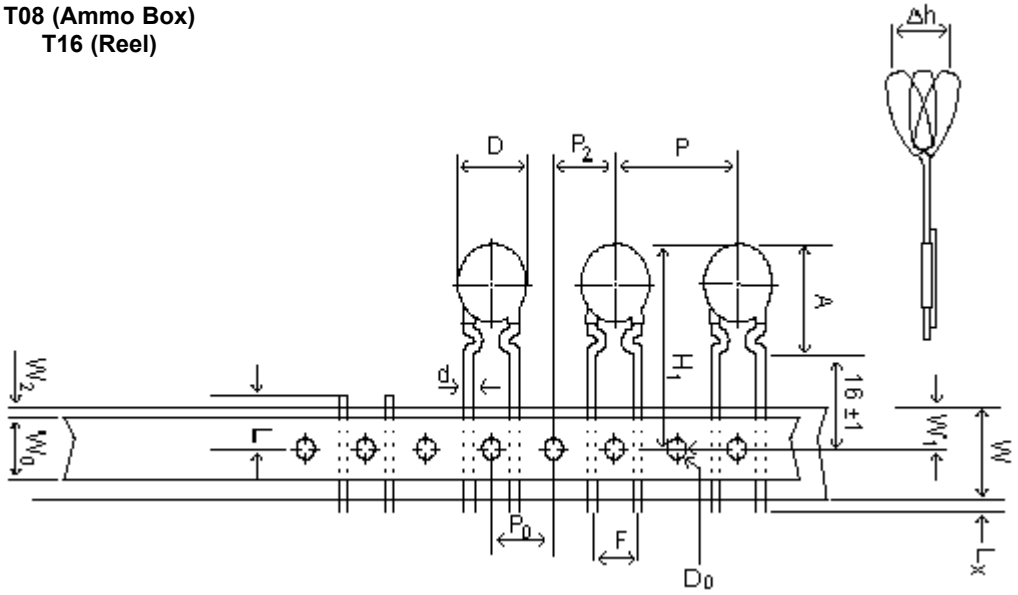
* Tolerances are +1 and -0.5

**T36 (Ammo Box)**
**T19 (Reel)**

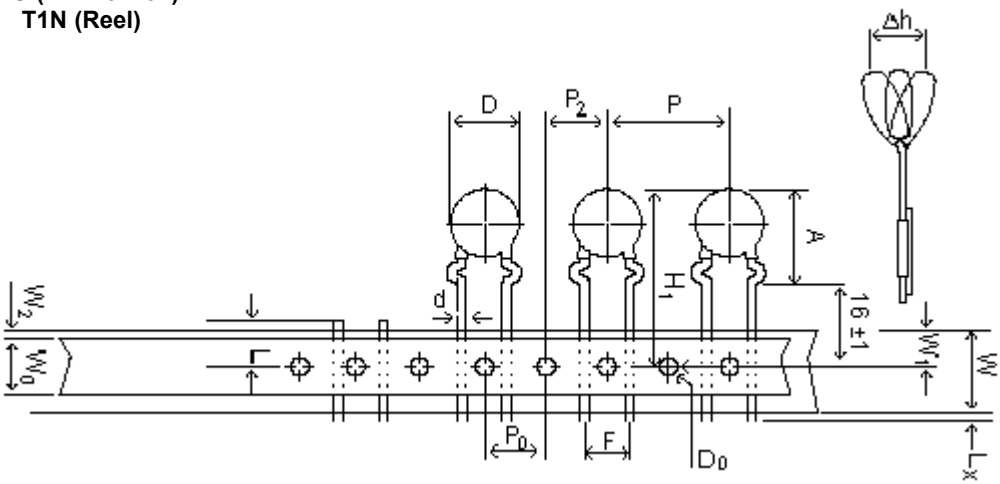



Dimensions : Millimetres

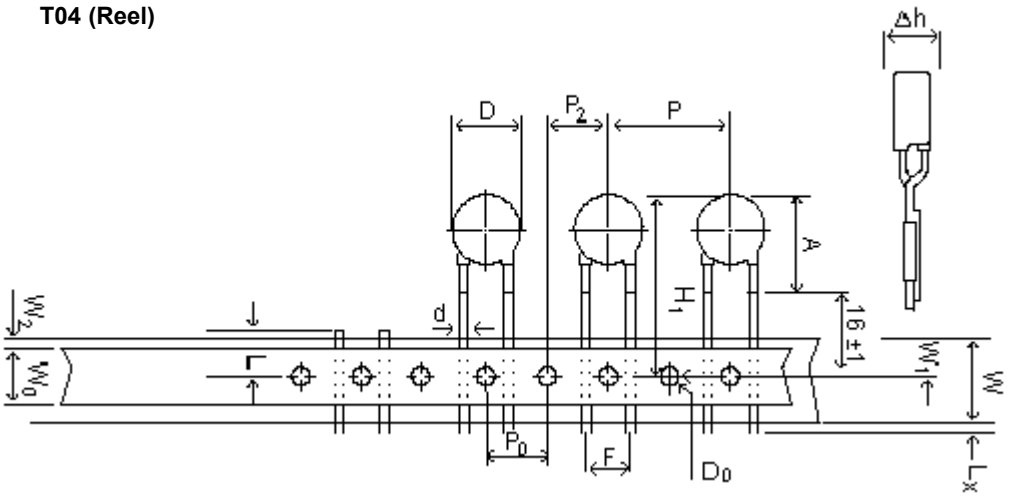
**T08 (Ammo Box)**
**T16 (Reel)**




**T1U (Ammo Box)**
**T1N (Reel)**




**T43 (Ammo Box)**
**T04 (Reel)**



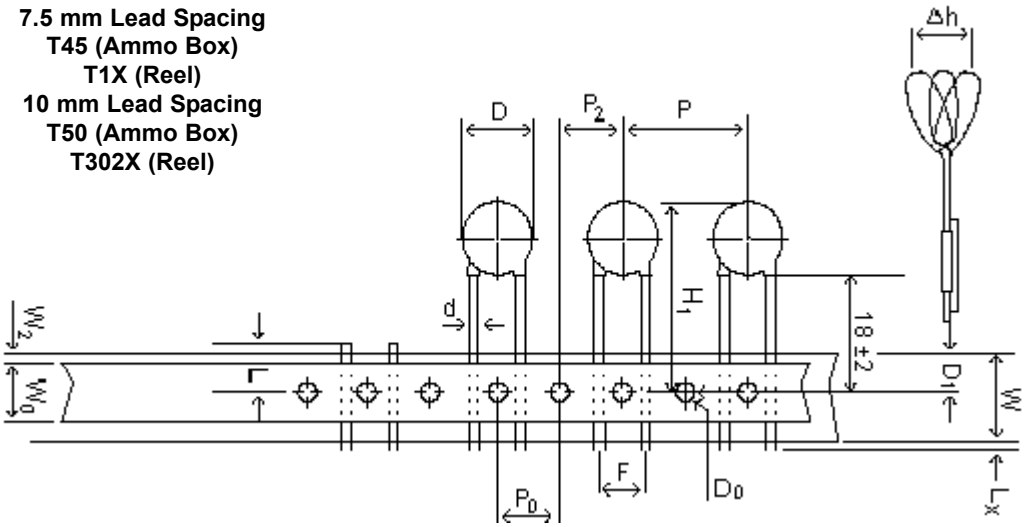

Dimensions : Millimetres

## Specification Table

| Item | | Disk Size | | | | | |
|---|---|---|---|---|---|---|---|
| | | 10D | | | 14D | | |
| Taping Code | | T19, T36 | T1N, T1U, T08, T16 | T43, T04 | T19, T36 | T1N, T1U, T08, T16 | T43, T04 |
| Body Diameter | D | 14 Maximum | | | 7.5 Maximum | | |
| Lead Wire Diameter | d | 0.8 ±0.05 | | | | | |
| Pitch of Component | P | 25.4 ±1 | | | | | |
| Hole Centre to Component Centre | $P_2$ | 12.7 ±0.3 | | | | | |
| Feed Hole Pitch | $P_0$ | | | | | | |
| Lead to Lead Distance (Centre to Centre) | F | 7.5 ± 0.8 | | | | | |
| Component Alignment | Δh | 2 Maximum | | | | | |
| Base paper Tape Width | W | 18* | | | | | |
| Adhesive Tape Width | $W_0$ | 10 Minimum | | | | | |
| Hole Position | $W_1$ | 9 ±0.5 | | | | | |
| Adhesive Tape Border | $W_2$ | 1.5 Maximum | | | | | |
| Component Height | $H_1$ | 33 Maximum | 38.5 Maximum | 35.5 Maximum | 37 Maximum | 40 Maximum | |
| Lead-Wire Protrusion | $L_x$ | 1 Maximum | | | | | |
| Feed Hole Diameter | $D_0$ | 4 ±0.2 | | | | | |
| Total Tape Thickness | t | < 0.7 | | | | | |
| Length of Clipped Lead | L | 11 Maximum | | | | | |
| Component Height from Seating Plane | A | - | 19.5 Maximum | | - | 22.5 Maximum | |

