



WORLD PRODUCTS INC.
ELECTRONIC COMPONENT SOLUTIONS



CELEBRATING 40 YEARS IN BUSINESS

METAL OXIDE VARISTORS EV* SERIES



*Environmental Varistor

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Definition of Terms (according to IEEE specifications C62.33)

Average Power Dissipation: Tested using two consecutive pulses at rated peak current using a 10/1000µs test waveform with a minimum pulse period of 60 seconds between pulses (IEC 61000-4-5).

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 1mA 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, 8/20µs 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 1KHZ.

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 | < -0.01 % / °C |
| Insulation Resistance | 1000 Megohm min. |
| Hi POT (Leads to Case, 1 min.) | 3000 VDC* |
| Typical Response Time | < 15 nsec. |
| Epoxy Rating | 94 V-0 |
| Current/Energy Derating (>85°C) | - 2.5 % / °C |
| DC Leakage Current | 200µA Max (at rated DC working voltage) |
| Solderability | MIL STD 202G, Method 208H |
| Failure Criteria | Voltage change ± 10% from initially measured Varistor Voltage. When determining if varistor is within aforementioned criteria the same temperature must be observed as was used for initial Varistor Voltage measurements. |

*Rating is for standard epoxy, for flame retardant coating (suffix "S") disk sizes 5mm to 20mm rating is 2000 VDC, for disk sizes 22mm & 34mm rating is 2500VDC.

Approvals

| APPROVAL & FILE # | DISK SIZE | | | | | | | | | | | | | | | | | | | | | | | |
|---|-----------|---|---|---|---|---|---------|---|---|---|---|---|---------|---|---|---|---|---|---------|---|---|---|---|---|
| | 5mm | | | | | | 7mm | | | | | | 10mm | | | | | | 14mm | | | | | |
| Suffix Codes | Nil | J | H | A | B | S | Nil | J | H | A | B | S | Nil | J | H | A | B | S | Nil | J | H | A | B | S |
| UL 1449 3RD EDITION, FILE#E321567* | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| CUL 1449 3RD EDITION, FILE#E321567* | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| VDE IEC60950-1 Annex Q | PENDING | | | | | | PENDING | | | | | | PENDING | | | | | | PENDING | | | | | |

| APPROVAL & FILE # | DISK SIZE | | | | | | | | | | | | | | |
|---|-----------|---|---|---|---|---|---------|---|---|---|---------|---|---|---------|---|
| | 20mm | | | | | | 22mm | | | | 34mm | | | | |
| Suffix Codes | Nil | J | H | A | B | S | Nil | A | S | P | Nil | H | A | S | P |
| UL 1449 3RD EDITION, FILE#E321567* | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| CUL 1449 3RD EDITION, FILE#E321567* | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | PENDING | √ |
| VDE IEC60950-1 Annex Q | PENDING | | | | | | PENDING | | | | PENDING | | | | |

NOTES:

Nil = 5mm through 20mm StandardSeries. 22mm & 34mm Standard Series (tab leads).

J = 5mm through 20mm High Energy series.

H = 5mm through 20mm & 34mm Ultra High Energy series.

B = Uncoated disk (with leads).

A = Uncoated disk (without leads).

S = Flame retardant coating option.

P = 22mm & 34mm Pin Type.

*UL1449 3RD Edition SPD Type designation:

5mm (11VAC – 40VAC) = other 1

5mm (50VAC – 360VAC) = other 2

7mm (All) = other 3

10mm (11VAC – 40VAC) = other 4

10mm (50VAC – 680VAC) = other 5

14mm = Type 3

20mm = Type 2

22mm = Type 2

34mm = Type 1

Part Numbering System

EV **20** **D** **130** **K** - **J** **S** **I** **X**
 (1) (2) (3) (4) (5) (6) (7) (8) (9) (10)

(1) Series

EV = Environmental Varistor
(All parts are RoHS compliant & halogen free.)

(2) Disk Diameter

05 = 5mm, **07** = 7mm, **10** = 10mm,
14 = 14mm, **20** = 20mm, **22** = 22mm,
34 = 34mm

(3) Type

D = Standard

(4) AC RMS Voltage Rating

130 = 130VAC

(5) Tolerance

J = ± 5%, **K** = ±10%

(6) Lead Type

Nil = Standard wire straight lead configuration applies for 5mm to 20mm disk size. (for 22mm & 34mm disk size standard tab lead configuration applies).

P = Pin Type (only offered for 22mm & 34mm disk size, standard lead configuration applies).

B = Uncoated disk with leads (standard lead configuration applies).

A = Uncoated disk without leads.

PB = Uncoated disk Pin Type (offered only for 22mm & 34mm disk size, standard tab lead configuration applies).

(7) Surge Type

Nil = Standard Series

J = High Energy (for 5mm through 20mm)

H = Ultra High Energy (for 5mm through 20mm & 34mm)

(8) Coating Option

Nil = Standard halogen free epoxy coating

S = Flame retardant coating

(9) Lead Configuration Options (wire or tab type)

(see notes below)

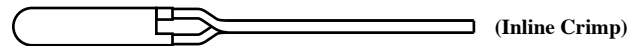
Nil = Straight lead

I = Inward Crimp (wire leads only-not applicable for 22mm & 34mm disk sizes.)

O = Outward Crimp (wire leads only-not applicable for 22mm & 34mm disk sizes.)

L = InLine Crimp (wire leads only-not applicable for 22mm & 34mm disk sizes.)

N = For ≥420VAC parts requested without inline crimp (see note 3 below).



(Inline Crimp)

(10) Lead Spacing Option

Nil = Standard lead spacing (please reference standard dimensions and lead modification options)

X = 10mm lead spacing for 20mm disk size

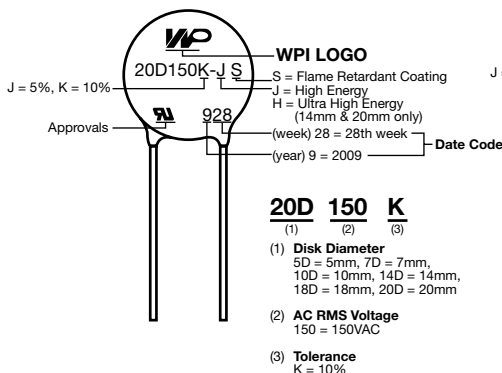
U = 22mm lead spacing for 34mm disk size.

NOTES:

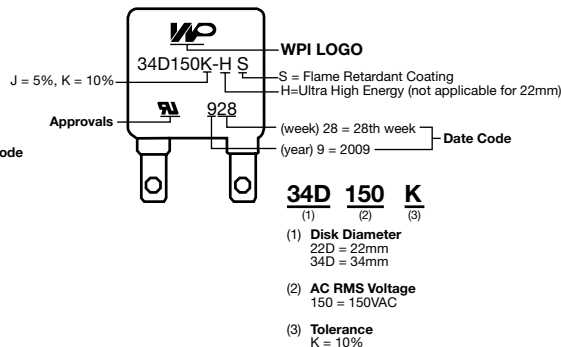
- For taped parts see taping specifications for suffix code.
- All disk sizes are available in several lead options. Contact WPI for additional information.
- For disk sizes 5mm through 20mm rated - parts ≥420VAC provided standard with inline crimp (see illustration above) for straight disk seating on PC boards.

Part Marking

(5mm - 20mm)



(22mm & 34mm)



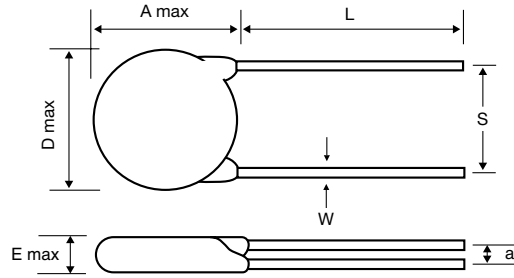
Date Code

928 = First digit represents year (9 = 2009). Second and third digits represent the week of the year.

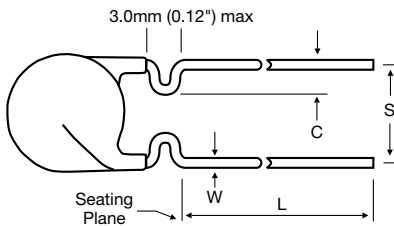
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Standard Dimensions and Lead Modification Options

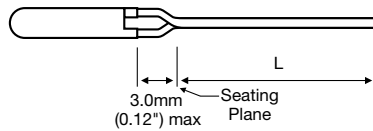
5mm, 7mm, 10mm, 14mm & 20mm



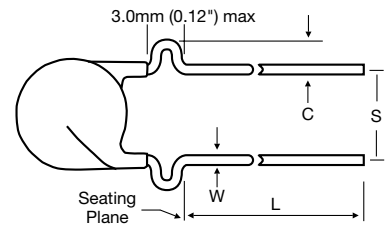
Inward Crimp



Inline Crimp



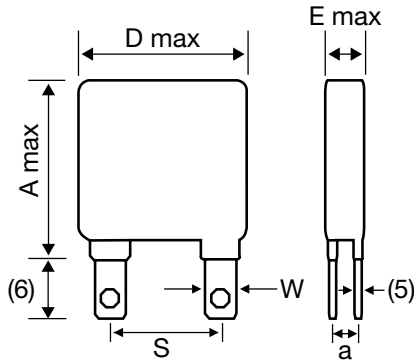
Outward Crimp



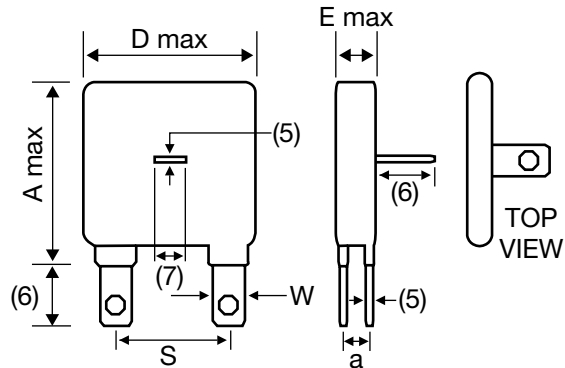
NOTE: For uncoated "A" Type (without leads) and "B" Type (with leads) consult World Products, Inc. for exact dimensions.

22mm & 34mm

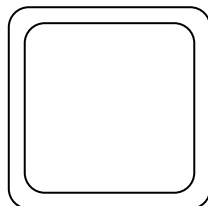
Tab Lead



Tab Lead Pin Type



22mm & 34mm Uncoated Disk Series (No Leads)



Standard Disk Size

22mm = 21mm ± 3.5mm X 22.5mm ± 3.5mm

34mm = 33mm ± 3.00mm X 35.5mm ± 5.0mm

NOTE: Please see "E" maximum thickness and off-set "a" dimension by part number.

All disk sizes are available in several lead options. Please contact WPI for additional information.

Standard Dimensions and Lead Modification Options (continued)

Wire Lead Parts (Standard Epoxy)⁽¹⁰⁾

| Disk Size | A max | | D max | | S | | W nom | | C | | L (min) | | Dimension E max & a |
|-------------------|-------|-----|-------|------|--------|----------|----------|-----------|------------|--------------|---------|--|---------------------|
| | mm | in | mm | in | mm ± 1 | in ± .04 | mm ± .02 | in ± .001 | mm | in | mm | in | |
| 5 | 9 | 0.4 | 7 | 0.28 | 5 | 0.20 | 0.6 | 0.024 | 1.6 ± 0.4 | 0.06 ± 0.016 | 25/.98 | Please see "E" Maximum Thickness and Off-set "a" Dimension by Part Number. | |
| 7 | 11 | 0.4 | 9 | 0.35 | 5 | 0.20 | 0.6 | 0.024 | 1.6 ± 0.4 | 0.06 ± 0.016 | | | |
| 10 | 15.5 | 0.6 | 12.5 | 0.49 | 7.5 | 0.30 | 0.8 | 0.031 | 1.6 ± 0.4 | 0.06 ± 0.016 | | | |
| 14 | 20 | 0.8 | 16.5 | 0.65 | 7.5 | 0.30 | 0.8 | 0.031 | 1.6 ± 0.4 | 0.06 ± 0.016 | | | |
| 20 | 26 | 1.0 | 23 | 0.91 | 7.5 | 0.30 | 0.8 | 0.031 | 2.05 ± 0.4 | 0.08 ± 0.016 | | | |
| 20 ⁽⁶⁾ | 26 | 1.0 | 23 | 0.91 | 10 | 0.39 | 1.0 | 0.039 | 2.05 ± 0.4 | 0.08 ± 0.016 | | | |

Tab Lead Parts (Standard Epoxy)⁽¹⁰⁾

| Disk Size | A max | | D max | | S | | W nom | | C | | Dimension E max & a |
|-------------------|----------------|------|-------|------|--------|-----------|----------|----------|-----|-----|--|
| | mm | in | mm | in | mm ± 1 | in ± .039 | mm ± 2 | in ± .08 | mm | in | |
| 22 | 28 | 1.1 | 28 | 1.1 | 22 | 0.87 | 4 | 0.16 | N/A | N/A | Please see "E" Maximum Thickness and Off-set "a" Dimension by Part Number. |
| 22 ⁽⁴⁾ | (see footnote) | | | | | | | | | | |
| | mm | in | mm | in | mm ± 1 | in ± .039 | mm ± 0.5 | in ± .02 | mm | in | |
| 34 | 42 | 1.65 | 37 | 1.46 | 25.4 | 1 | 7 | .275 | N/A | N/A | |
| 34 ⁽⁶⁾ | 42 | 1.65 | 37 | 1.46 | 22 | 0.87 | 6 | 0.24 | N/A | N/A | |
| 34 ⁽⁴⁾ | (see footnote) | | | | | | | | | | |

NOTES

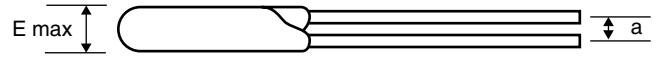
- Maximum epoxy extending on leads (measured from bottom portion of disk) is 3mm for all disk sizes with exception of 20mm disk size which is 4mm.
- Reduced dimensions, special lead diameters and special lead spacing may be available upon request.
- 20mm disk size** - for 10mm leadspacing use suffix "X".
- 22mm and 34mm disk size Pin Type dimensions are the same as 22mm and 34mm disk size Tab Lead type (except where noted).
- 22mm disk size** - .3mm (.01") max for 14 VAC - 180VAC and .4mm (.015") max for 195VAC - 1000VAC.
34mm disk size - .4mm (.015") max for 30VAC - 180VAC and .5mm (.02") max for 195VAC - 1000VAC.
- Dimension: 15mm (.6") ± 1mm (.039")
- 22mm disk size** - 4mm (0.16") ± 2mm (0.8").
34mm disk size - 6.5mm (0.26") ± 0.5mm (.02").
- 34mm disk size** - for 22mm lead spacing use suffix "U".
- For "flame retardant coating" (suffix "S") dimensions "A", "D", "E", and "a" add 10% (x1.10) as this coating is thicker.

Standard Dimensions and Lead Modification Options (continued)

E Max Dimensions for EV Standard Series (5, 7, 10, 14 and 20mm) using standard epoxy coating. For flame retardant coating (suffix “s”) dimensions “E” & “a” add 10% (x1.10) as this coating is thicker.

Dimensions are in mm (inches)

5mm



| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV05D11K | 3.4 (.13) | 1.3 (.05) |
| EV05D14K | 3.5 (.14) | 1.3 (.05) |
| EV05D17K | 3.8 (.15) | 1.4 (.06) |
| EV05D20K | 3.4 (.13) | 1.2 (.05) |
| EV05D25K | 3.6 (.14) | 1.3 (.05) |
| EV05D30K | 3.8 (.15) | 1.5 (.06) |
| EV05D35K | 3.9 (.15) | 1.6 (.06) |
| EV05D40K | 4.0 (.16) | 1.8 (.07) |
| EV05D50K | 3.4 (.13) | 1.2 (.05) |
| EV05D60K | 3.6 (.14) | 1.2 (.05) |
| EV05D75K | 3.8 (.15) | 1.3 (.05) |
| EV05D95K | 4.0 (.16) | 1.5 (.06) |
| EV05D120K | 3.2 (.13) | 1.4 (.05) |

| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV05D130K | 3.4 (.13) | 1.5 (.06) |
| EV05D140K | 3.5 (.14) | 1.5 (.06) |
| EV05D150K | 3.6 (.14) | 1.6 (.06) |
| EV05D180K | 3.8 (.15) | 1.8 (.07) |
| EV05D195K | 4.0 (.16) | 1.6 (.06) |
| EV05D210K | 4.2 (.17) | 1.7 (.07) |
| EV05D230K | 4.4 (.17) | 1.8 (.07) |
| EV05D250K | 4.6 (.18) | 1.9 (.08) |
| EV05D275K | 4.8 (.19) | 1.8 (.07) |
| EV05D300K | 5.0 (.20) | 2.4 (.09) |
| EV05D320K | 5.1 (.20) | 2.4 (.09) |
| EV05D360K | 5.4 (.21) | 2.6 (.10) |

7mm

| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV07D11K | 3.4 (.13) | 1.3 (.05) |
| EV07D14K | 3.5 (.14) | 1.3 (.05) |
| EV07D17K | 3.8 (.15) | 1.4 (.06) |
| EV07D20K | 3.4 (.13) | 1.2 (.05) |
| EV07D25K | 3.6 (.14) | 1.3 (.05) |
| EV07D30K | 3.8 (.15) | 1.5 (.06) |
| EV07D35K | 3.9 (.15) | 1.6 (.06) |
| EV07D40K | 4.0 (.16) | 1.8 (.07) |
| EV07D50K | 3.4 (.13) | 1.2 (.05) |
| EV07D60K | 3.6 (.14) | 1.2 (.05) |
| EV07D75K | 3.8 (.15) | 1.3 (.05) |
| EV07D95K | 4.0 (.16) | 1.4 (.06) |
| EV07D120K | 3.2 (.13) | 1.4 (.05) |
| EV07D130K | 3.4 (.13) | 1.5 (.06) |
| EV07D140K | 3.5 (.14) | 1.5 (.06) |

| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV07D150K | 3.6 (.14) | 1.6 (.06) |
| EV07D180K | 3.8 (.15) | 1.8 (.07) |
| EV07D195K | 4.0 (.16) | 1.6 (.06) |
| EV07D210K | 4.2 (.17) | 1.7 (.07) |
| EV07D230K | 4.4 (.17) | 1.8 (.07) |
| EV07D250K | 4.6 (.18) | 1.9 (.08) |
| EV07D275K | 4.8 (.19) | 2.0 (.08) |
| EV07D300K | 5.0 (.20) | 2.4 (.10) |
| EV07D320K | 5.1 (.20) | 2.0 (.09) |
| EV07D360K | 5.4 (.20) | 2.6 (.10) |
| EV07D390K | 5.8 (.24) | 2.6 (.10) |
| EV07D420K | 6.0 (.24) | *3.0 (.12) |
| EV07D460K | 6.2 (.24) | *3.3 (.13) |
| EV07D485K | 6.4 (.25) | *3.4 (.13) |
| EV07D510K | 6.8 (.27) | *3.5 (.14) |

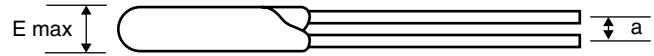
* Parts rated ≥420VAC come standard with inline crimp for straight disk seating on PC boards. For these parts, the “a” dimension is not applicable. If ≥420VAC parts are required without inline crimp, please reference “Part Number System” position 9 and add suffix “N” then reference “a” dimension above.

Standard Dimensions and Lead Modification Options (continued)

E Max Dimensions for EV Standard Series (5, 7, 10, 14 and 20mm) using standard epoxy coating. For flame retardant coating (suffix “s”) dimensions “E” & “a” add 10% (x1.10) as this coating is thicker.

Dimensions are in mm (inches)

10mm



| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV10D11K | 3.8 (.15) | 1.4 (.06) |
| EV10D14K | 3.9 (.15) | 1.5 (.06) |
| EV10D17K | 4.2 (.17) | 1.6 (.06) |
| EV10D20K | 3.8 (.15) | 1.8 (.07) |
| EV10D25K | 4.0 (.16) | 1.6 (.06) |
| EV10D30K | 4.2 (.17) | 1.7 (.07) |
| EV10D35K | 4.3 (.17) | 1.8 (.07) |
| EV10D40K | 4.4 (.17) | 2.1 (.08) |
| EV10D50K | 3.8 (.15) | 1.4 (.05) |
| EV10D60K | 4.0 (.16) | 1.4 (.06) |
| EV10D75K | 4.2 (.17) | 1.5 (.06) |
| EV10D95K | 4.4 (.17) | 1.7 (.07) |
| EV10D120K | 3.6 (.14) | 1.6 (.06) |
| EV10D130K | 3.8 (.15) | 1.7 (.07) |
| EV10D140K | 3.9 (.15) | 1.8 (.07) |
| EV10D150K | 4.0 (.16) | 1.9 (.07) |
| EV10D180K | 4.2 (.17) | 2.0 (.08) |
| EV10D195K | 4.4 (.17) | 1.8 (.07) |

| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV10D210K | 4.6 (.18) | 1.9 (.08) |
| EV10D230K | 4.8 (.19) | 2.0 (.08) |
| EV10D250K | 5.0 (.20) | 2.1 (.08) |
| EV10D275K | 5.2 (.21) | 2.1 (.08) |
| EV10D300K | 5.4 (.21) | 2.6 (.10) |
| EV10D320K | 5.5 (.22) | 2.6 (.10) |
| EV10D360K | 5.9 (.23) | 2.8 (.10) |
| EV10D390K | 6.2 (.24) | 3.1 (.12) |
| EV10D420K | 6.4 (.25) | *3.3 (.13) |
| EV10D460K | 6.6 (.26) | *3.5 (.14) |
| EV10D485K | 6.8 (.27) | *3.6 (.14) |
| EV10D510K | 7.2 (.28) | *3.8 (.15) |
| EV10D550K | 7.6 (.30) | *4.1 (.16) |
| EV10D625K | 8.0 (.32) | *4.4 (.17) |
| EV10D680K | 8.5 (.37) | *4.9 (.19) |
| EV10D750K | 9.5 (.37) | *5.4 (.21) |
| EV10D1100K | 11.5 (.45) | *6.4 (.25) |

14mm

| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV14D11K | 3.8 (.15) | 1.4 (.06) |
| EV14D14K | 3.9 (.15) | 1.5 (.06) |
| EV14D17K | 4.2 (.17) | 1.7 (.07) |
| EV14D20K | 3.8 (.15) | 1.9 (.08) |
| EV14D25K | 4.0 (.16) | 1.7 (.07) |
| EV14D30K | 4.2 (.17) | 1.8 (.07) |
| EV14D35K | 4.3 (.17) | 2.0 (.08) |
| EV14D40K | 4.4 (.17) | 2.2 (.09) |
| EV14D50K | 3.8 (.15) | 1.4 (.06) |
| EV14D60K | 4.0 (.16) | 1.5 (.06) |
| EV14D75K | 4.2 (.17) | 1.5 (.06) |
| EV14D95K | 4.4 (.17) | 1.7 (.07) |
| EV14D120K | 3.6 (.14) | 1.7 (.07) |
| EV14D130K | 3.8 (.15) | 1.8 (.07) |
| EV14D140K | 3.9 (.15) | 1.9 (.08) |
| EV14D150K | 4.0 (.16) | 1.9 (.08) |
| EV14D180K | 4.2 (.17) | 2.0 (.08) |
| EV14D195K | 4.4 (.17) | 2.0 (.08) |

| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV14D210K | 4.6 (.18) | 2.1 (.08) |
| EV14D230K | 4.8 (.19) | 2.0 (.09) |
| EV14D250K | 5.0 (.20) | 2.3 (.09) |
| EV14D275K | 5.2 (.21) | 2.3 (.09) |
| EV14D300K | 5.4 (.21) | 2.6 (.10) |
| EV14D320K | 5.5 (.22) | 2.6 (.10) |
| EV14D360K | 5.9 (.23) | 2.8 (.10) |
| EV14D390K | 6.2 (.24) | 3.1 (.12) |
| EV14D420K | 6.4 (.25) | *3.3 (.13) |
| EV14D460K | 6.6 (.26) | *3.5 (.14) |
| EV14D485K | 6.8 (.27) | *3.6 (.14) |
| EV14D510K | 7.2 (.28) | *3.8 (.15) |
| EV14D550K | 7.6 (.30) | *4.0 (.16) |
| EV14D625K | 8.0 (.32) | *4.4 (.18) |
| EV14D680K | 8.5 (.37) | *4.9 (.19) |
| EV14D750K | 9.7 (.38) | *5.8 (.23) |
| EV14D1100K | 11.7 (.46) | *6.9 (.27) |

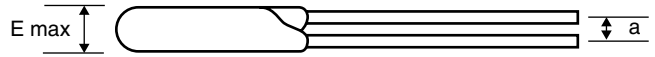
* Parts rated ≥420VAC come standard with inline crimp for straight disk seating on PC boards. For these parts, the “a” dimension is not applicable. If ≥420VAC parts are required without inline crimp, please reference “Part Number System” position 9 and add suffix “N” then reference “a” dimension above.

Standard Dimensions and Lead Modification Options (continued)

E Max Dimensions for EV Standard Series (5, 7, 10, 14 and 20mm) using standard epoxy coating. For flame retardant coating (suffix “s”) dimensions “E” & “a” add 10% (x1.10) as this coating is thicker.

Dimensions are in mm (inches)

20mm



| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV20D11K | 4.2 (.17) | 1.5 (.06) |
| EV20D14K | 4.3 (.17) | 1.6 (.06) |
| EV20D17K | 4.6 (.18) | 1.8 (.07) |
| EV20D20K | 4.2 (.17) | 2.1 (.08) |
| EV20D25K | 4.4 (.17) | 2.1 (.08) |
| EV20D30K | 4.6 (.18) | 2.2 (.09) |
| EV20D35K | 4.7 (.19) | 2.2 (.09) |
| EV20D40K | 4.8 (.19) | 2.4 (.09) |
| EV20D50K | 4.2 (.17) | 1.5 (.06) |
| EV20D60K | 4.4 (.17) | 1.6 (.06) |
| EV20D75K | 4.6 (.18) | 1.6 (.06) |
| EV20D95K | 4.8 (.19) | 1.6 (.06) |
| EV20D120K | 4.0 (.16) | 1.8 (.07) |
| EV20D130K | 4.2 (.07) | 2.2 (.09) |
| EV20D140K | 4.3 (.17) | 2.3 (.09) |
| EV20D150K | 4.4 (.17) | 2.1 (.08) |
| EV20D180K | 4.6 (.18) | 2.3 (.09) |
| EV20D195K | 4.8 (.19) | 2.2 (.09) |

| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV20D210K | 5.0 (.20) | 2.3 (.09) |
| EV20D230K | 5.2 (.21) | 2.4 (.09) |
| EV20D250K | 5.4 (.21) | 2.5 (.10) |
| EV20D275K | 5.6 (.22) | 2.5 (.10) |
| EV20D300K | 5.9 (.23) | 2.9 (.11) |
| EV20D320K | 6.0 (.24) | 2.8 (.10) |
| EV20D360K | 6.5 (.26) | 3.1 (.12) |
| EV20D390K | 6.9 (.27) | 3.3 (.13) |
| EV20D420K | 7.0 (.28) | *3.5 (.14) |
| EV20D460K | 7.2 (.28) | *3.8 (.15) |
| EV20D485K | 7.4 (.29) | *3.9 (.15) |
| EV20D510K | 7.8 (.31) | *4.0 (.16) |
| EV20D550K | 8.2 (.32) | *4.4 (.17) |
| EV20D625K | 8.7 (.34) | *4.7 (.19) |
| EV20D680K | 9.2 (.36) | *5.2 (.20) |
| EV20D750K | 10.2 (.40) | *6.0 (.19) |
| EV20D1100K | 12.2 (.48) | *7.2 (.28) |

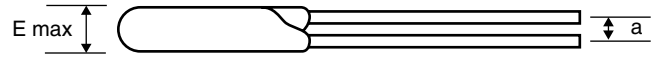
* Parts rated ≥420VAC come standard with inline crimp for straight disk seating on PC boards. For these parts, the “a” dimension is not applicable. If ≥420VAC parts are required without inline crimp, please reference “Part Number System” position 9 and add suffix “N” then reference “a” dimension above.

Standard Dimensions and Lead Modification Options (continued)

E Max Dimensions for EV High Energy (-J) Series (5, 7, 10, 14 and 20mm) using standard epoxy coating. For flame retardant coating (suffix “s”) dimensions “E” & “a” add 10% (x1.10) as this coating is thicker.

Dimensions are in mm (inches)

5mm



| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|---------------|--|
| EV05D11K-J | 3.4 (.13) | 1.3 (.05) |
| EV05D14K-J | 3.5 (.14) | 1.3 (.05) |
| EV05D17K-J | 3.8 (.15) | 1.4 (.06) |
| EV05D20K-J | 3.4 (.13) | 1.2 (.05) |
| EV05D25K-J | 3.6 (.14) | 1.3 (.05) |
| EV05D30K-J | 3.8 (.15) | 1.5 (.06) |
| EV05D35K-J | 3.9 (.15) | 1.6 (.06) |
| EV05D40K-J | 4.0 (.16) | 1.8 (.07) |
| EV05D50K-J | 3.4 (.13) | 1.2 (.05) |
| EV05D60K-J | 3.6 (.14) | 1.2 (.05) |
| EV05D75K-J | 3.8 (.15) | 1.3 (.05) |
| EV05D95K-J | 4.0 (.16) | 1.5 (.06) |
| EV05D120K-J | 3.2 (.13) | 1.4 (.05) |

| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|---------------|--|
| EV05D130K-J | 3.4 (.13) | 1.5 (.06) |
| EV05D140K-J | 3.5 (.14) | 1.5 (.06) |
| EV05D150K-J | 3.6 (.14) | 1.6 (.06) |
| EV05D180K-J | 3.8 (.15) | 1.8 (.07) |
| EV05D195K-J | 4.0 (.16) | 1.6 (.06) |
| EV05D210K-J | 4.2 (.17) | 1.7 (.07) |
| EV05D230K-J | 4.4 (.17) | 1.8 (.07) |
| EV05D250K-J | 4.6 (.18) | 1.9 (.08) |
| EV05D275K-J | 4.8 (.19) | 1.8 (.07) |
| EV05D300K-J | 5.0 (.20) | 2.4 (.09) |
| EV05D320K-J | 5.1 (.20) | 2.4 (.09) |
| EV05D360K-J | 5.4 (.21) | 2.6 (.10) |

7mm

| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|---------------|--|
| EV07D11K-J | 3.4 (.13) | 1.3 (.05) |
| EV07D14K-J | 3.5 (.14) | 1.3 (.05) |
| EV07D17K-J | 3.8 (.15) | 1.4 (.06) |
| EV07D20K-J | 3.4 (.13) | 1.2 (.05) |
| EV07D25K-J | 3.6 (.14) | 1.3 (.05) |
| EV07D30K-J | 3.8 (.15) | 1.5 (.06) |
| EV07D35K-J | 3.9 (.15) | 1.6 (.06) |
| EV07D40K-J | 4.0 (.16) | 1.8 (.07) |
| EV07D50K-J | 3.4 (.13) | 1.2 (.05) |
| EV07D60K-J | 3.6 (.14) | 1.2 (.05) |
| EV07D75K-J | 3.8 (.15) | 1.3 (.05) |
| EV07D95K-J | 4.0 (.16) | 1.4 (.06) |
| EV07D120K-J | 3.2 (.13) | 1.4 (.05) |
| EV07D130K-J | 3.4 (.13) | 1.5 (.06) |
| EV07D140K-J | 3.5 (.14) | 1.5 (.06) |

| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|---------------|--|
| EV07D150K-J | 3.6 (.14) | 1.6 (.06) |
| EV07D180K-J | 3.8 (.15) | 1.8 (.07) |
| EV07D195K-J | 4.0 (.16) | 1.6 (.06) |
| EV07D210K-J | 4.2 (.17) | 1.7 (.07) |
| EV07D230K-J | 4.4 (.17) | 1.8 (.07) |
| EV07D250K-J | 4.6 (.18) | 1.9 (.08) |
| EV07D275K-J | 4.8 (.19) | 2.0 (.08) |
| EV07D300K-J | 5.0 (.20) | 2.4 (.10) |
| EV07D320K-J | 5.1 (.20) | 2.0 (.09) |
| EV07D360K-J | 5.4 (.20) | 2.6 (.10) |
| EV07D390K-J | 5.8 (.24) | 2.6 (.10) |
| EV07D420K-J | 6.0 (.24) | *3.0 (.12) |
| EV07D460K-J | 6.2 (.24) | *3.3 (.13) |
| EV07D485K-J | 6.4 (.25) | *3.4 (.13) |
| EV07D510K-J | 6.8 (.27) | *3.5 (.14) |

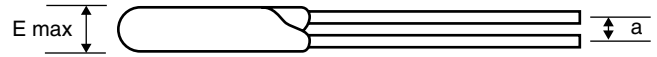
* Parts rated ≥420VAC come standard with inline crimp for straight disk seating on PC boards. For these parts, the “a” dimension is not applicable. If ≥420VAC parts are required without inline crimp, please reference “Part Number System” position 9 and add suffix “N” then reference “a” dimension above.

Standard Dimensions and Lead Modification Options (continued)

E Max Dimensions for EV High Energy (-J) Series (5, 7, 10, 14 and 20mm) using standard epoxy coating. For flame retardant coating (suffix “s”) dimensions “E” & “a” add 10% (x1.10) as this coating is thicker.

Dimensions are in mm (inches)

10mm



| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV10D11K-J | 3.8 (.15) | 1.4 (.06) |
| EV10D14K-J | 3.9 (.15) | 1.5 (.06) |
| EV10D17K-J | 4.2 (.17) | 1.7 (.07) |
| EV10D20K-J | 3.8 (.15) | 1.9 (.08) |
| EV10D25K-J | 4.0 (.16) | 1.7 (.07) |
| EV10D30K-J | 4.2 (.17) | 1.8 (.07) |
| EV10D35K-J | 4.3 (.17) | 2.0 (.08) |
| EV10D40K-J | 4.4 (.17) | 2.2 (.09) |
| EV10D50K-J | 3.8 (.15) | 1.4 (.06) |
| EV10D60K-J | 4.0 (.16) | 1.4 (.06) |
| EV10D75K-J | 4.2 (.17) | 1.5 (.06) |
| EV10D95K-J | 4.4 (.17) | 1.7 (.07) |
| EV10D120K-J | 3.6 (.14) | 1.6 (.06) |
| EV10D130K-J | 3.8 (.15) | 1.7 (.07) |
| EV10D140K-J | 3.9 (.15) | 1.8 (.07) |
| EV10D150K-J | 4.0 (.16) | 1.9 (.07) |
| EV10D180K-J | 4.2 (.17) | 2.0 (.08) |

| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV10D195K-J | 4.4 (.17) | 1.8 (.07) |
| EV10D210K-J | 4.6 (.18) | 1.9 (.08) |
| EV10D230K-J | 4.8 (.19) | 2.0 (.08) |
| EV10D250K-J | 5.0 (.20) | 2.1 (.08) |
| EV10D275K-J | 5.2 (.21) | 2.1 (.08) |
| EV10D300K-J | 5.4 (.21) | 2.6 (.10) |
| EV10D320K-J | 5.5 (.22) | 2.6 (.10) |
| EV10D360K-J | 5.9 (.23) | 2.8 (.10) |
| EV10D390K-J | 6.2 (.24) | 3.1 (.12) |
| EV10D420K-J | 6.4 (.25) | *3.3 (.13) |
| EV10D460K-J | 6.6 (.26) | *3.5 (.14) |
| EV10D485K-J | 6.8 (.27) | *3.6 (.14) |
| EV10D510K-J | 7.2 (.28) | *3.8 (.15) |
| EV10D550K-J | 7.6 (.30) | *4.1 (.16) |
| EV10D625K-J | 8.0 (.32) | *4.4 (.17) |
| EV10D680K-J | 8.5 (.37) | *4.9 (.19) |

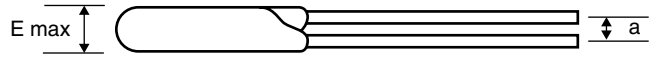
* Parts rated ≥420VAC come standard with inline crimp for straight disk seating on PC boards. For these parts, the “a” dimension is not applicable. If ≥420VAC parts are required without inline crimp, please reference “Part Number System” position 9 and add suffix “N” then reference “a” dimension above.

Standard Dimensions and Lead Modification Options (continued)

E Max Dimensions for EV High Energy (-J) Series (5, 7, 10, 14 and 20mm) using standard epoxy coating. For flame retardant coating (suffix “s”) dimensions “E” & “a” add 10% (x1.10) as this coating is thicker.

Dimensions are in mm (inches)

14mm



| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|---------------|--|
| EV14D11K-J | 3.8 (.15) | 1.4 (.06) |
| EV14D14K-J | 3.9 (.15) | 1.5 (.06) |
| EV14D17K-J | 4.2 (.17) | 1.7 (.07) |
| EV14D20K-J | 3.8 (.15) | 1.9 (.08) |
| EV14D25K-J | 4.0 (.16) | 1.7 (.07) |
| EV14D30K-J | 4.2 (.17) | 1.8 (.07) |
| EV14D35K-J | 4.3 (.17) | 2.0 (.08) |
| EV14D40K-J | 4.4 (.17) | 2.2 (.09) |
| EV14D50K-J | 3.8 (.15) | 1.4 (.06) |
| EV14D60K-J | 4.0 (.16) | 1.5 (.06) |
| EV14D75K-J | 4.2 (.17) | 1.5 (.06) |
| EV14D95K-J | 4.4 (.17) | 1.7 (.07) |
| EV14D120K-J | 3.6 (.14) | 1.7 (.07) |
| EV14D130K-J | 3.8 (.15) | 1.8 (.07) |
| EV14D140K-J | 3.9 (.15) | 1.9 (.08) |
| EV14D150K-J | 4.0 (.16) | 1.9 (.08) |
| EV14D180K-J | 4.2 (.17) | 2.0 (.08) |

| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|---------------|--|
| EV14D195K-J | 4.4 (.17) | 2.0 (.08) |
| EV14D210K-J | 4.6 (.18) | 2.1 (.08) |
| EV14D230K-J | 4.8 (.19) | 2.0 (.09) |
| EV14D250K-J | 5.0 (.20) | 2.3 (.09) |
| EV14D275K-J | 5.2 (.21) | 2.3 (.09) |
| EV14D300K-J | 5.4 (.21) | 2.6 (.10) |
| EV14D320K-J | 5.5 (.22) | 2.6 (.10) |
| EV14D360K-J | 5.9 (.23) | 2.8 (.10) |
| EV14D390K-J | 6.2 (.24) | 3.1 (.12) |
| EV14D420K-J | 6.4 (.25) | *3.3 (.13) |
| EV14D460K-J | 6.6 (.26) | *3.5 (.14) |
| EV14D485K-J | 6.8 (.27) | *3.6 (.14) |
| EV14D510K-J | 7.2 (.28) | *3.8 (.15) |
| EV14D550K-J | 7.6 (.30) | *4.0 (.16) |
| EV14D625K-J | 8.0 (.32) | *4.4 (.18) |
| EV14D680K-J | 8.5 (.37) | *4.9 (.19) |

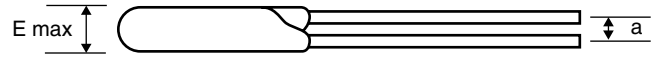
* Parts rated ≥420VAC come standard with inline crimp for straight disk seating on PC boards. For these parts, the “a” dimension is not applicable. If ≥420VAC parts are required without inline crimp, please reference “Part Number System” position 9 and add suffix “N” then reference “a” dimension above.

Standard Dimensions and Lead Modification Options (continued)

E Max Dimensions for EV High Energy (-J) Series (5, 7, 10, 14 and 20mm) using standard epoxy coating. For flame retardant coating (suffix “s”) dimensions “E” & “a” add 10% (x1.10) as this coating is thicker.