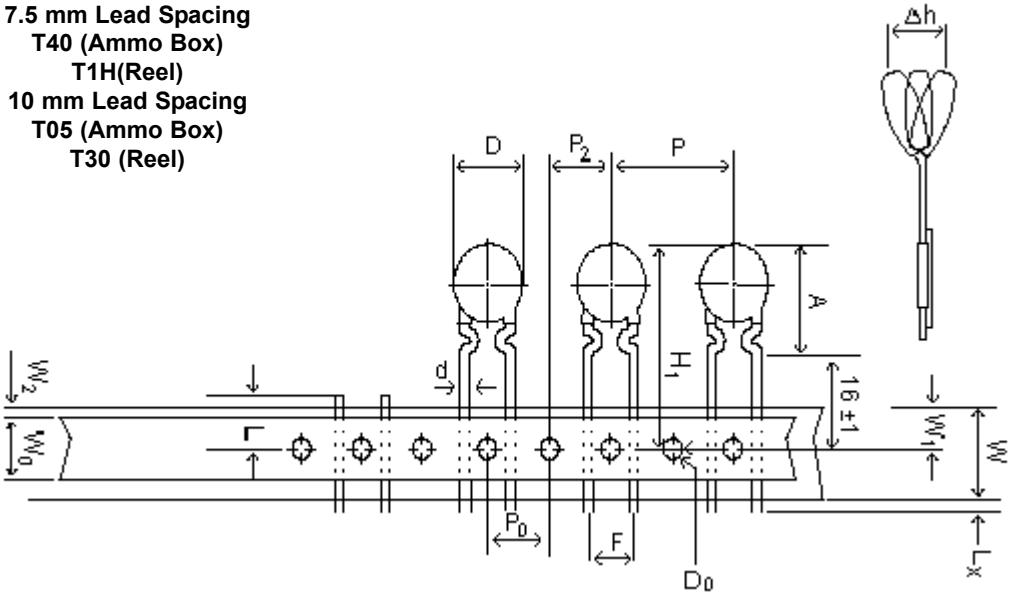
* Tolerances are +1 and -0.5

**7.5 mm Lead Spacing**
**T45 (Ammo Box)**
**T1X (Reel)**
**10 mm Lead Spacing**
**T50 (Ammo Box)**
**T302X (Reel)**

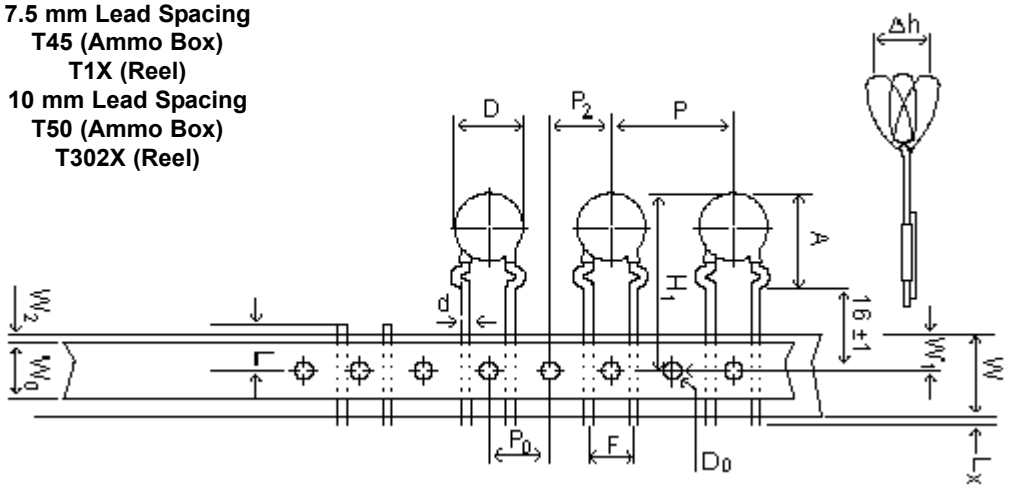



Dimensions : Millimetres

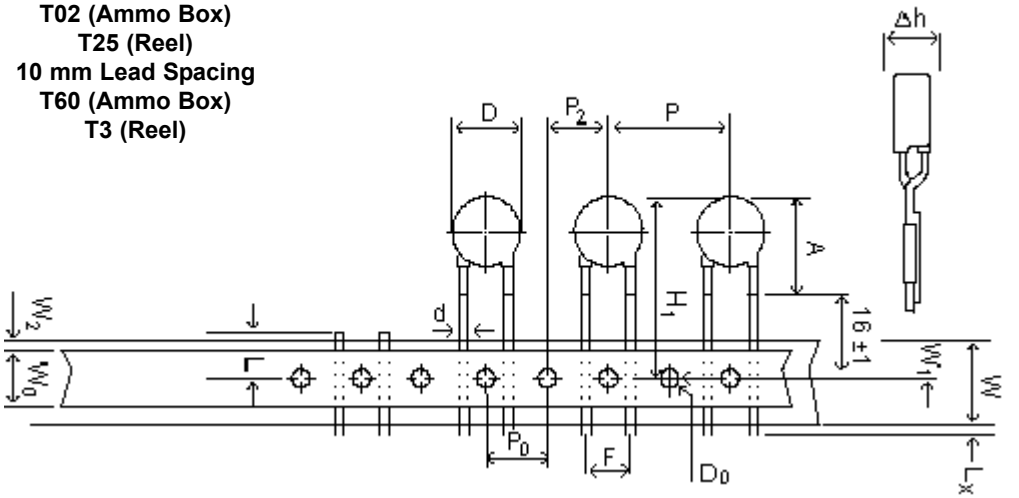
**7.5 mm Lead Spacing**
**T40 (Ammo Box)**
**T1H(Reel)**
**10 mm Lead Spacing**
**T05 (Ammo Box)**
**T30 (Reel)**




**7.5 mm Lead Spacing**
**T45 (Ammo Box)**
**T1X (Reel)**
**10 mm Lead Spacing**
**T50 (Ammo Box)**
**T302X (Reel)**




**7.5 mm Lead Spacing**
**T02 (Ammo Box)**
**T25 (Reel)**
**10 mm Lead Spacing**
**T60 (Ammo Box)**
**T3 (Reel)**




Dimensions : Millimetres

## Specification Table

| Item | | Disk Size | | | | | |
|---|---|---|---|---|---|---|---|
| | | 20D | | | | | |
| | | Lead Spacing 7.5 mm | | | Spacing 10 mm | | |
| Taping Code | | T44, T1H | T45, T1X, T40, T4X | T02, T25 | T05, T30 | T50, T2X, T35, T2D | T60, T3X |
| Body Diameter | D | 24 Maximum** | | | 24 Maximum | | |