Dimensions are in mm (inches)

20mm



| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV20D11K-J | 4.2 (.17) | 1.5 (.06) |
| EV20D14K-J | 4.3 (.17) | 1.6 (.06) |
| EV20D17K-J | 4.6 (.18) | 1.8 (.07) |
| EV20D20K-J | 4.2 (.17) | 2.1 (.08) |
| EV20D25K-J | 4.4 (.17) | 2.1 (.08) |
| EV20D30K-J | 4.6 (.18) | 2.2 (.09) |
| EV20D35K-J | 4.7 (.19) | 2.2 (.09) |
| EV20D40K-J | 4.8 (.19) | 2.4 (.09) |
| EV20D50K-J | 4.2 (.17) | 1.5 (.06) |
| EV20D60K-J | 4.4 (.17) | 1.6 (.06) |
| EV20D75K-J | 4.6 (.18) | 1.6 (.06) |
| EV20D95K-J | 4.8 (.19) | 1.6 (.06) |
| EV20D120K-J | 4.0 (.16) | 1.8 (.07) |
| EV20D130K-J | 4.2 (.07) | 2.2 (.09) |
| EV20D140K-J | 4.3 (.17) | 2.3 (.09) |
| EV20D150K-J | 4.4 (.17) | 2.1 (.08) |
| EV20D180K-J | 4.6 (.18) | 2.3 (.09) |

| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV20D195K-J | 4.8 (.19) | 2.2 (.09) |
| EV20D210K-J | 5.0 (.20) | 2.3 (.09) |
| EV20D230K-J | 5.2 (.21) | 2.4 (.09) |
| EV20D250K-J | 5.4 (.21) | 2.5 (.10) |
| EV20D275K-J | 5.6 (.22) | 2.5 (.10) |
| EV20D300K-J | 5.9 (.23) | 2.9 (.11) |
| EV20D320K-J | 6.0 (.24) | 2.8 (.10) |
| EV20D360K-J | 6.5 (.26) | 3.1 (.12) |
| EV20D390K-J | 6.9 (.27) | 3.3 (.13) |
| EV20D420K-J | 7.0 (.28) | *3.5 (.14) |
| EV20D460K-J | 7.2 (.28) | *3.8 (.15) |
| EV20D485K-J | 7.4 (.29) | *3.9 (.15) |
| EV20D510K-J | 7.8 (.31) | *4.0 (.16) |
| EV20D550K-J | 8.2 (.32) | *4.4 (.17) |
| EV20D625K-J | 8.7 (.34) | *4.7 (.19) |
| EV20D680K-J | 9.2 (.36) | *5.2 (.20) |

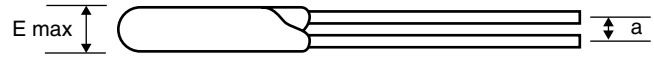
* Parts rated ≥420VAC come standard with inline crimp for straight disk seating on PC boards. For these parts, the “a” dimension is not applicable. If ≥420VAC parts are required without inline crimp, please reference “Part Number System” position 9 and add suffix “N” then reference “a” dimension above.

Standard Dimensions and Lead Modification Options (continued)

E Max Dimensions for EV Ultra High Energy (-H) Series (14 and 20mm) using standard epoxy coating. For flame retardant coating (suffix “s”) dimensions “E” & “a” add 10% (x1.10) as this coating is thicker.

Dimensions are in mm (inches)

14mm



| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV14D120K-H | 3.6 (.14) | 1.7 (.07) |
| EV14D130K-H | 3.8 (.15) | 1.8 (.07) |
| EV14D140K-H | 3.9 (.15) | 1.9 (.08) |
| EV14D150K-H | 4.0 (.16) | 1.9 (.08) |
| EV14D180K-H | 4.2 (.17) | 2.0 (.08) |
| EV14D195K-H | 4.4 (.17) | 2.0 (.08) |
| EV14D210K-H | 4.6 (.18) | 2.1 (.08) |
| EV14D230K-H | 4.8 (.19) | 2.3 (.09) |
| EV14D250K-H | 5.0 (.20) | 2.3 (.09) |
| EV14D275K-H | 5.2 (.21) | 2.3 (.09) |
| EV14D300K-H | 5.4 (.21) | 2.6 (.10) |

| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV14D320K-H | 5.5 (.22) | 2.6 (.10) |
| EV14D360K-H | 5.9 (.23) | 2.8 (.10) |
| EV14D390K-H | 6.2 (.24) | 3.1 (.12) |
| EV14D420K-H | 6.4 (.25) | *3.3 (.13) |
| EV14D460K-H | 6.6 (.26) | *3.5 (.14) |
| EV14D485K-H | 6.8 (.27) | *3.6 (.14) |
| EV14D510K-H | 7.2 (.28) | *3.8 (.15) |
| EV14D550K-H | 7.6 (.30) | *4.0 (.16) |
| EV14D625K-H | 8.0 (.32) | *4.4 (.18) |
| EV14D680K-H | 8.5 (.37) | *4.9 (.19) |

20mm

| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV20D120K-H | 4.0 (.16) | 2.1 (.08) |
| EV20D130K-H | 4.2 (.07) | 2.2 (.09) |
| EV20D140K-H | 4.3 (.17) | 2.3 (.09) |
| EV20D150K-H | 4.4 (.17) | 2.1 (.08) |
| EV20D180K-H | 4.6 (.18) | 2.3 (.09) |
| EV20D195K-H | 4.8 (.19) | 2.2 (.09) |
| EV20D210K-H | 5.0 (.20) | 2.3 (.09) |
| EV20D230K-H | 5.2 (.21) | 2.4 (.09) |
| EV20D250K-H | 5.4 (.21) | 2.5 (.10) |
| EV20D275K-H | 5.6 (.22) | 2.5 (.10) |
| EV20D300K-H | 5.9 (.23) | 2.9 (.11) |

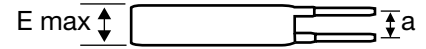
| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV20D320K-H | 6.0 (.24) | 2.8 (.10) |
| EV20D360K-H | 6.5 (.26) | 3.1 (.12) |
| EV20D390K-H | 6.9 (.27) | 3.3 (.13) |
| EV20D420K-H | 7.0 (.28) | *3.5 (.14) |
| EV20D460K-H | 7.2 (.28) | *3.8 (.15) |
| EV20D485K-H | 7.4 (.29) | *3.9 (.15) |
| EV20D510K-H | 7.8 (.31) | *4.0 (.16) |
| EV20D550K-H | 8.2 (.32) | *4.4 (.17) |
| EV20D625K-H | 8.7 (.34) | *4.7 (.19) |
| EV20D680K-H | 9.2 (.36) | *5.2 (.20) |

* Parts rated ≥420VAC come standard with inline crimp for straight disk seating on PC boards. For these parts, the “a” dimension is not applicable. If ≥420VAC parts are required without inline crimp, please reference “Part Number System” position 9 and add suffix “N” then reference “a” dimension above.

Standard Dimensions and Lead Modification Options (continued)

E Max Dimensions for EV Standard Tab Lead using standard epoxy coating. For flame retardant coating (suffix “s”) dimensions “E” & “a” add 10% (x1.10) as this coating is thicker.

Dimensions are in mm (inches)



22mm

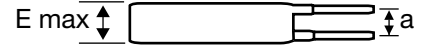
| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) | Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|-------------|------------------|---|
| EV22D14K | 3.89 (0.153) | 1.09 (0.043) | EV22D230K | 5.55 (0.219) | 2.65 (0.104) |
| EV22D17K | 4.03 (0.159) | 1.23 (0.048) | EV22D250K | 5.72 (0.225) | 2.82 (0.111) |
| EV22D20K | 4.20 (0.165) | 1.40 (0.055) | EV22D275K | 5.96 (0.235) | 3.06 (0.120) |
| EV22D25K | 4.37 (0.172) | 1.57 (0.062) | EV22D300K | 6.19 (0.244) | 3.29 (0.130) |
| EV22D30K | 4.20 (0.165) | 1.40 (0.055) | EV22D320K | 6.49 (0.256) | 3.59 (0.141) |
| EV22D35K | 4.38 (0.172) | 1.58 (0.062) | EV22D360K | 6.72 (0.265) | 3.82 (0.150) |
| EV22D40K | 4.62 (0.182) | 1.82 (0.072) | EV22D390K | 7.11 (0.280) | 4.21 (0.166) |
| EV22D50K | 3.97 (0.156) | 1.17 (0.046) | EV22D420K | 7.49 (0.295) | 4.59 (0.181) |
| EV22D60K | 4.15 (0.163) | 1.35 (0.053) | EV22D460K | 7.90 (0.311) | 5.00 (0.197) |
| EV22D75K | 4.34 (0.171) | 1.54 (0.061) | EV22D485K | 8.08 (0.318) | 5.18 (0.204) |
| EV22D95K | 4.31 (0.170) | 1.51 (0.059) | EV22D510K | 8.31 (0.327) | 5.41 (0.213) |
| EV22D120K | 4.52 (0.178) | 1.72 (0.068) | EV22D550K | 8.84 (0.348) | 5.94 (0.234) |
| EV22D130K | 4.66 (0.183) | 1.86 (0.073) | EV22D575K | 9.08 (0.357) | 6.18 (0.243) |
| EV22D140K | 4.81 (0.189) | 2.01 (0.079) | EV22D625K | 9.40 (0.370) | 6.50 (0.256) |
| EV22D150K | 4.95 (0.195) | 2.15 (0.085) | EV22D680K | 9.99 (0.393) | 7.09 (0.279) |
| EV22D180K | 5.16 (0.203) | 2.36 (0.093) | EV22D750K | 10.61 (0.418) | 7.71 (0.304) |
| EV22D195K | 5.19 (0.204) | 2.29 (0.090) | EV22D850K | 11.78 (0.464) | 8.88 (0.350) |
| EV22D210K | 5.37 (0.211) | 2.47 (0.097) | EV22D1000K | 12.46 (0.491) | 10.09 (0.397) |

Standard Dimensions and Lead Modification Options (continued)

E Max Dimensions for EV Standard Tab Lead using standard epoxy coating. For flame retardant coating (suffix “s”) dimensions “E” & “a” add 10% (x1.10) as this coating is thicker.

Dimensions are in mm (inches)

34mm



| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV34D30K | 4.4 (0.173) | 1.5 (0.059) |
| EV34D35K | 4.58 (0.180) | 1.68 (0.066) |
| EV34D40K | 4.82 (0.191) | 1.92 (0.076) |
| EV34D50K | 4.17 (0.164) | 1.27 (0.050) |
| EV34D60K | 4.35 (0.171) | 1.45 (0.057) |
| EV34D75K | 4.54 (0.179) | 1.64 (0.065) |
| EV34D95K | 4.51 (0.178) | 1.61 (0.063) |
| EV34D120K | 4.72 (0.186) | 1.82 (0.072) |
| EV34D130K | 4.86 (0.191) | 1.96 (0.077) |
| EV34D140K | 5.01 (0.197) | 2.11 (0.083) |
| EV34D150K | 5.15 (0.203) | 2.25 (0.089) |
| EV34D180K | 5.36 (0.211) | 2.46 (0.097) |
| EV34D195K | 5.39 (0.212) | 2.39 (0.094) |
| EV34D210K | 5.57 (0.219) | 2.57 (0.101) |
| EV34D230K | 5.75 (0.226) | 2.75 (0.108) |
| EV34D250K | 5.92 (0.233) | 2.92 (0.115) |

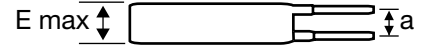
| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV34D275K | 6.16 (0.243) | 3.16 (0.124) |
| EV34D300K | 6.39 (0.252) | 3.39 (0.133) |
| EV34D320K | 6.69 (0.263) | 3.69 (0.145) |
| EV34D360K | 6.92 (0.272) | 3.92 (0.154) |
| EV34D390K | 7.31 (0.288) | 4.31 (0.170) |
| EV34D420K | 7.69 (0.303) | 4.69 (0.185) |
| EV34D460K | 8.10 (0.319) | 5.10 (0.201) |
| EV34D485K | 8.28 (0.326) | 5.28 (0.208) |
| EV34D510K | 8.51 (0.335) | 5.51 (0.217) |
| EV34D550K | 9.04 (0.356) | 6.04 (0.238) |
| EV34D575K | 9.28 (0.365) | 6.28 (0.247) |
| EV34D625K | 9.50 (0.374) | 6.60 (0.260) |
| EV34D680K | 10.19 (0.401) | 7.19 (0.283) |
| EV34D750K | 10.81 (0.426) | 7.81 (0.307) |
| EV34D850K | 11.98 (0.472) | 8.98 (0.354) |
| EV34D1000K | 12.66 (0.498) | 9.66 (0.380) |

Standard Dimensions and Lead Modification Options (continued)

E Max Dimensions for EV Ultra High Energy (-H) Series – Tab Lead using standard epoxy coating. For flame retardant coating (suffix “s”) dimensions “E” & “a” add 10% (x1.10) as this coating is thicker.

Dimensions are in mm (inches)

34mm



| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV34D60K-H | 4.35 (0.171) | 1.45 (0.057) |
| EV34D75K-H | 4.54 (0.179) | 1.64 (0.065) |
| EV34D130K-H | 5.06 (0.199) | 2.06 (0.081) |
| EV34D140K-H | 5.21 (0.205) | 2.21 (0.087) |
| EV34D150K-H | 5.35 (0.211) | 2.35 (0.093) |
| EV34D180K-H | 5.56 (0.219) | 2.56 (0.101) |
| EV34D195K-H | 5.78 (0.228) | 2.78 (0.109) |
| EV34D210K-H | 5.99 (0.236) | 2.99 (0.118) |
| EV34D230K-H | 6.21 (0.244) | 3.21 (0.126) |

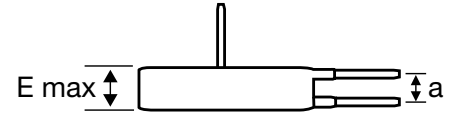
| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV34D250K-H | 6.42 (0.253) | 3.42 (0.135) |
| EV34D275K-H | 6.71 (0.264) | 3.71 (0.146) |
| EV34D300K-H | 6.99 (0.275) | 3.99 (0.157) |
| EV34D320K-H | 7.35 (0.289) | 4.35 (0.171) |
| EV34D360K-H | 7.64 (0.301) | 4.64 (0.183) |
| EV34D390K-H | 8.10 (0.319) | 5.1 (0.201) |
| EV34D420K-H | 8.56 (0.337) | 5.56 (0.219) |
| | | |
| | | |

Standard Dimensions and Lead Modification Options (continued)

E Max Dimensions for EV Pin Type Series – Tab Lead using standard epoxy coating. For flame retardant coating (suffix “s”) dimensions “E” & “a” add 10% (x1.10) as this coating is thicker.

Dimensions are in mm (inches)

22mm



| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV22D14KP | 3.89 (0.153) | 1.09 (0.043) |
| EV22D17KP | 4.03 (0.159) | 1.23 (0.048) |
| EV22D20KP | 4.20 (0.165) | 1.40 (0.055) |
| EV22D25KP | 4.37 (0.172) | 1.57 (0.062) |
| EV22D30KP | 4.20 (0.165) | 1.40 (0.055) |
| EV22D35KP | 4.38 (0.172) | 1.58 (0.062) |
| EV22D40KP | 4.62 (0.182) | 1.82 (0.072) |
| EV22D50KP | 3.97 (0.156) | 1.17 (0.046) |
| EV22D60KP | 4.15 (0.163) | 1.35 (0.053) |
| EV22D75KP | 4.34 (0.171) | 1.54 (0.061) |
| EV22D95KP | 4.31 (0.170) | 1.51 (0.059) |
| EV22D120KP | 4.52 (0.178) | 1.72 (0.068) |
| EV22D130KP | 4.66 (0.183) | 1.86 (0.073) |
| EV22D140KP | 4.81 (0.189) | 2.01 (0.079) |
| EV22D150KP | 4.95 (0.195) | 2.15 (0.085) |
| EV22D180KP | 5.16 (0.203) | 2.36 (0.093) |
| EV22D195KP | 5.19 (0.204) | 2.29 (0.090) |
| EV22D210KP | 5.37 (0.211) | 2.47 (0.097) |
| EV22D230KP | 5.55 (0.219) | 2.65 (0.104) |

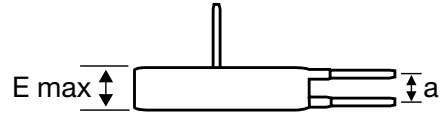
| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV22D250KP | 5.72 (0.225) | 2.82 (0.111) |
| EV22D275KP | 5.96 (0.235) | 3.06 (0.120) |
| EV22D300KP | 6.19 (0.244) | 3.29 (0.130) |
| EV22D320KP | 6.49 (0.256) | 3.59 (0.141) |
| EV22D360KP | 6.72 (0.265) | 3.82 (0.150) |
| EV22D390KP | 7.11 (0.280) | 4.21 (0.166) |
| EV22D420KP | 7.49 (0.295) | 4.59 (0.181) |
| EV22D460KP | 7.90 (0.311) | 5.00 (0.197) |
| EV22D485KP | 8.08 (0.318) | 5.18 (0.204) |
| EV22D510KP | 8.31 (0.327) | 5.41 (0.213) |
| EV22D550KP | 8.84 (0.348) | 5.94 (0.234) |
| EV22D575KP | 9.08 (0.357) | 6.18 (0.243) |
| EV22D625KP | 9.40 (0.370) | 6.50 (0.256) |
| EV22D680KP | 9.99 (0.393) | 7.09 (0.279) |
| EV22D750KP | 10.61 (0.418) | 7.71 (0.304) |
| EV22D850KP | 11.78 (0.464) | 8.88 (0.350) |
| EV22D1000KP | 12.46 (0.491) | 10.09 (0.397) |
| EV22D1100KP | 13.57 (0.534) | 1.26 (0.443) |
| | | |

Standard Dimensions and Lead Modification Options (continued)

E Max Dimensions for EV Pin Type Series – Tab Lead using standard epoxy coating. For flame retardant coating (suffix “s”) dimensions “E” & “a” add 10% (x1.10) as this coating is thicker.