| Lead Wire Diameter | d | 0.8 ±0.1 | | | | | |
| Pitch of Component | P | 25.4 ±1 | | | | | |
| Hole Centre to Component Centre | $P_2$ | 12.7 ±0.3 | | | | | |
| Feed Hole Pitch | $P_0$ | | | | | | |
| Lead to Lead Distance (Centre to Centre) | F | 7.5 ± 0.8 | | | 10 ±1 | | |
| Component Alignment | h | 2 Maximum | | | | | |
| Base paper Tape Width | W | 18* | | | | | |
| Adhesive Tape Width | $W_0$ | 10 Minimum | | | | | |
| Hole Position | $W_1$ | 9 ±0.5 | | | | | |
| Adhesive Tape Border | $W_2$ | 1.5 Maximum | | | | | |
| Component Height | $H_1$ | 48 Maximum** | | | 48 Maximum | | |
| Lead-Wire Protrusion | $L_x$ | 1 Maximum | | | | | |
| Feed Hole Diameter | $D_0$ | 4 ±0.2 | | | | | |
| Total Tape Thickness | t | < 0.7 | | | | | |
| Length of Clipped Lead | L | 11 Maximum | | | | | |
| Component Height from Seating Plane | A | - | 29 Maximum | 28 Maximum | - | 29 Maximum | 28 Maximum |

* Tolerances are +1 and -0.5
** For 18Ø, D = 22, H1 = 46 and A = 26 Maximum