Dimensions are in mm (inches)

34mm



| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV34D30KP | 4.4 (0.173) | 1.5 (0.059) |
| EV34D35KP | 4.58 (0.180) | 1.68 (0.066) |
| EV34D40KP | 4.82 (0.191) | 1.92 (0.076) |
| EV34D50KP | 4.17 (0.164) | 1.27 (0.050) |
| EV34D60KP | 4.35 (0.171) | 1.45 (0.057) |
| EV34D75KP | 4.54 (0.179) | 1.64 (0.065) |
| EV34D95KP | 4.51 (0.178) | 1.61 (0.063) |
| EV34D120KP | 4.72 (0.186) | 1.82 (0.072) |
| EV34D130KP | 4.86 (0.191) | 1.96 (0.077) |
| EV34D140KP | 5.01 (0.197) | 2.11 (0.083) |
| EV34D150KP | 5.15 (0.203) | 2.25 (0.089) |
| EV34D180KP | 5.36 (0.211) | 2.46 (0.097) |
| EV34D195KP | 5.39 (0.212) | 2.39 (0.094) |
| EV34D210KP | 5.57 (0.219) | 2.57 (0.101) |
| EV34D230KP | 5.75 (0.226) | 2.75 (0.108) |
| EV34D250KP | 5.92 (0.233) | 2.92 (0.115) |

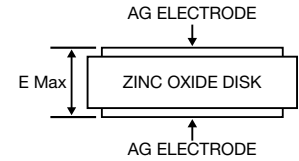
| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV34D275KP | 6.16 (0.243) | 3.16 (0.124) |
| EV34D300KP | 6.39 (0.252) | 3.39 (0.133) |
| EV34D320KP | 6.69 (0.263) | 3.69 (0.145) |
| EV34D360KP | 6.92 (0.272) | 3.92 (0.154) |
| EV34D390KP | 7.31 (0.288) | 4.31 (0.170) |
| EV34D420KP | 7.69 (0.303) | 4.69 (0.185) |
| EV34D460KP | 8.10 (0.319) | 5.10 (0.201) |
| EV34D485KP | 8.28 (0.326) | 5.28 (0.208) |
| EV34D510KP | 8.51 (0.335) | 5.51 (0.217) |
| EV34D550KP | 9.04 (0.356) | 6.04 (0.238) |
| EV34D575KP | 9.28 (0.365) | 6.28 (0.247) |
| EV34D625KP | 9.50 (0.374) | 6.60 (0.260) |
| EV34D680KP | 10.19 (0.401) | 7.19 (0.283) |
| EV34D750KP | 10.81 (0.426) | 7.81 (0.307) |
| EV34D850KP | 11.98 (0.472) | 8.98 (0.354) |
| EV34D1000KP | 12.66 (0.498) | 9.66 (0.380) |

Standard Dimensions and Lead Modification Options (continued)

E Max Dimensions for EV Uncoated Disk Series – No Leads

Dimensions are in mm (inches)

22mm



| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV22D14KA | 0.71 (0.028) | N/A |
| EV22D17KA | 0.86 (0.034) | N/A |
| EV22D20KA | 1.03 (0.041) | N/A |
| EV22D25KA | 1.20 (0.047) | N/A |
| EV22D30KA | 1.00 (0.039) | N/A |
| EV22D35KA | 1.18 (0.046) | N/A |
| EV22D40KA | 1.42 (0.056) | N/A |
| EV22D50KA | 0.77 (0.030) | N/A |
| EV22D60KA | 0.96 (0.038) | N/A |
| EV22D75KA | 1.14 (0.045) | N/A |
| EV22D95KA | 1.11 (0.044) | N/A |
| EV22D120KA | 1.32 (0.052) | N/A |
| EV22D130KA | 1.46 (0.058) | N/A |
| EV22D140KA | 1.61 (0.063) | N/A |
| EV22D150KA | 1.75 (0.069) | N/A |
| EV22D180KA | 1.96 (0.077) | N/A |
| EV22D195KA | 1.79 (0.071) | N/A |
| EV22D210KA | 1.97 (0.078) | N/A |

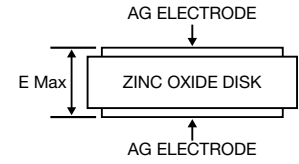
| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV22D230KA | 2.15 (0.085) | N/A |
| EV22D250KA | 2.32 (0.091) | N/A |
| EV22D275KA | 2.56 (0.101) | N/A |
| EV22D300KA | 2.79 (0.110) | N/A |
| EV22D320KA | 3.09 (0.122) | N/A |
| EV22D360KA | 3.32 (0.131) | N/A |
| EV22D390KA | 3.71 (0.146) | N/A |
| EV22D420KA | 4.09 (0.161) | N/A |
| EV22D460KA | 4.50 (0.177) | N/A |
| EV22D485KA | 4.66 (0.184) | N/A |
| EV22D510KA | 4.91 (0.193) | N/A |
| EV22D550KA | 5.44 (0.214) | N/A |
| EV22D575KA | 5.68 (0.223) | N/A |
| EV22D625KA | 6.00 (0.236) | N/A |
| EV22D680KA | 6.59 (0.259) | N/A |
| EV22D750KA | 7.21 (0.284) | N/A |
| EV22D850KA | 8.38 (0.330) | N/A |
| EV22D1000KA | 9.06 (0.357) | N/A |

Standard Dimensions and Lead Modification Options (continued)

E Max Dimensions for EV Uncoated Disk Series – No Leads

Dimensions are in mm (inches)

34mm



| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV34D30KA | 1.00 (0.039) | N/A |
| EV34D35KA | 1.18 (0.046) | N/A |
| EV34D40KA | 1.42 (0.056) | N/A |
| EV34D50KA | 0.77 (0.030) | N/A |
| EV34D60KA | 0.96 (0.038) | N/A |
| EV34D75KA | 1.14 (0.045) | N/A |
| EV34D95KA | 1.11 (0.044) | N/A |
| EV34D120KA | 1.32 (0.052) | N/A |
| EV34D130KA | 1.46 (0.058) | N/A |
| EV34D140KA | 1.61 (0.063) | N/A |
| EV34D150KA | 1.75 (0.069) | N/A |
| EV34D180KA | 1.96 (0.077) | N/A |
| EV34D195KA | 1.79 (0.071) | N/A |
| EV34D210KA | 1.97 (0.078) | N/A |
| EV34D230KA | 2.15 (0.085) | N/A |
| EV34D250KA | 2.32 (0.091) | N/A |

| Part Number | E Max mm (in) | Off-set Dimension (a) ±1 (±0.04) mm (in) |
|-------------|------------------|---|
| EV34D275KA | 2.56 (0.101) | N/A |
| EV34D300KA | 2.79 (0.110) | N/A |
| EV34D320KA | 3.09 (0.122) | N/A |
| EV34D360KA | 3.32 (0.131) | N/A |
| EV34D390KA | 3.71 (0.146) | N/A |
| EV34D420KA | 4.09 (0.161) | N/A |
| EV34D460KA | 4.50 (0.177) | N/A |
| EV34D485KA | 4.68 (0.184) | N/A |
| EV34D510KA | 4.91 (0.193) | N/A |
| EV34D550KA | 5.44 (0.214) | N/A |
| EV34D575KA | 5.68 (0.223) | N/A |
| EV34D625KA | 6.00 (0.236) | N/A |
| EV34D680KA | 6.59 (0.259) | N/A |
| EV34D750KA | 7.21 (0.284) | N/A |
| EV34D850KA | 8.38 (0.330) | N/A |
| EV34D1000KA | 9.06 (0.357) | N/A |

METAL OXIDE VARISTORS - EV SERIES

EV Standard Series – Electrical Characteristics (5, 7, 10, 14 & 20mm)

5mm

| Part Number | Maximum Continuous Rated Voltage | | Rated Single Pulse Transient | | Varistor Voltage @1mA DC | | Maximum Clamping Voltage @Test Current 8/20µs | | Typical Capacitance @1KHZ 25°C |
|-------------|----------------------------------|----------|------------------------------|-------------|--------------------------|-----------|---|------|--------------------------------|
| | | | Energy | Peak | | | | | |
| | AC RMS Volts | DC Volts | 8/20µs (joules) | 8/20µs Amps | Min Volts | Max Volts | Volts | Amps | pF |
| EV05D11K | 11 | 14 | 0.4 | 125 | 16 | 20 | 40 | 1 | 1500 |
| EV05D14K | 14 | 18 | 0.5 | 125 | 20 | 24 | 48 | 1 | 1260 |
| EV05D17K | 17 | 22 | 0.6 | 125 | 24 | 30 | 60 | 1 | 1050 |
| EV05D20K | 20 | 26 | 0.8 | 125 | 30 | 36 | 73 | 1 | 850 |
| EV05D25K | 25 | 31 | 0.9 | 125 | 35 | 43 | 86 | 1 | 600 |
| EV05D30K | 30 | 38 | 1.1 | 125 | 42 | 52 | 104 | 1 | 500 |
| EV05D35K | 35 | 45 | 1.3 | 125 | 50 | 62 | 123 | 1 | 400 |
| EV05D40K | 40 | 56 | 1.6 | 125 | 61 | 75 | 150 | 1 | 360 |
| EV05D50K | 50 | 65 | 2.5 | 500 | 74 | 90 | 145 | 5 | 480 |
| EV05D60K | 60 | 85 | 3.0 | 500 | 90 | 110 | 175 | 5 | 420 |
| EV05D75K | 75 | 100 | 4.0 | 500 | 108 | 132 | 210 | 5 | 360 |
| EV05D95K | 95 | 125 | 4.8 | 500 | 135 | 165 | 260 | 5 | 280 |
| EV05D120K | 120 | 150 | 5.9 | 500 | 162 | 198 | 320 | 5 | 200 |
| EV05D130K | 130 | 170 | 6.5 | 500 | 185 | 225 | 355 | 5 | 160 |
| EV05D140K | 140 | 180 | 7.0 | 500 | 198 | 242 | 380 | 5 | 110 |
| EV05D150K | 150 | 200 | 8.0 | 500 | 216 | 264 | 415 | 5 | 105 |
| EV05D180K | 180 | 225 | 9.0 | 500 | 243 | 297 | 475 | 5 | 100 |
| EV05D195K | 195 | 250 | 9.0 | 500 | 270 | 330 | 520 | 5 | 95 |
| EV05D210K | 210 | 275 | 10 | 500 | 297 | 363 | 570 | 5 | 90 |
| EV05D230K | 230 | 300 | 10 | 500 | 324 | 396 | 620 | 5 | 85 |
| EV05D250K | 250 | 320 | 12 | 500 | 351 | 429 | 675 | 5 | 80 |
| EV05D275K | 275 | 350 | 13 | 500 | 387 | 473 | 745 | 5 | 70 |
| EV05D300K | 300 | 385 | 15 | 500 | 423 | 517 | 810 | 5 | 60 |
| EV05D320K | 320 | 415 | 16 | 500 | 459 | 561 | 845 | 5 | 55 |
| EV05D360K | 360 | 460 | 16 | 500 | 504 | 616 | 925 | 5 | 50 |

METAL OXIDE VARISTORS - EV SERIES

EV Standard Series – Electrical Characteristics (5, 7, 10, 14 & 20mm)

7mm

| Part Number | Maximum Continuous Rated Voltage | | Rated Single Pulse Transient | | Varistor Voltage @1mA DC | | Maximum Clamping Voltage @Test Current 8/20µs | | Typical Capacitance @1KHZ 25°C |
|-------------|----------------------------------|----------|------------------------------|-------------|--------------------------|-----------|---|------|--------------------------------|
| | | | Energy | Peak | | | | | |
| | AC RMS Volts | DC Volts | 8/20µs (joules) | 8/20µs Amps | Min Volts | Max Volts | Volts | Amps | pF |
| EV07D11K | 11 | 14 | 0.9 | 250 | 16 | 20 | 36 | 2.5 | 2900 |
| EV07D14K | 14 | 18 | 1.1 | 250 | 20 | 24 | 43 | 2.5 | 2400 |
| EV07D17K | 17 | 22 | 1.4 | 250 | 24 | 30 | 53 | 2.5 | 1800 |
| EV07D20K | 20 | 26 | 1.7 | 250 | 30 | 36 | 65 | 2.5 | 1500 |
| EV07D25K | 25 | 31 | 2.1 | 250 | 35 | 43 | 77 | 2.5 | 1230 |
| EV07D30K | 30 | 38 | 2.5 | 250 | 42 | 52 | 93 | 2.5 | 950 |
| EV07D35K | 35 | 45 | 3.1 | 250 | 50 | 62 | 110 | 2.5 | 890 |
| EV07D40K | 40 | 56 | 3.6 | 250 | 61 | 75 | 135 | 2.5 | 850 |
| EV07D50K | 50 | 65 | 6.0 | 1200 | 74 | 90 | 135 | 10 | 930 |
| EV07D60K | 60 | 85 | 7.0 | 1200 | 90 | 110 | 165 | 10 | 860 |
| EV07D75K | 75 | 100 | 8.0 | 1200 | 108 | 132 | 200 | 10 | 670 |
| EV07D95K | 95 | 125 | 10 | 1200 | 135 | 165 | 350 | 10 | 490 |
| EV07D120K | 120 | 150 | 12 | 1200 | 162 | 198 | 300 | 10 | 330 |
| EV07D130K | 130 | 170 | 13 | 1200 | 185 | 225 | 340 | 10 | 240 |
| EV07D140K | 140 | 180 | 14 | 1200 | 198 | 242 | 360 | 10 | 190 |
| EV07D150K | 150 | 200 | 15 | 1200 | 216 | 264 | 395 | 10 | 165 |
| EV07D180K | 180 | 225 | 18 | 1200 | 243 | 297 | 455 | 10 | 150 |
| EV07D195K | 195 | 250 | 20 | 1200 | 270 | 330 | 500 | 10 | 140 |
| EV07D210K | 210 | 275 | 23 | 1200 | 297 | 363 | 550 | 10 | 130 |
| EV07D230K | 230 | 300 | 25 | 1200 | 324 | 396 | 595 | 10 | 125 |
| EV07D250K | 250 | 320 | 25 | 1200 | 351 | 429 | 650 | 10 | 115 |
| EV07D275K | 275 | 350 | 28 | 1200 | 387 | 473 | 710 | 10 | 110 |
| EV07D300K | 300 | 385 | 30 | 1200 | 423 | 517 | 775 | 10 | 100 |
| EV07D320K | 320 | 415 | 30 | 1200 | 459 | 561 | 845 | 10 | 90 |
| EV07D360K | 360 | 460 | 30 | 1200 | 504 | 616 | 925 | 10 | 85 |
| EV07D390K | 390 | 505 | 33 | 1200 | 558 | 682 | 1025 | 10 | 80 |
| EV07D420K | 420 | 560 | 33 | 1200 | 612 | 748 | 1120 | 10 | 75 |
| EV07D460K | 460 | 620 | 36 | 1200 | 675 | 825 | 1240 | 10 | 70 |
| EV07D485K | 485 | 640 | 36 | 1200 | 702 | 858 | 1290 | 10 | 70 |
| EV07D510K | 510 | 675 | 39 | 1200 | 738 | 902 | 1355 | 10 | 60 |

EV Standard Series – Electrical Characteristics (5, 7, 10, 14 & 20mm)

10mm

| Part Number | Maximum Continuous Rated Voltage | | Rated Single Pulse Transient | | Varistor Voltage @1mA DC | | Maximum Clamping Voltage @Test Current 8/20µs | | Typical Capacitance @1KHZ 25°C |
|-------------|----------------------------------|----------|------------------------------|-------------|--------------------------|-----------|---|------|--------------------------------|
| | | | Energy | Peak | | | | | |
| | AC RMS Volts | DC Volts | 8/20µs (joules) | 8/20µs Amps | Min Volts | Max Volts | Volts | Amps | pF |
| EV10D11K | 11 | 14 | 2.1 | 500 | 16 | 20 | 36 | 5 | 6000 |
| EV10D14K | 14 | 18 | 2.5 | 500 | 20 | 24 | 43 | 5 | 5000 |
| EV10D17K | 17 | 22 | 3.0 | 500 | 24 | 30 | 53 | 5 | 4000 |
| EV10D20K | 20 | 26 | 4.0 | 500 | 30 | 36 | 65 | 5 | 3500 |
| EV10D25K | 25 | 31 | 4.6 | 500 | 35 | 43 | 77 | 5 | 3100 |
| EV10D30K | 30 | 38 | 6.0 | 500 | 42 | 52 | 93 | 5 | 2800 |
| EV10D35K | 35 | 45 | 7.0 | 500 | 50 | 62 | 110 | 5 | 2400 |
| EV10D40K | 40 | 56 | 8.0 | 500 | 61 | 75 | 135 | 5 | 2200 |
| EV10D50K | 50 | 65 | 12 | 2500 | 74 | 90 | 135 | 25 | 2100 |
| EV10D60K | 60 | 85 | 15 | 2500 | 90 | 110 | 165 | 25 | 1700 |
| EV10D75K | 75 | 100 | 18 | 2500 | 108 | 132 | 200 | 25 | 1500 |
| EV10D95K | 95 | 125 | 22 | 2500 | 135 | 165 | 250 | 25 | 1300 |
| EV10D120K | 120 | 150 | 27 | 2500 | 162 | 198 | 300 | 25 | 470 |
| EV10D130K | 130 | 170 | 30 | 2500 | 185 | 225 | 340 | 25 | 430 |
| EV10D140K | 140 | 180 | 32 | 2500 | 198 | 242 | 360 | 25 | 390 |
| EV10D150K | 150 | 200 | 35 | 2500 | 216 | 264 | 395 | 25 | 360 |
| EV10D180K | 180 | 225 | 40 | 2500 | 243 | 297 | 455 | 25 | 330 |
| EV10D195K | 195 | 250 | 40 | 2500 | 270 | 330 | 500 | 25 | 290 |
| EV10D210K | 210 | 275 | 43 | 2500 | 297 | 363 | 550 | 25 | 280 |
| EV10D230K | 230 | 300 | 47 | 2500 | 324 | 396 | 595 | 25 | 260 |
| EV10D250K | 250 | 320 | 60 | 2500 | 351 | 429 | 650 | 25 | 240 |
| EV10D275K | 275 | 350 | 65 | 2500 | 387 | 473 | 710 | 25 | 220 |
| EV10D300K | 300 | 385 | 70 | 2500 | 423 | 517 | 775 | 25 | 200 |
| EV10D320K | 320 | 415 | 70 | 2500 | 459 | 561 | 845 | 25 | 190 |
| EV10D360K | 360 | 460 | 70 | 2500 | 504 | 616 | 825 | 25 | 180 |
| EV10D390K | 390 | 505 | 70 | 2500 | 558 | 682 | 1025 | 25 | 160 |
| EV10D420K | 420 | 560 | 70 | 2500 | 612 | 748 | 1120 | 25 | 140 |
| EV10D460K | 460 | 615 | 75 | 2500 | 675 | 825 | 1240 | 25 | 130 |
| EV10D485K | 485 | 640 | 80 | 2500 | 702 | 858 | 1290 | 25 | 130 |
| EV10D510K | 510 | 670 | 85 | 2500 | 738 | 902 | 1355 | 25 | 130 |
| EV10D550K | 550 | 745 | 93 | 2500 | 819 | 1001 | 1500 | 25 | 120 |
| EV10D625K | 625 | 825 | 102 | 2500 | 900 | 1100 | 1650 | 25 | 100 |
| EV10D680K | 680 | 895 | 115 | 2500 | 990 | 1210 | 1815 | 25 | 90 |

EV Standard Series – Electrical Characteristics (5, 7, 10, 14 & 20mm)

14mm

| Part Number | Maximum Continuous Rated Voltage | | Rated Single Pulse Transient | | Varistor Voltage @1mA DC | | Maximum Clamping Voltage @Test Current 8/20µs | | Typical Capacitance @1KHZ 25°C |
|-------------|----------------------------------|----------|------------------------------|-------------|--------------------------|-----------|---|------|--------------------------------|
| | | | Energy | Peak | | | | | |
| | AC RMS Volts | DC Volts | 8/20µs (joules) | 8/20µs Amps | Min Volts | Max Volts | Volts | Amps | pF |
| EV14D11K | 11 | 14 | 4.0 | 1000 | 16 | 20 | 36 | 10 | 15000 |
| EV14D14K | 14 | 18 | 5.0 | 1000 | 20 | 24 | 43 | 10 | 12000 |
| EV14D17K | 17 | 22 | 6.0 | 1000 | 24 | 30 | 53 | 10 | 8500 |
| EV14D20K | 20 | 26 | 8.0 | 1000 | 30 | 36 | 65 | 10 | 7200 |
| EV14D25K | 25 | 31 | 9.0 | 1000 | 35 | 43 | 77 | 10 | 6300 |
| EV14D30K | 30 | 38 | 10 | 1000 | 42 | 52 | 93 | 10 | 5500 |
| EV14D35K | 35 | 45 | 11 | 1000 | 50 | 62 | 110 | 10 | 4800 |
| EV14D40K | 40 | 56 | 14 | 1000 | 61 | 75 | 135 | 10 | 4000 |
| EV14D50K | 50 | 65 | 22 | 4500 | 74 | 90 | 135 | 50 | 3900 |
| EV14D60K | 60 | 85 | 28 | 4500 | 90 | 110 | 165 | 50 | 3400 |
| EV14D75K | 75 | 100 | 32 | 4500 | 108 | 132 | 200 | 50 | 3100 |
| EV14D95K | 95 | 125 | 40 | 4500 | 135 | 165 | 250 | 50 | 3000 |
| EV14D120K | 120 | 150 | 50 | 4500 | 162 | 198 | 300 | 50 | 1030 |
| EV14D130K | 130 | 170 | 57 | 4500 | 185 | 225 | 340 | 50 | 970 |
| EV14D140K | 140 | 180 | 60 | 4500 | 198 | 242 | 360 | 50 | 840 |
| EV14D150K | 150 | 200 | 63 | 4500 | 216 | 264 | 395 | 50 | 710 |
| EV14D180K | 180 | 225 | 70 | 4500 | 243 | 297 | 455 | 50 | 650 |
| EV14D195K | 195 | 250 | 77 | 4500 | 270 | 330 | 500 | 50 | 600 |
| EV14D210K | 210 | 275 | 85 | 4500 | 297 | 363 | 550 | 50 | 550 |
| EV14D230K | 230 | 300 | 93 | 4500 | 324 | 396 | 595 | 50 | 530 |
| EV14D250K | 250 | 320 | 100 | 4500 | 351 | 429 | 650 | 50 | 500 |
| EV14D275K | 275 | 350 | 115 | 4500 | 387 | 473 | 710 | 50 | 480 |
| EV14D300K | 300 | 385 | 125 | 4500 | 423 | 517 | 775 | 50 | 440 |
| EV14D320K | 320 | 415 | 125 | 4500 | 459 | 561 | 845 | 50 | 390 |
| EV14D360K | 360 | 460 | 125 | 4500 | 504 | 616 | 825 | 50 | 360 |
| EV14D390K | 390 | 505 | 125 | 4500 | 558 | 682 | 1025 | 50 | 320 |
| EV14D420K | 420 | 560 | 130 | 4500 | 612 | 748 | 1120 | 50 | 300 |
| EV14D460K | 460 | 615 | 143 | 4500 | 675 | 825 | 1240 | 50 | 280 |
| EV14D485K | 485 | 640 | 148 | 4500 | 702 | 858 | 1290 | 50 | 250 |
| EV14D510K | 510 | 670 | 157 | 4500 | 738 | 902 | 1355 | 50 | 230 |
| EV14D550K | 550 | 745 | 175 | 4500 | 819 | 1001 | 1500 | 50 | 200 |
| EV14D625K | 625 | 825 | 190 | 4500 | 900 | 1100 | 1650 | 50 | 180 |
| EV14D680K | 680 | 895 | 213 | 4500 | 990 | 1210 | 1815 | 50 | 150 |
| EV14D750K | 750 | 990 | 213 | 4500 | 1080 | 1320 | 1980 | 50 | 150 |
| EV14D1100K | 1100 | 1465 | 250 | 4500 | 1620 | 1980 | 2970 | 50 | 100 |

EV Standard Series – Electrical Characteristics (5, 7, 10, 14 & 20mm)

20mm

| Part Number | Maximum Continuous Rated Voltage | | Rated Single Pulse Transient | | Varistor Voltage @1mA DC | | Maximum Clamping Voltage @Test Current 8/20µs | | Typical Capacitance @1KHZ 25°C |
|-------------|----------------------------------|----------|------------------------------|-------------|--------------------------|-----------|---|------|--------------------------------|
| | | | Energy | Peak | | | Volts | Amps | |
| | AC RMS Volts | DC Volts | 8/20µs (joules) | 8/20µs Amps | Min Volts | Max Volts | | | pF |
| EV20D11K | 11 | 14 | 11 | 2000 | 16 | 20 | 36 | 20 | 27000 |
| EV20D14K | 14 | 18 | 14 | 2000 | 20 | 24 | 43 | 20 | 20000 |
| EV20D17K | 17 | 22 | 16 | 2000 | 24 | 30 | 53 | 20 | 15000 |
| EV20D20K | 20 | 26 | 23 | 2000 | 30 | 36 | 65 | 20 | 12200 |
| EV20D25K | 25 | 31 | 26 | 2000 | 35 | 43 | 77 | 20 | 10000 |
| EV20D30K | 30 | 38 | 30 | 2000 | 42 | 52 | 93 | 20 | 9350 |
| EV20D35K | 35 | 45 | 41 | 2000 | 50 | 62 | 110 | 20 | 8000 |
| EV20D40K | 40 | 56 | 46 | 2000 | 61 | 75 | 135 | 20 | 6800 |
| EV20D50K | 50 | 65 | 38 | 6500 | 74 | 90 | 135 | 100 | 5800 |
| EV20D60K | 60 | 85 | 45 | 6500 | 90 | 110 | 165 | 100 | 3800 |
| EV20D75K | 75 | 100 | 55 | 6500 | 108 | 132 | 200 | 100 | 3000 |
| EV20D95K | 95 | 125 | 70 | 6500 | 135 | 165 | 250 | 100 | 2600 |
| EV20D120K | 120 | 150 | 85 | 10000 | 162 | 198 | 300 | 100 | 2400 |
| EV20D130K | 130 | 170 | 95 | 10000 | 185 | 225 | 340 | 100 | 1800 |
| EV20D140K | 140 | 180 | 100 | 10000 | 198 | 242 | 360 | 100 | 1500 |
| EV20D150K | 150 | 200 | 120 | 10000 | 216 | 264 | 395 | 100 | 1400 |
| EV20D180K | 180 | 225 | 127 | 10000 | 243 | 297 | 455 | 100 | 1350 |
| EV20D195K | 195 | 250 | 136 | 10000 | 270 | 330 | 500 | 100 | 1300 |
| EV20D210K | 210 | 275 | 150 | 10000 | 297 | 363 | 550 | 100 | 1250 |
| EV20D230K | 230 | 300 | 163 | 10000 | 324 | 396 | 595 | 100 | 1180 |
| EV20D250K | 250 | 320 | 180 | 10000 | 351 | 429 | 650 | 100 | 1100 |
| EV20D275K | 275 | 350 | 190 | 10000 | 387 | 473 | 710 | 100 | 1050 |
| EV20D300K | 300 | 385 | 220 | 10000 | 423 | 517 | 775 | 100 | 1000 |
| EV20D320K | 320 | 415 | 222 | 10000 | 459 | 561 | 845 | 100 | 970 |
| EV20D360K | 360 | 460 | 226 | 10000 | 504 | 616 | 825 | 100 | 950 |
| EV20D390K | 390 | 505 | 228 | 10000 | 558 | 682 | 1025 | 100 | 900 |
| EV20D420K | 420 | 560 | 230 | 10000 | 612 | 748 | 1120 | 100 | 850 |
| EV20D460K | 460 | 615 | 255 | 10000 | 675 | 825 | 1240 | 100 | 750 |
| EV20D485K | 485 | 640 | 265 | 10000 | 702 | 858 | 1290 | 100 | 700 |
| EV20D510K | 510 | 670 | 282 | 10000 | 738 | 902 | 1355 | 100 | 600 |
| EV20D550K | 550 | 745 | 310 | 10000 | 819 | 1001 | 1500 | 100 | 500 |
| EV20D625K | 625 | 825 | 342 | 10000 | 900 | 1100 | 1650 | 100 | 450 |
| EV20D680K | 680 | 895 | 383 | 10000 | 990 | 1210 | 1815 | 100 | 375 |
| EV20D750K | 750 | 990 | 408 | 10000 | 1080 | 1320 | 1980 | 100 | 320 |
| EV20D1100K | 1100 | 1465 | 625 | 10000 | 1620 | 1980 | 2970 | 100 | 220 |

METAL OXIDE VARISTORS - EV SERIES

EV Standard Series – Electrical Characteristics (22mm)

22mm

| Part Number | Maximum Continuous Rated Voltage | | Rated Single Pulse Transient | | Varistor Voltage @1mA DC | | Maximum Clamping Voltage @Test Current 8/20µs | | Typical Capacitance @1KHZ 25°C |
|-------------|----------------------------------|----------|------------------------------|-----------|--------------------------|-----------|---|------|--------------------------------|
| | | | Energy | Peak | | | | | |
| | AC RMS Volts | DC Volts | 10/1000µs (joules) | 8/20µs KA | Min Volts | Max Volts | Volts | Amps | pF |
| EV22D14K | 14 | 18 | 28 | 6 | 20 | 25 | 43 | 35 | 37000 |
| EV22D17K | 17 | 22 | 33 | 6 | 24 | 31 | 53 | 35 | 30000 |
| EV22D20K | 20 | 26 | 42 | 6 | 30 | 37 | 65 | 35 | 24500 |
| EV22D25K | 25 | 31 | 49 | 6 | 35 | 44 | 77 | 35 | 21000 |
| EV22D30K | 30 | 38 | 60 | 10 | 42 | 52 | 93 | 35 | 17250 |
| EV22D35K | 35 | 45 | 72 | 10 | 50 | 63 | 110 | 35 | 14500 |
| EV22D40K | 40 | 56 | 85 | 10 | 61 | 75 | 135 | 35 | 9500 |
| EV22D50K | 50 | 65 | 98 | 18 | 74 | 90 | 135 | 175 | 8800 |
| EV22D60K | 60 | 85 | 122 | 18 | 90 | 110 | 165 | 175 | 7200 |
| EV22D75K | 75 | 100 | 146 | 25 | 108 | 132 | 200 | 175 | 6000 |
| EV22D95K | 95 | 125 | 185 | 25 | 135 | 165 | 250 | 175 | 4400 |
| EV22D120K | 120 | 150 | 218 | 25 | 162 | 198 | 300 | 175 | 3650 |
| EV22D130K | 130 | 170 | 252 | 25 | 185 | 225 | 340 | 175 | 3300 |
| EV22D140K | 140 | 180 | 280 | 25 | 198 | 242 | 360 | 175 | 3000 |
| EV22D150K | 150 | 200 | 302 | 25 | 222 | 270 | 395 | 175 | 2800 |
| EV22D180K | 180 | 225 | 340 | 25 | 256 | 310 | 455 | 175 | 2450 |
| EV22D195K | 195 | 250 | 375 | 25 | 270 | 330 | 500 | 175 | 2200 |
| EV22D210K | 210 | 275 | 410 | 25 | 297 | 363 | 550 | 175 | 2050 |
| EV22D230K | 230 | 300 | 465 | 25 | 324 | 396 | 595 | 175 | 1850 |
| EV22D250K | 250 | 320 | 520 | 25 | 362 | 440 | 650 | 175 | 1700 |
| EV22D275K | 275 | 350 | 575 | 25 | 387 | 473 | 710 | 175 | 1600 |
| EV22D300K | 300 | 385 | 630 | 25 | 423 | 517 | 775 | 175 | 1450 |
| EV22D320K | 320 | 415 | 665 | 25 | 459 | 561 | 845 | 175 | 1300 |
| EV22D360K | 360 | 460 | 720 | 25 | 504 | 616 | 925 | 175 | 1200 |
| EV22D390K | 390 | 505 | 790 | 25 | 558 | 682 | 1025 | 175 | 1100 |
| EV22D420K | 420 | 560 | 790 | 25 | 612 | 748 | 1120 | 175 | 1000 |
| EV22D460K | 460 | 615 | 825 | 25 | 675 | 825 | 1240 | 175 | 900 |
| EV22D485K | 485 | 640 | 860 | 25 | 702 | 858 | 1290 | 175 | 850 |
| EV22D510K | 510 | 670 | 900 | 22 | 738 | 902 | 1355 | 175 | 810 |
| EV22D550K | 550 | 745 | 950 | 22 | 819 | 1001 | 1500 | 175 | 750 |
| EV22D575K | 575 | 780 | 950 | 22 | 855 | 1045 | 1570 | 175 | 700 |
| EV22D625K | 625 | 825 | 1130 | 22 | 900 | 1100 | 1650 | 175 | 660 |
| EV22D680K | 680 | 895 | 1140 | 22 | 990 | 1210 | 1815 | 175 | 605 |
| EV22D750K | 750 | 980 | 1170 | 22 | 1150 | 1320 | 1980 | 175 | 555 |
| EV22D850K | 850 | 1120 | 1170 | 20 | 1315 | 1540 | 2310 | 175 | 475 |
| EV22D1000K | 1000 | 1320 | 1300 | 20 | 1550 | 1760 | 2640 | 175 | 415 |

EV Standard Series – Electrical Characteristics (34mm)

34mm

| Part Number | Maximum Continuous Rated Voltage | | Rated Single Pulse Transient | | Varistor Voltage @1mA DC | | Maximum Clamping Voltage @Test Current 8/20µs | | Typical Capacitance @1KHZ 25°C |
|-------------|----------------------------------|----------|------------------------------|-----------|--------------------------|-----------|---|------|--------------------------------|
| | | | Energy | Peak | | | Volts | Amps | |
| | AC RMS Volts | DC Volts | 10/1000µs (joules) | 8/20µs KA | Min Volts | Max Volts | | | pF |
| EV34D30K | 30 | 38 | 96 | 20 | 42 | 52 | 93 | 60 | 35000 |
| EV34D35K | 35 | 45 | 115 | 20 | 50 | 63 | 110 | 60 | 29500 |
| EV34D40K | 40 | 56 | 136 | 20 | 61 | 75 | 135 | 60 | 24200 |
| EV34D50K | 50 | 65 | 156 | 30 | 74 | 90 | 135 | 300 | 17950 |
| EV34D60K | 60 | 85 | 195 | 30 | 90 | 110 | 165 | 300 | 15000 |
| EV34D75K | 75 | 100 | 235 | 45 | 108 | 132 | 200 | 300 | 12200 |
| EV34D95K | 95 | 125 | 296 | 45 | 135 | 165 | 250 | 300 | 10000 |
| EV34D120K | 120 | 150 | 350 | 45 | 162 | 198 | 300 | 300 | 8250 |
| EV34D130K | 130 | 170 | 400 | 45 | 185 | 225 | 340 | 300 | 6750 |
| EV34D140K | 140 | 180 | 450 | 45 | 198 | 242 | 360 | 300 | 6400 |
| EV34D150K | 150 | 200 | 480 | 45 | 222 | 270 | 395 | 300 | 5650 |
| EV34D180K | 180 | 225 | 540 | 45 | 256 | 310 | 455 | 300 | 5100 |
| EV34D195K | 195 | 250 | 600 | 45 | 270 | 330 | 500 | 300 | 4510 |
| EV34D210K | 210 | 275 | 656 | 50 | 297 | 363 | 550 | 300 | 4150 |
| EV34D230K | 230 | 300 | 745 | 50 | 324 | 396 | 595 | 300 | 3750 |
| EV34D250K | 250 | 320 | 830 | 50 | 362 | 440 | 650 | 300 | 3500 |
| EV34D275K | 275 | 350 | 920 | 50 | 387 | 473 | 710 | 300 | 2950 |
| EV34D300K | 300 | 385 | 1000 | 50 | 423 | 517 | 775 | 300 | 2880 |
| EV34D320K | 320 | 415 | 1060 | 50 | 459 | 561 | 845 | 300 | 2650 |
| EV34D360K | 360 | 460 | 1150 | 50 | 504 | 616 | 925 | 300 | 2450 |
| EV34D390K | 390 | 505 | 1250 | 50 | 558 | 682 | 1025 | 300 | 2200 |
| EV34D420K | 420 | 560 | 1250 | 50 | 612 | 748 | 1120 | 300 | 2000 |
| EV34D460K | 460 | 615 | 1280 | 50 | 675 | 825 | 1240 | 300 | 1820 |
| EV34D485K | 485 | 640 | 1350 | 50 | 702 | 858 | 1290 | 300 | 1750 |
| EV34D510K | 510 | 670 | 1395 | 45 | 738 | 902 | 1355 | 300 | 1650 |
| EV34D550K | 550 | 745 | 1475 | 45 | 819 | 1001 | 1500 | 300 | 1500 |
| EV34D575K | 575 | 760 | 1485 | 45 | 855 | 1045 | 1570 | 300 | 1430 |
| EV34D625K | 625 | 825 | 1550 | 45 | 900 | 1100 | 1650 | 300 | 1350 |
| EV34D680K | 680 | 895 | 1700 | 45 | 990 | 1210 | 1815 | 300 | 1230 |
| EV34D750K | 750 | 980 | 1750 | 40 | 1150 | 1320 | 1980 | 300 | 1135 |
| EV34D850K | 850 | 1120 | 1750 | 40 | 1315 | 1540 | 2310 | 300 | 970 |
| EV34D1000K | 1000 | 1320 | 2000 | 40 | 1550 | 1760 | 2640 | 300 | 840 |

**EV High Energy (-J) Series
Electrical Characteristics (5, 7, 10, 14, and 20mm)**

5mm -J

| Part Number | Maximum Continuous Rated Voltage | | Rated Single Pulse Transient | | Varistor Voltage @1mA DC | | Maximum Clamping Voltage @Test Current 8/20µs | | Typical Capacitance @1KHZ 25°C |
|-------------|----------------------------------|----------|------------------------------|-------------|--------------------------|-----------|---|------|--------------------------------|
| | | | Energy | Peak | | | Volts | Amps | |
| | AC RMS Volts | DC Volts | 8/20µs (joules) | 8/20µs Amps | Min Volts | Max Volts | | | pF |
| EV05D11K-J | 11 | 14 | 0.6 | 250 | 16 | 20 | 40 | 1 | 1500 |
| EV05D14K-J | 14 | 18 | 0.7 | 250 | 20 | 24 | 48 | 1 | 1260 |
| EV05D17K-J | 17 | 22 | 0.9 | 250 | 24 | 30 | 60 | 1 | 1050 |
| EV05D20K-J | 20 | 26 | 1.1 | 250 | 30 | 36 | 73 | 1 | 850 |
| EV05D25K-J | 25 | 31 | 1.2 | 250 | 35 | 43 | 86 | 1 | 600 |
| EV05D30K-J | 30 | 38 | 1.5 | 250 | 42 | 52 | 104 | 1 | 500 |
| EV05D35K-J | 35 | 45 | 1.8 | 250 | 50 | 62 | 123 | 1 | 400 |
| EV05D40K-J | 40 | 56 | 2.2 | 250 | 61 | 75 | 150 | 1 | 360 |
| EV05D50K-J | 50 | 65 | 4.0 | 800 | 74 | 90 | 145 | 5 | 480 |
| EV05D60K-J | 60 | 85 | 4.1 | 800 | 90 | 110 | 175 | 5 | 420 |
| EV05D75K-J | 75 | 100 | 4.9 | 800 | 108 | 132 | 210 | 5 | 360 |
| EV05D95K-J | 95 | 125 | 6.5 | 800 | 135 | 165 | 260 | 5 | 280 |
| EV05D120K-J | 120 | 150 | 7.5 | 800 | 162 | 198 | 320 | 55 | 200 |
| EV05D130K-J | 130 | 170 | 8.5 | 800 | 185 | 225 | 355 | 5 | 160 |
| EV05D140K-J | 140 | 180 | 9.0 | 800 | 198 | 242 | 380 | 5 | 110 |
| EV05D150K-J | 150 | 200 | 10 | 800 | 216 | 264 | 415 | 5 | 105 |
| EV05D180K-J | 180 | 225 | 11 | 800 | 243 | 297 | 475 | 5 | 100 |
| EV05D195K-J | 195 | 250 | 12 | 800 | 270 | 330 | 520 | 5 | 95 |
| EV05D210K-J | 210 | 275 | 13 | 800 | 297 | 363 | 570 | 5 | 90 |
| EV05D230K-J | 230 | 300 | 16 | 800 | 324 | 396 | 620 | 5 | 85 |
| EV05D250K-J | 250 | 320 | 17 | 800 | 351 | 429 | 675 | 5 | 80 |
| EV05D275K-J | 275 | 350 | 20 | 800 | 387 | 473 | 745 | 5 | 70 |
| EV05D300K-J | 300 | 385 | 21 | 800 | 423 | 517 | 810 | 5 | 60 |
| EV05D320K-J | 320 | 415 | 23 | 800 | 459 | 561 | 845 | 5 | 55 |
| EV05D360K-J | 360 | 460 | 24 | 800 | 504 | 616 | 925 | 5 | 50 |

**EV High Energy (-J) Series
Electrical Characteristics (5, 7, 10, 14, and 20mm)**

7mm -J

| Part Number | Maximum Continuous Rated Voltage | | Rated Single Pulse Transient | | Varistor Voltage @1mA DC | | Maximum Clamping Voltage @Test Current 8/20µs | | Typical Capacitance @1KHZ 25°C |
|-------------|----------------------------------|----------|------------------------------|-------------|--------------------------|-----------|---|------|--------------------------------|
| | | | Energy | Peak | | | Volts | Amps | |
| | AC RMS Volts | DC Volts | 8/20µs (joules) | 8/20µs Amps | Min Volts | Max Volts | Volts | Amps | pF |
| EV07D11K-J | 11 | 14 | 2.0 | 500 | 16 | 20 | 36 | 2.5 | 2900 |
| EV07D14K-J | 14 | 18 | 2.4 | 500 | 20 | 24 | 43 | 2.5 | 2400 |
| EV07D17K-J | 17 | 22 | 3.0 | 500 | 24 | 30 | 53 | 2.5 | 1800 |
| EV07D20K-J | 20 | 26 | 4.0 | 500 | 30 | 36 | 65 | 2.5 | 1500 |
| EV07D25K-J | 25 | 31 | 4.0 | 500 | 35 | 43 | 77 | 2.5 | 1230 |
| EV07D30K-J | 30 | 38 | 5.0 | 500 | 42 | 52 | 93 | 2.5 | 950 |
| EV07D35K-J | 35 | 45 | 6.0 | 500 | 50 | 62 | 110 | 2.5 | 890 |
| EV07D40K-J | 40 | 56 | 7.0 | 500 | 61 | 75 | 135 | 2.5 | 850 |
| EV07D50K-J | 50 | 65 | 10 | 1750 | 74 | 90 | 135 | 10 | 930 |
| EV07D60K-J | 60 | 85 | 12 | 1750 | 90 | 110 | 165 | 10 | 860 |
| EV07D75K-J | 75 | 100 | 13 | 1750 | 108 | 132 | 200 | 10 | 670 |
| EV07D95K-J | 95 | 125 | 13 | 1750 | 135 | 165 | 350 | 10 | 490 |
| EV07D120K-J | 120 | 150 | 16 | 1750 | 162 | 198 | 300 | 10 | 330 |
| EV07D130K-J | 130 | 170 | 17 | 1750 | 185 | 225 | 340 | 10 | 240 |
| EV07D140K-J | 140 | 180 | 19 | 1750 | 198 | 242 | 360 | 10 | 190 |
| EV07D150K-J | 150 | 200 | 21 | 1750 | 216 | 264 | 395 | 10 | 165 |
| EV07D180K-J | 180 | 225 | 24 | 1750 | 243 | 297 | 455 | 10 | 150 |
| EV07D195K-J | 195 | 250 | 26 | 1750 | 270 | 330 | 500 | 10 | 140 |
| EV07D210K-J | 210 | 275 | 28 | 1750 | 297 | 363 | 550 | 10 | 130 |
| EV07D230K-J | 230 | 300 | 32 | 1750 | 324 | 396 | 595 | 10 | 125 |
| EV07D250K-J | 250 | 320 | 35 | 1750 | 351 | 429 | 650 | 10 | 115 |
| EV07D275K-J | 275 | 350 | 40 | 1750 | 387 | 473 | 710 | 10 | 110 |
| EV07D300K-J | 300 | 385 | 42 | 1750 | 423 | 517 | 775 | 10 | 100 |
| EV07D320K-J | 320 | 415 | 45 | 1750 | 459 | 561 | 845 | 10 | 90 |
| EV07D360K-J | 360 | 460 | 49 | 1750 | 504 | 616 | 925 | 10 | 85 |
| EV07D390K-J | 390 | 505 | 55 | 1750 | 558 | 682 | 1025 | 10 | 80 |
| EV07D420K-J | 420 | 560 | 60 | 1750 | 612 | 748 | 1120 | 10 | 75 |
| EV07D460K-J | 460 | 620 | 65 | 1750 | 675 | 825 | 1240 | 10 | 70 |
| EV07D485K-J | 485 | 640 | 65 | 1750 | 702 | 858 | 1290 | 10 | 70 |
| EV07D510K-J | 510 | 675 | 70 | 1750 | 738 | 902 | 1355 | 10 | 60 |

**EV High Energy (-J) Series
Electrical Characteristics (5, 7, 10, 14, and 20mm)**

10mm -J

| Part Number | Maximum Continuous Rated Voltage | | Rated Single Pulse Transient | | Varistor Voltage @1mA DC | | Maximum Clamping Voltage @Test Current 8/20µs | | Typical Capacitance @1KHZ 25°C |
|-------------|----------------------------------|----------|------------------------------|-------------|--------------------------|-----------|---|------|--------------------------------|
| | | | Energy | Peak | | | Volts | Amps | |
| | AC RMS Volts | DC Volts | 8/20µs (joules) | 8/20µs Amps | Min Volts | Max Volts | Volts | Amps | µF |
| EV10D11K-J | 11 | 14 | 3.0 | 1000 | 16 | 20 | 36 | 5 | 6000 |
| EV10D14K-J | 14 | 18 | 5.0 | 1000 | 20 | 24 | 43 | 5 | 5000 |
| EV10D17K-J | 17 | 22 | 6.0 | 1000 | 24 | 30 | 53 | 5 | 4000 |
| EV10D20K-J | 20 | 26 | 7.0 | 1000 | 30 | 36 | 65 | 5 | 3500 |
| EV10D25K-J | 25 | 31 | 9.0 | 1000 | 35 | 43 | 77 | 5 | 3100 |
| EV10D30K-J | 30 | 38 | 11 | 1000 | 42 | 52 | 93 | 5 | 2800 |
| EV10D35K-J | 35 | 45 | 13 | 1000 | 50 | 62 | 110 | 5 | 2400 |
| EV10D40K-J | 40 | 56 | 15 | 1000 | 61 | 75 | 135 | 5 | 2200 |
| EV10D50K-J | 50 | 65 | 17 | 3500 | 74 | 90 | 135 | 25 | 2100 |
| EV10D60K-J | 60 | 85 | 18 | 3500 | 90 | 110 | 165 | 25 | 1700 |
| EV10D75K-J | 75 | 100 | 21 | 3500 | 108 | 132 | 200 | 25 | 1500 |
| EV10D95K-J | 95 | 125 | 25 | 3500 | 135 | 165 | 250 | 25 | 1300 |
| EV10D120K-J | 120 | 150 | 30 | 3500 | 162 | 198 | 300 | 25 | 470 |
| EV10D130K-J | 130 | 170 | 35 | 3500 | 185 | 225 | 340 | 25 | 430 |
| EV10D140K-J | 140 | 180 | 39 | 3500 | 198 | 242 | 360 | 25 | 390 |
| EV10D150K-J | 150 | 200 | 42 | 3500 | 216 | 264 | 395 | 25 | 360 |
| EV10D180K-J | 180 | 225 | 49 | 3500 | 243 | 297 | 455 | 25 | 330 |
| EV10D195K-J | 195 | 250 | 54 | 3500 | 270 | 330 | 500 | 25 | 290 |
| EV10D210K-J | 210 | 275 | 58 | 3500 | 297 | 363 | 550 | 25 | 280 |
| EV10D230K-J | 230 | 300 | 65 | 3500 | 324 | 396 | 595 | 25 | 260 |
| EV10D250K-J | 250 | 320 | 70 | 3500 | 351 | 429 | 650 | 25 | 240 |
| EV10D275K-J | 275 | 350 | 80 | 3500 | 387 | 473 | 710 | 25 | 220 |
| EV10D300K-J | 300 | 385 | 85 | 3500 | 423 | 517 | 775 | 25 | 200 |
| EV10D320K-J | 320 | 415 | 90 | 3500 | 459 | 561 | 845 | 25 | 190 |
| EV10D360K-J | 360 | 460 | 92 | 3500 | 504 | 616 | 825 | 25 | 180 |
| EV10D390K-J | 390 | 505 | 95 | 3500 | 558 | 682 | 1025 | 25 | 160 |
| EV10D420K-J | 420 | 560 | 98 | 3500 | 612 | 748 | 1120 | 25 | 140 |
| EV10D460K-J | 460 | 615 | 100 | 3500 | 675 | 825 | 1240 | 25 | 130 |
| EV10D485K-J | 485 | 640 | 105 | 3500 | 702 | 858 | 1290 | 25 | 130 |
| EV10D510K-J | 510 | 670 | 110 | 3500 | 738 | 902 | 1355 | 25 | 130 |
| EV10D550K-J | 550 | 745 | 130 | 3500 | 819 | 1001 | 1500 | 25 | 120 |
| EV10D625K-J | 625 | 825 | 140 | 3500 | 900 | 1100 | 1650 | 25 | 100 |
| EV10D680K-J | 680 | 895 | 155 | 3500 | 990 | 1210 | 1815 | 25 | 90 |

**EV High Energy (-J) Series
Electrical Characteristics (5, 7, 10, 14, and 20mm)**

14mm -J

| Part Number | Maximum Continuous Rated Voltage | | Rated Single Pulse Transient | | Varistor Voltage @1mA DC | | Maximum Clamping Voltage @Test Current 8/20µs | | Typical Capacitance @1KHZ 25°C |
|-------------|----------------------------------|----------|------------------------------|-------------|--------------------------|-----------|---|------|--------------------------------|
| | | | Energy | Peak | | | Volts | Amps | |
| | AC RMS Volts | DC Volts | 8/20µs (joules) | 8/20µs Amps | Min Volts | Max Volts | Volts | Amps | pF |
| EV14D11K-J | 11 | 14 | 7.0 | 2000 | 16 | 20 | 36 | 10 | 15000 |
| EV14D14K-J | 14 | 18 | 8.0 | 2000 | 20 | 24 | 43 | 10 | 12000 |
| EV14D17K-J | 17 | 22 | 10 | 2000 | 24 | 30 | 53 | 10 | 8500 |
| EV14D20K-J | 20 | 26 | 12 | 2000 | 30 | 36 | 65 | 10 | 7200 |
| EV14D25K-J | 25 | 31 | 13 | 2000 | 35 | 43 | 77 | 10 | 6300 |
| EV14D30K-J | 30 | 38 | 17 | 2000 | 42 | 52 | 93 | 10 | 5500 |
| EV14D35K-J | 35 | 45 | 20 | 2000 | 50 | 62 | 110 | 10 | 4800 |
| EV14D40K-J | 40 | 56 | 24 | 2000 | 61 | 75 | 135 | 10 | 4000 |
| EV14D50K-J | 50 | 65 | 27 | 6000 | 74 | 90 | 135 | 50 | 3900 |
| EV14D60K-J | 60 | 85 | 33 | 6000 | 90 | 110 | 165 | 50 | 3400 |
| EV14D75K-J | 75 | 100 | 40 | 6000 | 108 | 132 | 200 | 50 | 3100 |
| EV14D95K-J | 95 | 125 | 53 | 6000 | 135 | 165 | 250 | 50 | 3000 |
| EV14D120K-J | 120 | 150 | 60 | 6000 | 162 | 198 | 300 | 50 | 1030 |
| EV14D130K-J | 130 | 170 | 70 | 6000 | 185 | 225 | 340 | 50 | 970 |
| EV14D140K-J | 140 | 180 | 78 | 6000 | 198 | 242 | 360 | 50 | 840 |
| EV14D150K-J | 150 | 200 | 84 | 6000 | 216 | 264 | 395 | 50 | 710 |
| EV14D180K-J | 180 | 225 | 99 | 6000 | 243 | 297 | 455 | 50 | 650 |
| EV14D195K-J | 195 | 250 | 108 | 6000 | 270 | 330 | 500 | 50 | 600 |
| EV14D210K-J | 210 | 275 | 115 | 6000 | 297 | 363 | 550 | 50 | 550 |
| EV14D230K-J | 230 | 300 | 130 | 6000 | 324 | 396 | 595 | 50 | 530 |
| EV14D250K-J | 250 | 320 | 140 | 6000 | 351 | 429 | 650 | 50 | 500 |
| EV14D275K-J | 275 | 350 | 155 | 6000 | 387 | 473 | 710 | 50 | 480 |
| EV14D300K-J | 300 | 385 | 175 | 6000 | 423 | 517 | 775 | 50 | 440 |
| EV14D320K-J | 320 | 415 | 180 | 6000 | 459 | 561 | 845 | 50 | 390 |
| EV14D350K-J | 350 | 460 | 185 | 6000 | 504 | 616 | 825 | 50 | 360 |
| EV14D390K-J | 390 | 505 | 190 | 6000 | 558 | 682 | 1025 | 50 | 320 |
| EV14D420K-J | 420 | 560 | 200 | 6000 | 612 | 748 | 1120 | 50 | 300 |
| EV14D460K-J | 460 | 615 | 210 | 6000 | 675 | 825 | 1240 | 50 | 280 |
| EV14D485K-J | 485 | 640 | 220 | 6000 | 702 | 858 | 1290 | 50 | 250 |
| EV14D510K-J | 510 | 670 | 235 | 6000 | 738 | 902 | 1355 | 50 | 230 |
| EV14D550K-J | 550 | 745 | 255 | 6000 | 819 | 1001 | 1500 | 50 | 200 |
| EV14D625K-J | 625 | 825 | 280 | 6000 | 900 | 1100 | 1650 | 50 | 180 |
| EV14D680K-J | 680 | 895 | 310 | 6000 | 990 | 1210 | 1815 | 50 | 150 |

**EV High Energy (-J) Series
Electrical Characteristics (5, 7, 10, 14, and 20mm)**

20mm -J

| Part Number | Maximum Continuous Rated Voltage | | Rated Single Pulse Transient | | Varistor Voltage @1mA DC | | Maximum Clamping Voltage @Test Current 8/20µs | | Typical Capacitance @1KHZ 25°C |
|-------------|----------------------------------|----------|------------------------------|-------------|--------------------------|-----------|---|------|--------------------------------|
| | | | Energy | Peak | | | Volts | Amps | |
| | AC RMS Volts | DC Volts | 8/20µs (joules) | 8/20µs Amps | Min Volts | Max Volts | Volts | Amps | µF |
| EV20D11K-J | 11 | 14 | 13 | 3000 | 16 | 20 | 36 | 20 | 27000 |
| EV20D14K-J | 14 | 18 | 16 | 3000 | 20 | 24 | 43 | 20 | 20000 |
| EV20D17K-J | 17 | 22 | 19 | 3000 | 24 | 30 | 53 | 20 | 15000 |
| EV20D20K-J | 20 | 26 | 24 | 3000 | 30 | 36 | 65 | 20 | 12200 |
| EV20D25K-J | 25 | 31 | 28 | 3000 | 35 | 43 | 77 | 20 | 10000 |
| EV20D30K-J | 30 | 38 | 34 | 3000 | 42 | 52 | 93 | 20 | 9350 |
| EV20D35K-J | 35 | 45 | 41 | 3000 | 50 | 62 | 110 | 20 | 8000 |
| EV20D40K-J | 40 | 56 | 49 | 3000 | 61 | 75 | 135 | 20 | 6800 |
| EV20D50K-J | 50 | 65 | 56 | 10000 | 74 | 90 | 135 | 100 | 5800 |
| EV20D60K-J | 60 | 85 | 70 | 10000 | 90 | 110 | 165 | 100 | 3800 |
| EV20D75K-J | 75 | 100 | 85 | 10000 | 108 | 132 | 200 | 100 | 3000 |
| EV20D95K-J | 95 | 125 | 106 | 10000 | 135 | 165 | 250 | 100 | 2600 |
| EV20D120K-J | 120 | 150 | 130 | 12000 | 162 | 198 | 300 | 100 | 2400 |
| EV20D130K-J | 130 | 170 | 140 | 12000 | 185 | 225 | 340 | 100 | 1800 |
| EV20D140K-J | 140 | 180 | 155 | 12000 | 198 | 242 | 360 | 100 | 1500 |
| EV20D150K-J | 150 | 200 | 168 | 12000 | 216 | 264 | 395 | 100 | 1400 |
| EV20D180K-J | 180 | 225 | 190 | 12000 | 243 | 297 | 455 | 100 | 1350 |
| EV20D195K-J | 195 | 250 | 210 | 12000 | 270 | 330 | 500 | 100 | 1300 |
| EV20D210K-J | 210 | 275 | 228 | 12000 | 297 | 363 | 550 | 100 | 1250 |
| EV20D230K-J | 230 | 300 | 255 | 12000 | 324 | 396 | 595 | 100 | 1180 |
| EV20D250K-J | 250 | 320 | 275 | 12000 | 351 | 429 | 650 | 100 | 1100 |
| EV20D275K-J | 275 | 350 | 305 | 12000 | 387 | 473 | 710 | 100 | 1050 |
| EV20D300K-J | 300 | 385 | 350 | 12000 | 423 | 517 | 775 | 100 | 1000 |
| EV20D320K-J | 320 | 415 | 360 | 12000 | 459 | 561 | 845 | 100 | 970 |
| EV20D360K-J | 360 | 460 | 380 | 12000 | 504 | 616 | 825 | 100 | 950 |
| EV20D390K-J | 390 | 505 | 390 | 12000 | 558 | 682 | 1025 | 100 | 900 |
| EV20D420K-J | 420 | 560 | 400 | 12000 | 612 | 748 | 1120 | 100 | 850 |
| EV20D460K-J | 460 | 615 | 420 | 12000 | 675 | 825 | 1240 | 100 | 750 |
| EV20D485K-J | 485 | 640 | 440 | 12000 | 702 | 858 | 1290 | 100 | 700 |
| EV20D510K-J | 510 | 670 | 460 | 12000 | 738 | 902 | 1355 | 100 | 600 |
| EV20D550K-J | 550 | 745 | 510 | 12000 | 819 | 1001 | 1500 | 100 | 500 |
| EV20D625K-J | 625 | 825 | 565 | 12000 | 900 | 1100 | 1650 | 100 | 450 |
| EV20D680K-J | 680 | 895 | 620 | 12000 | 990 | 1210 | 1815 | 100 | 375 |

**EV Ultra High Energy (-H) Series
Electrical Characteristics (14 and 20mm)**

14mm -H

| Part Number | Maximum Continuous Rated Voltage | | Rated Single Pulse Transient | | Varistor Voltage @1mA DC | | Maximum Clamping Voltage @Test Current 8/20µs | | Typical Capacitance @1KHZ 25°C |
|-------------|----------------------------------|----------|------------------------------|-------------|--------------------------|-----------|---|------|--------------------------------|
| | | | Energy | Peak | | | Volts | Amps | |
| | AC RMS Volts | DC Volts | 8/20µs (joules) | 8/20µs Amps | Min Volts | Max Volts | Volts | Amps | pF |
| EV14D120K-H | 120 | 150 | 72 | 7500 | 162 | 198 | 300 | 50 | 1030 |
| EV14D130K-H | 130 | 170 | 84 | 7500 | 185 | 225 | 340 | 50 | 970 |
| EV14D140K-H | 140 | 180 | 94 | 7500 | 198 | 242 | 360 | 50 | 840 |
| EV14D150K-H | 150 | 200 | 100 | 7500 | 216 | 264 | 395 | 50 | 710 |
| EV14D180K-H | 180 | 225 | 120 | 7500 | 243 | 297 | 455 | 50 | 650 |
| EV14D195K-H | 195 | 250 | 130 | 7500 | 270 | 330 | 500 | 50 | 600 |
| EV14D210K-H | 210 | 275 | 140 | 7500 | 297 | 363 | 550 | 50 | 550 |
| EV14D230K-H | 230 | 300 | 155 | 7500 | 324 | 396 | 595 | 50 | 530 |
| EV14D250K-H | 250 | 320 | 190 | 7500 | 351 | 429 | 650 | 50 | 500 |
| EV14D275K-H | 275 | 350 | 210 | 7500 | 387 | 473 | 710 | 50 | 480 |
| EV14D300K-H | 300 | 385 | 215 | 7500 | 423 | 517 | 775 | 50 | 440 |
| EV14D320K-H | 320 | 415 | 220 | 7500 | 459 | 561 | 845 | 50 | 390 |
| EV14D350K-H | 350 | 460 | 230 | 7500 | 504 | 616 | 825 | 50 | 360 |
| EV14D390K-H | 390 | 505 | 240 | 7500 | 558 | 682 | 1025 | 50 | 320 |
| EV14D420K-H | 420 | 560 | 250 | 7500 | 612 | 748 | 1120 | 50 | 300 |
| EV14D460K-H | 460 | 615 | 250 | 7500 | 675 | 825 | 1240 | 50 | 280 |
| EV14D485K-H | 485 | 640 | 265 | 7500 | 702 | 858 | 1290 | 50 | 250 |
| EV14D510K-H | 510 | 670 | 280 | 7500 | 738 | 902 | 1355 | 50 | 230 |
| EV14D550K-H | 550 | 745 | 310 | 7500 | 819 | 1001 | 1500 | 50 | 200 |
| EV14D625K-H | 625 | 825 | 340 | 7500 | 900 | 1100 | 1650 | 50 | 180 |
| EV14D680K-H | 680 | 895 | 370 | 7500 | 990 | 1210 | 1815 | 50 | 150 |

**EV Ultra High Energy (-H) Series
Electrical Characteristics (14 and 20mm)**

20mm -H

| Part Number | Maximum Continuous Rated Voltage | | Rated Single Pulse Transient | | Varistor Voltage @1mA DC | | Maximum Clamping Voltage @Test Current 8/20µs | | Typical Capacitance @1KHZ 25°C |
|-------------|----------------------------------|----------|------------------------------|-------------|--------------------------|-----------|---|------|--------------------------------|
| | | | Energy | Peak | | | Volts | Amps | |
| | AC RMS Volts | DC Volts | 8/20µs (joules) | 8/20µs Amps | Min Volts | Max Volts | | | pF |
| EV20D120K-H | 120 | 150 | 156 | 13000 | 162 | 198 | 300 | 100 | 2400 |
| EV20D130K-H | 130 | 170 | 175 | 13000 | 185 | 225 | 340 | 100 | 1800 |
| EV20D140K-H | 140 | 180 | 186 | 13000 | 198 | 242 | 360 | 100 | 1500 |
| EV20D150K-H | 150 | 200 | 200 | 13000 | 216 | 264 | 395 | 100 | 1400 |
| EV20D180K-H | 180 | 225 | 230 | 13000 | 243 | 297 | 455 | 100 | 1350 |
| EV20D195K-H | 195 | 250 | 250 | 13000 | 270 | 330 | 500 | 100 | 1300 |
| EV20D210K-H | 210 | 275 | 275 | 13000 | 297 | 363 | 550 | 100 | 1250 |
| EV20D230K-H | 230 | 300 | 310 | 13000 | 324 | 396 | 595 | 100 | 1180 |
| EV20D250K-H | 250 | 320 | 330 | 13000 | 351 | 429 | 650 | 100 | 1100 |
| EV20D275K-H | 275 | 350 | 360 | 13000 | 387 | 473 | 710 | 100 | 1050 |
| EV20D300K-H | 300 | 385 | 420 | 13000 | 423 | 517 | 775 | 100 | 1000 |
| EV20D320K-H | 320 | 415 | 432 | 13000 | 459 | 561 | 845 | 100 | 970 |
| EV20D360K-H | 360 | 460 | 455 | 13000 | 504 | 616 | 825 | 100 | 950 |
| EV20D390K-H | 390 | 505 | 470 | 13000 | 558 | 682 | 1025 | 100 | 900 |
| EV20D420K-H | 420 | 560 | 480 | 13000 | 612 | 748 | 1120 | 100 | 850 |
| EV20D460K-H | 460 | 615 | 505 | 13000 | 675 | 825 | 1240 | 100 | 750 |
| EV20D485K-H | 485 | 640 | 530 | 13000 | 702 | 858 | 1290 | 100 | 700 |
| EV20D510K-H | 510 | 670 | 550 | 13000 | 738 | 902 | 1355 | 100 | 600 |
| EV20D550K-H | 550 | 745 | 612 | 13000 | 819 | 1001 | 1500 | 100 | 500 |
| EV20D625K-H | 625 | 825 | 680 | 13000 | 900 | 1100 | 1650 | 100 | 450 |
| EV20D680K-H | 680 | 895 | 745 | 13000 | 990 | 1210 | 1815 | 100 | 375 |

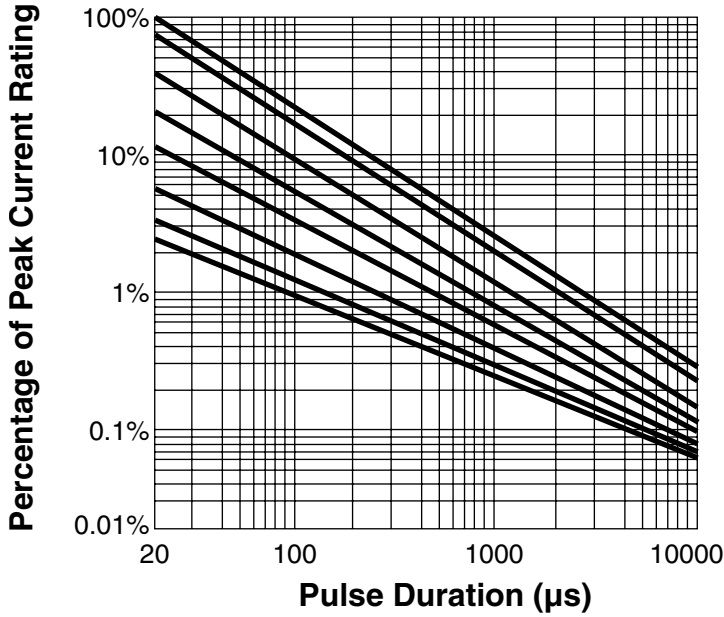
**EV Ultra High Energy (-H) Series
Electrical Characteristics (34mm)**

34mm -H

| Part Number | Maximum Continuous Rated Voltage | | Rated Single Pulse Transient | | Varistor Voltage @1mA DC | | Maximum Clamping Voltage @Test Current 8/20µs | | Typical Capacitance @1KHZ 25°C |
|-------------|----------------------------------|----------|------------------------------|-----------|--------------------------|-----------|---|------|--------------------------------|
| | | | Energy | Peak | | | Volts | Amps | |
| | AC RMS Volts | DC Volts | 10/1000µs (joules) | 8/20µs KA | Min Volts | Max Volts | Volts | Amps | pF |
| EV34D60K-H | 60 | 85 | 200 | 45 | 90 | 110 | 165 | 300 | 15000 |
| EV34D75K-H | 75 | 100 | 250 | 45 | 108 | 132 | 200 | 300 | 12200 |
| EV34D95K-H | 95 | 125 | 300 | 50 | 135 | 165 | 250 | 300 | 10000 |
| EV34D120K-H | 120 | 150 | 400 | 50 | 162 | 198 | 300 | 300 | 8250 |
| EV34D130K-H | 130 | 170 | 450 | 50 | 185 | 225 | 340 | 300 | 6750 |
| EV34D140K-H | 140 | 180 | 500 | 50 | 198 | 242 | 360 | 300 | 6400 |
| EV34D150K-H | 150 | 200 | 550 | 50 | 222 | 270 | 395 | 300 | 5650 |
| EV34D180K-H | 180 | 225 | 630 | 50 | 256 | 310 | 455 | 300 | 5100 |
| EV34D195K-H | 195 | 250 | 700 | 50 | 270 | 330 | 500 | 300 | 4510 |
| EV34D210K-H | 210 | 275 | 800 | 60 | 297 | 363 | 550 | 300 | 4150 |
| EV34D230K-H | 230 | 300 | 850 | 60 | 324 | 396 | 595 | 300 | 3750 |
| EV34D250K-H | 250 | 320 | 930 | 60 | 362 | 440 | 650 | 300 | 3500 |
| EV34D275K-H | 275 | 350 | 1050 | 60 | 387 | 473 | 710 | 300 | 2950 |
| EV34D300K-H | 300 | 385 | 1150 | 60 | 423 | 517 | 775 | 300 | 2880 |
| EV34D320K-H | 320 | 415 | 1200 | 60 | 459 | 561 | 845 | 300 | 2650 |
| EV34D360K-H | 360 | 460 | 1300 | 60 | 504 | 616 | 925 | 300 | 2450 |
| EV34D390K-H | 390 | 505 | 1400 | 60 | 558 | 682 | 1025 | 300 | 2200 |
| EV34D420K-H | 420 | 560 | 1400 | 60 | 612 | 748 | 1120 | 300 | 2000 |
| EV34D460K-H | 460 | 615 | 1500 | 60 | 675 | 825 | 1240 | 300 | 1820 |
| EV34D485K-H | 485 | 640 | 1550 | 60 | 702 | 858 | 1290 | 300 | 1750 |
| EV34D510K-H | 510 | 670 | 1650 | 60 | 738 | 902 | 1355 | 300 | 1650 |
| EV34D550K-H | 550 | 745 | 1750 | 60 | 819 | 1001 | 1500 | 300 | 1500 |

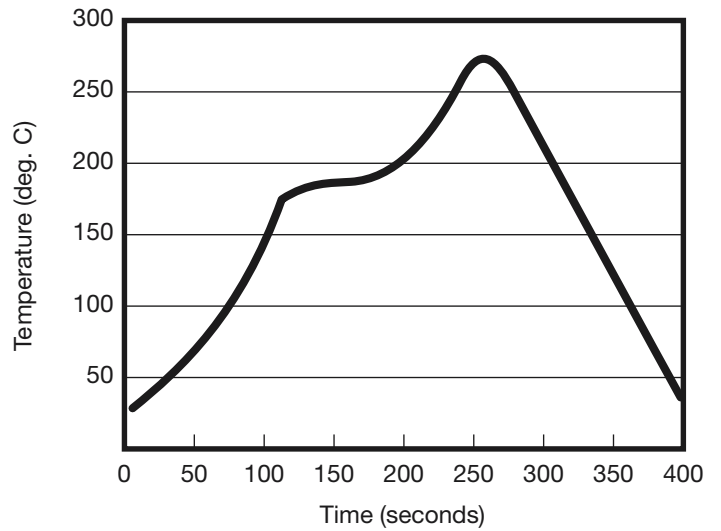
Peak Pulse and Derating Curve

Peak Current Per Pulse Versus Pulse Duration

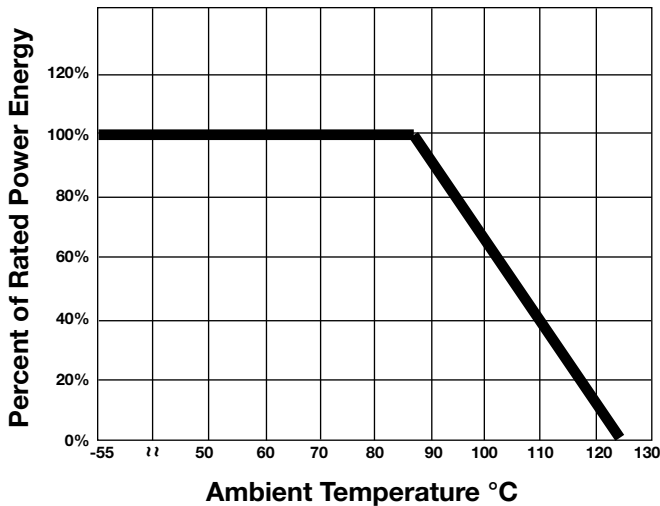


- 1 Repetition - (Top line on graph)
- 2 Repetitions
- 10 Repetitions
- 10² Repetitions
- 10³ Repetitions
- 10⁴ Repetitions
- 10⁵ Repetitions
- 10⁶ Repetitions - (Bottom line on graph)

Soldering Profile



Temperature Derating Curve Power and Energy Rating vs. Temperature



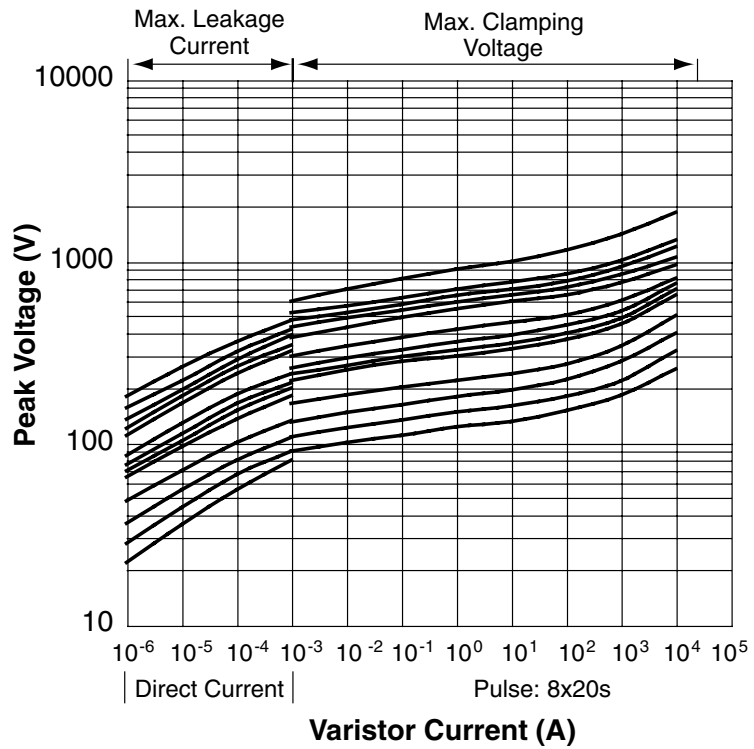
Power Dissipation Ratings

| Disk Size | Pm-watts |
|-----------------|----------|
| 5mm (< 50 VAC) | 0.01 |
| 5mm (≥ 50 VAC) | 0.20 |
| 7mm (< 50 VAC) | 0.02 |
| 7mm (≥ 50 VAC) | 0.25 |
| 10mm (< 50 VAC) | 0.05 |
| 10mm (≥ 50 VAC) | 0.40 |
| 14mm (< 50 VAC) | 0.10 |
| 14mm (≥ 50 VAC) | 0.60 |
| 20mm (≥ 50 VAC) | 0.20 |
| 20mm (< 50 VAC) | 1.00 |
| 22mm (≥ 50 VAC) | 0.25 |
| 22mm (< 50 VAC) | 1.20 |
| 34mm (≥ 50 VAC) | 0.30 |
| 34mm (≥ 50 VAC) | 1.40 |

V-I Characteristics

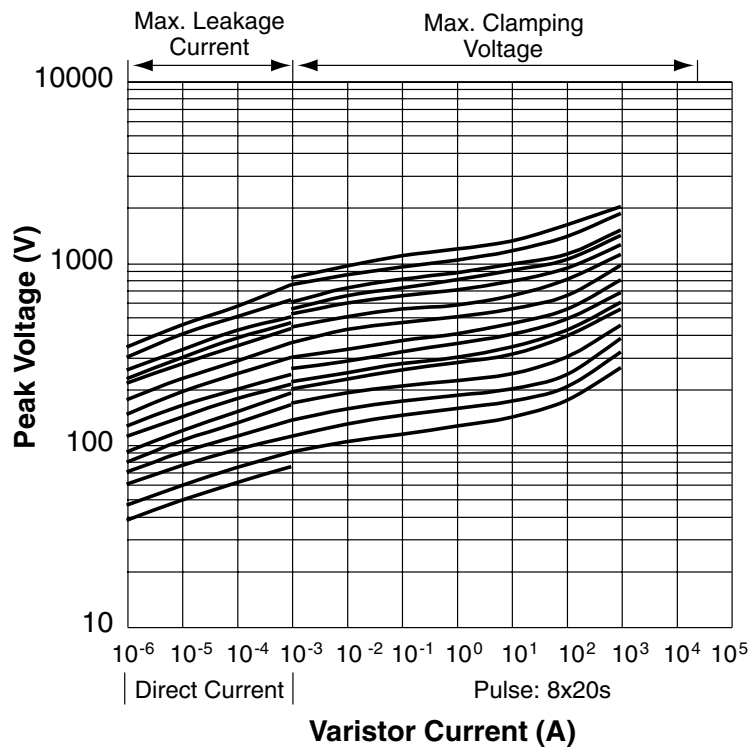
5mm Disk Size (VAC)

- 360 - (Top line on graph)
- 300
- 275
- 250
- 230
- 180
- 150
- 140
- 130
- 95
- 75
- 60
- 50 - (Bottom line on graph)



7mm Disk Size (VAC)

- 420 - (Top line on graph)
- 390
- 360
- 320
- 300
- 250
- 210
- 180
- 150
- 130
- 120
- 95
- 75
- 60
- 50 - (Bottom line on graph)

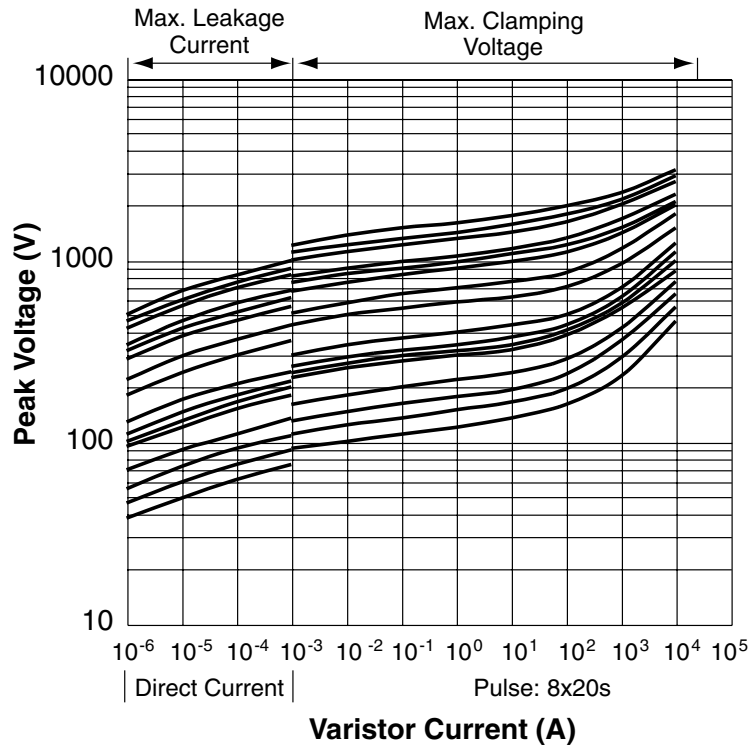


At idle power, current levels shown to the left of the discontinuity illustrate typically the high end leakage current. However, if lower leakage current levels are desired, they may be guaranteed. In the clamping voltage region to the right of the discontinuity, maximum clamping voltage is plotted.

V-I Characteristics (continued)

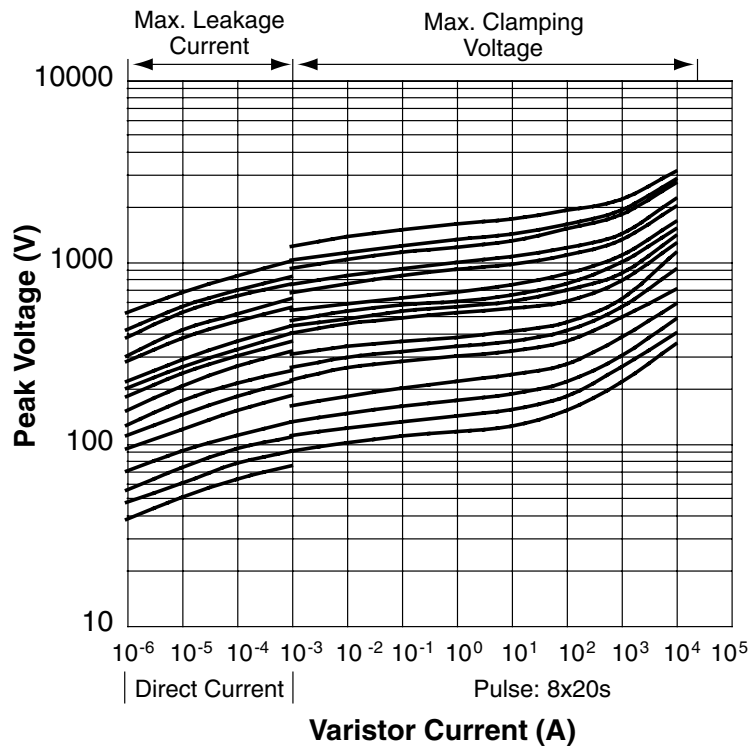
10mm Disk Size (VAC)

- 680 - (Top line on graph)
- 625
- 550
- 460
- 420
- 390
- 300
- 250
- 180
- 150
- 140
- 130
- 95
- 75
- 60
- 50 - (Bottom line on graph)



14mm Disk Size (VAC)

- 680 - (Top line on graph)
- 550
- 510
- 420
- 390
- 300
- 275
- 250
- 230
- 180
- 150
- 130
- 95
- 75
- 60
- 50 - (Bottom line on graph)

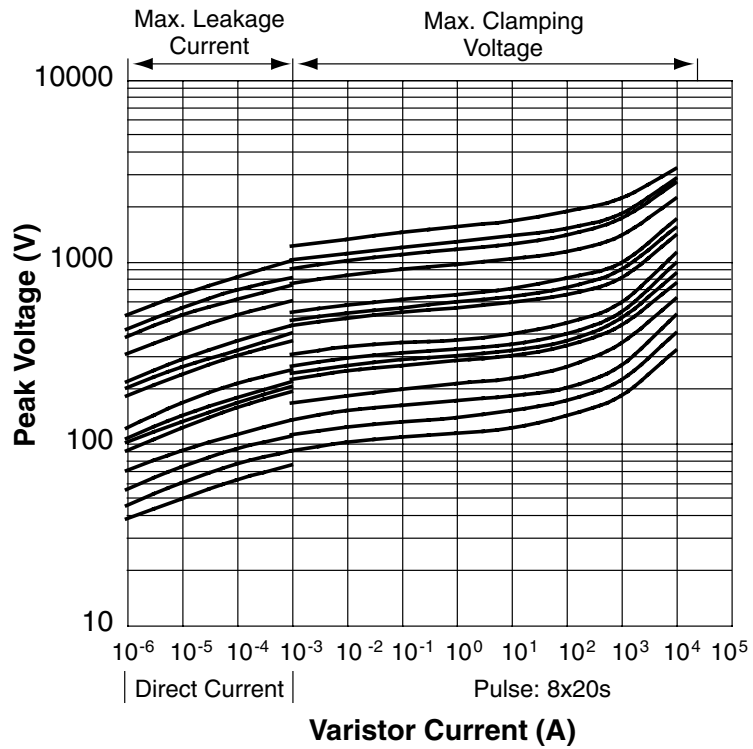


At idle power, current levels shown to the left of the diskontinuity illustrate typically the high end leakage current. However, if lower leakage current levels are desired, they may be guaranteed. In the clamping voltage region to the right of the diskontinuity, maximum clamping voltage is plotted.

V-I Characteristics (continued)

20mm Disk Size (VAC)

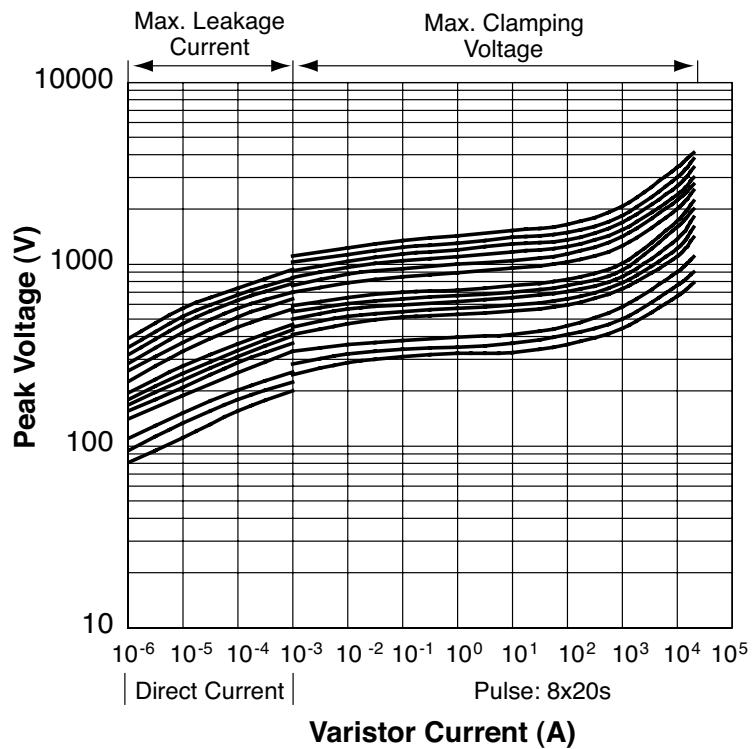
- 680 - (Top line on graph)
- 550
- 510
- 420
- 300
- 275
- 250
- 180
- 150
- 140
- 130
- 95
- 75
- 60
- 50 - (Bottom line on graph)



At idle power, current levels shown to the left of the diskontinuity illustrate typically the high end leakage current. However, if lower leakage current levels are desired, they may be guaranteed. In the clamping voltage region to the right of the diskontinuity, maximum clamping voltage is plotted.

22mm Disk Size (VAC)

- 575 - (Top line on graph)
- 550
- 510
- 460
- 420
- 390
- 320
- 300
- 275
- 250
- 230
- 180
- 150
- 130 - (Bottom line on graph)

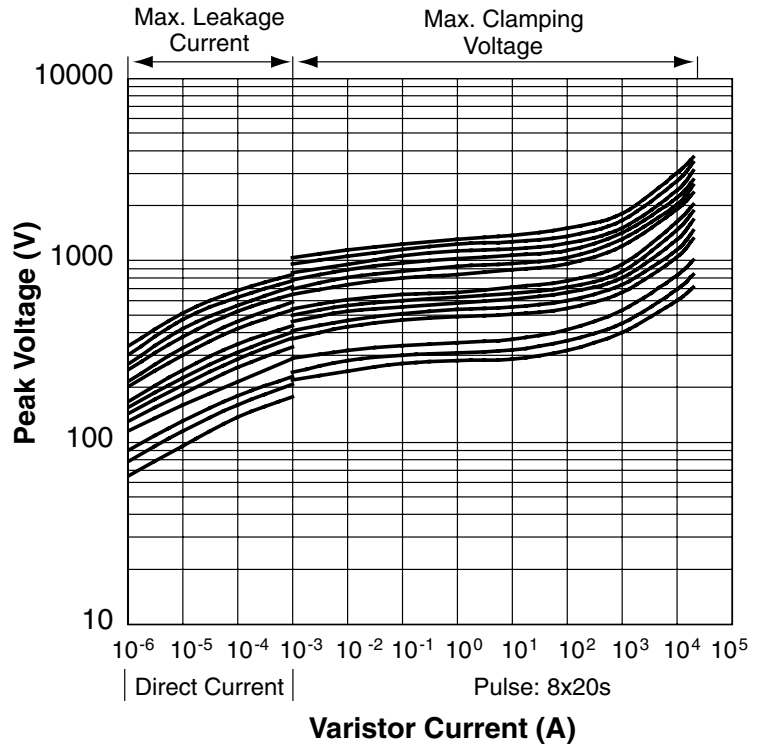


At idle power, current levels shown to the left of the diskontinuity illustrate typically the high end leakage current. However, if lower leakage current levels are desired, they may be guaranteed. In the clamping voltage region to the right of the diskontinuity, maximum clamping voltage is plotted.

V-I Characteristics (continued)

34mm Disk Size (VAC)

- 575 - (Top line on graph)
- 550
- 510
- 460
- 420
- 390
- 320
- 300
- 275
- 250
- 230
- 180
- 150
- 130 - (Bottom line on graph)



Standard Bulk Packaging

| Disk Size mm | AC RMS Voltage | Quantity pieces/bag | Quantity pieces/box | Quantity pieces/carton |
|--------------|----------------|---------------------|---------------------|------------------------|
| 5 | ALL | 500 | 2000 | 20000 |
| 7 | ALL | 500 | 2000 | 20000 |
| 10 | 11 - 300 | 500 | 1000 | 10000 |
| | ≥ 320 | 500 | 1000 | 10000 |
| 14 | 11 - 230 | 500 | 1000 | 10000 |
| | ≥ 250 | 250 | 500 | 5000 |
| 20 | 11 - 390 | 250 | 500 | 5000 |
| | ≥ 420 | 250 | 500 | 5000 |
| 22 | 20 - 420 | 60 (BOX) | --- | 480 |
| | ≥ 460 | 32 (BOX) | --- | 256 |
| 34 | 20 - 230 | 60 (BOX) | --- | 480 |
| | 250 - 420 | 32 (BOX) | --- | 256 |
| | 460 - 900 | 24 (BOX) | --- | 192 |
| | 1000 | 20 (BOX) | --- | 160 |

NOTE: Applies to EV standard, -"J", -"H" suffix series parts.

5mm / 7mm Taping Specifications

| Item | Symbol | 5mm Disk Size | | 7mm Disk Size | |
|--|--------|---------------|-----------------------------|---------------|-----------------------------|
| | | T11, T1 | T17, T3, T1D, T14, T1W, T32 | T11, T1 | T17, T3, T1D, T14, T1W, T32 |
| Body Diameter | D | 7 max | 7 max | 9.5 max | 9.5 max |
| Lead Wire Diameter | d | 0.6 ± 0.02 | 0.6 ± 0.02 | 0.6 ± 0.02 | 0.6 ± 0.02 |
| Pitch of Component | P | 12.7 ± 1 | 12.7 ± 1 | 12.7 ± 1 | 12.7 ± 1 |
| Feed Hole Pitch | P0 | 12.7 ± 0.3 | 12.7 ± 0.3 | 12.7 ± 0.3 | 12.7 ± 0.3 |
| Feed Hole Center to Lead | P1 | 3.85 ± 0.7 | 3.85 ± 0.7 | 3.85 ± 0.7 | 3.85 ± 0.7 |
| Lead to Lead Distance (Center to Center) | F | 5 ± 0.8 | 5 ± 0.8 | 5 ± 0.8 | 5 ± 0.8 |
| Component Alignment | △h | 2.0 max | 2.0 max | 2.0 max | 2.0 max |
| Basepaper Tape Width | W | 18 +1/-0.5 | 18 +1/-0.5 | 18 +1/-0.5 | 18 +1/-0.5 |
| Adhesive Tape Width | W0 | 10 min | 10 min | 10 min | 10 min |
| Hole Position | W1 | 9 ± 0.5 | 9 ± 0.5 | 9 ± 0.5 | 9 ± 0.5 |
| Adhesive Tape Border | W2 | 3 max | 3 max | 3 max | 3 max |
| Component Height | H1 | 30 max | 30 max | 32 max | 32 max |
| Lead-Wire Clinch Height | H0 | — | 16 ± 0.5 | — | 16 ± 0.5 |
| Lead-Wire Protrusion | Lx | 1.0 max | 1.0 max | 1.0 max | 1.0 max |
| Feed Hole Diameter | D0 | 4 ± 0.2 | 4 ± 0.2 | 4 ± 0.2 | 4 ± 0.2 |
| Total Tape Thickness | t | »0.7 max | »0.7 max | »0.7 max | »0.7 max |
| Length of Clipped Lead | L | 11 max | 11 max | 11 max | 11 max |
| Component Height from Seating Plane | A | — | 13 max | — | 15 max |
| Hole Center to Component Center | P2 | 6.35 ± .7 | 6.35 ± .7 | 6.35 ± .7 | 6.35 ± .7 |

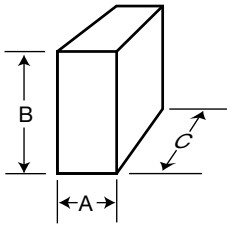
All dimensions are in Millimeters.

Note: Basepaper Thickness = 0.375mm ± 0.1mm (Ammo Box), 0.53mm ± 0.1mm (Reel)

Adhesive Tape Thickness = 0.16mm ± 0.03mm

Largest voltage which can be taped is 420VAC. For 320VAC and larger, only T1W or T32 is available

5mm / 7mm Taping Specifications (continued)



Ammo Box

5mm and 7mm Disk Size, (T11, T17, T1D, T1W)

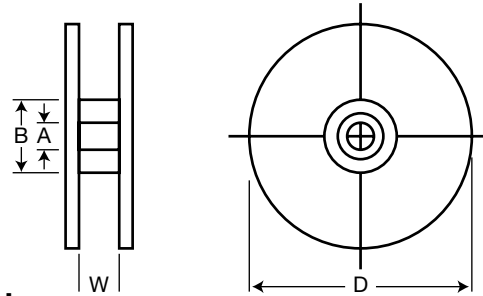
A = 50 max, B = 300 max, C = 340 max

2,000 pieces (5 \emptyset)

< 250VAC = 1,500 pieces (7 \emptyset)

\geq 250VAC = 1,000 pieces (7 \emptyset)

All dimensions are in Millimeters.



Reel

5mm and 7mm Disk Size, (T1, T3, T14, T32)

W = Approximately 50, D = 350 \emptyset max,

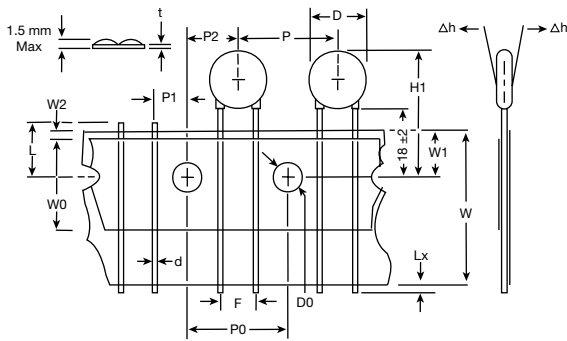
A = Approximately 30 \emptyset , B = Approximately 95 \emptyset

2,000 pieces (5 \emptyset)

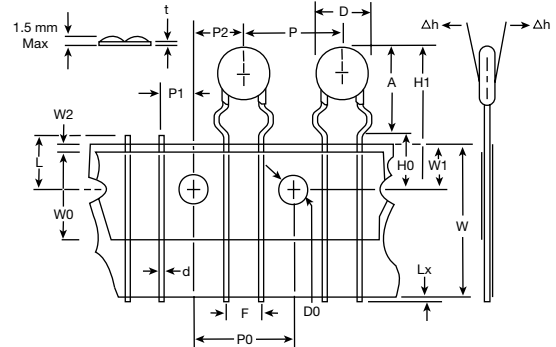
< 250VAC = 1,500 pieces (7 \emptyset)

\geq 250VAC = 1,000 pieces (7 \emptyset)

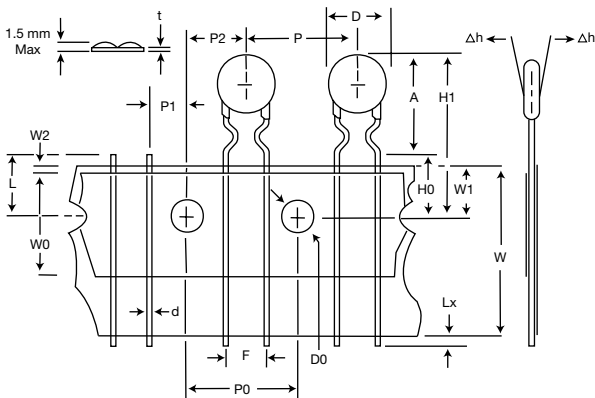
**Straight Lead
T11 (Ammo Box) and T1 (Reel)**



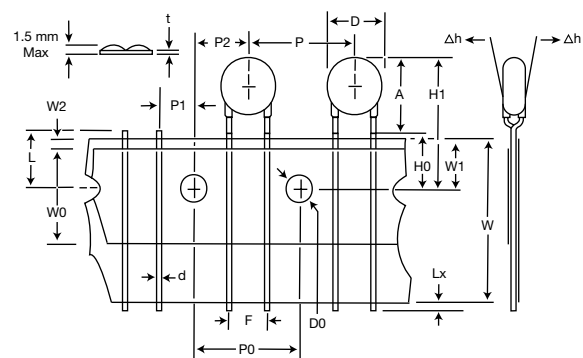
**Outward Crimp
T17 (Ammo Box) and T3 (Reel)**



**Inward Crimp
T1D (Ammo Box) and T14 (Reel)**



**In-Line Crimp
T1W (Ammo Box) and T32 (Reel)**



Based on EIA-468-B Specifications.

10mm Taping Specifications

| Item | Symbol | Straight Leads | | Outward Crimp | | Inline Crimp | | Inward Crimp | |
|--|--------|----------------|------------|---------------|------------|--------------|------------|--------------|------------|
| | | T36, T19 | T7, T18 | T1U, T1N | T10, T26 | T43, T4 | T15, T38 | T8, T16 | T6, T12 |
| Body Diameter | D | 12.5 max | 12.5 max | 12.5 max | 12.5 max | 12.5 max | 12.5 max | 12.5 max | 12.5 max |
| Lead Wire Diameter | d | 0.8 ± 0.06 | 0.8 ± 0.06 | 0.8 ± 0.06 | 0.8 ± 0.06 | 0.8 ± 0.06 | 0.8 ± 0.06 | 0.8 ± 0.06 | 0.8 ± 0.06 |
| Pitch of Component | P | 25.4 ± 1 | 25.4 ± 1 | 25.4 ± 1 | 25.4 ± 1 | 25.4 ± 1 | 25.4 ± 1 | 25.4 ± 1 | 25.4 ± 1 |
| Feed Hole Pitch | P0 | 12.7 ± 0.3 | 12.7 ± 0.3 | 12.7 ± 0.3 | 12.7 ± 0.3 | 12.7 ± 0.3 | 12.7 ± 0.3 | 12.7 ± 0.3 | 12.7 ± 0.3 |
| Feed Hole Center to Lead | P1 | | 3.85 ± 0.7 | | 3.85 ± 0.7 | | 3.85 ± 0.7 | | 3.85 ± 0.7 |
| Lead to Lead Distance (Center to Center) | F | 7.5 ± 0.8 | 5.0 ± 0.8 | 7.5 ± 0.8 | 5.0 ± 0.8 | 7.5 ± 0.8 | 5.0 ± 0.8 | 7.5 ± 0.8 | 5.0 ± 0.8 |
| Component Alignment | Δh | 2.0 max | 2.0 max | 2.0 max | 2.0 max | 2.0 max | 2.0 max | 2.0 max | 2.0 max |
| Basepaper Tape Width | W | 18 +1/-0.5 | 18 +1/-0.5 | 18 +1/-0.5 | 18 +1/-0.5 | 18 +1/-0.5 | 18 +1/-0.5 | 18 +1/-0.5 | 18 +1/-0.5 |
| Adhesive Tape Width | W0 | 10 min | 10 min | 10 min | 10 min | 10 min | 10 min | 10 min | 10 min |
| Hole Position | W1 | 9 ± 0.5 | 9 ± 0.5 | 9 ± 0.5 | 9 ± 0.5 | 9 ± 0.5 | 9 ± 0.5 | 9 ± 0.5 | 9 ± 0.5 |
| Adhesive Tape Border | W2 | 3 max | 3 max | 3 max | 3 max | 3 max | 3 max | 3 max | 3 max |
| Component Height | H1 | 33 max | 33 max | 38.5 max | 38.5 max | 35.5 max | 38.5 max | 38.5 max | 38.5 max |
| Lead-Wire Protrusion | Lx | 1.0 max | 1.0 max | 1.0 max | 1.0 max | 1.0 max | 1.0 max | 1.0 max | 1.0 max |
| Feed Hole Diameter | D0 | 4 ± 0.2 | 4 ± 0.2 | 4 ± 0.2 | 4 ± 0.2 | 4 ± 0.2 | 4 ± 0.2 | 4 ± 0.2 | 4 ± 0.2 |
| Total Tape Thickness | t | »0.7 max | »0.7 max | »0.7 max | »0.7 max | »0.7 max | »0.7 max | »0.7 max | »0.7 max |
| Length of Clipped Lead | L | 11 max | 11 max | 11 max | 11 max | 11 max | 11 max | 11 max | 11 max |
| Component Height from Seating Plane | A | — | — | 19.5 max | 19.5 max | 19.5 max | 19.5 max | 19.5 max | 19.5 max |
| Hole Center to Component Center | P2 | | 6.35 ± 0.7 | | 6.35 ± 0.7 | | 6.35 ± 0.7 | | 6.35 ± 0.7 |

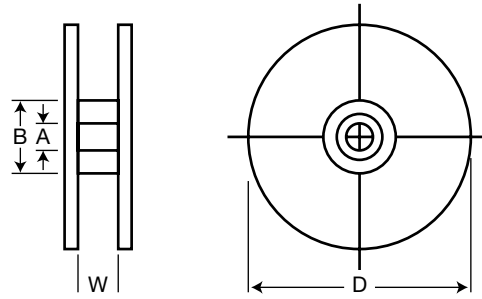
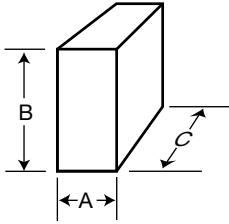
All dimensions are in Millimeters.

Note: Basepaper Thickness = 0.375mm ± 0.1mm (Ammo Box), 0.53mm ± 0.1mm (Reel)

Adhesive Tape Thickness = 0.16mm ± 0.03mm

Largest voltage which can be taped is 460VAC. For 320VAC and larger, only T15, T43, T38 or T4 is available

10mm Taping Specifications (continued)



Ammo Box

Ammo Box Taping Codes
(T7, T36, T15, T43, T1U, T10, T8, T6)

A = 65 max
B = 250 max
C = 340 max

< 300VAC = 500 to 1,000 pieces
≥ 300VAC = 300 pieces

All dimensions are in Millimeters.

Reel

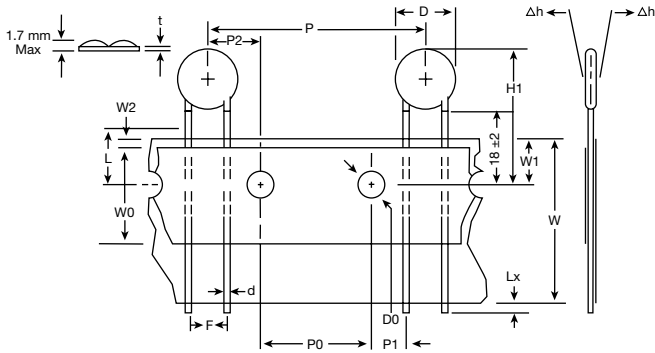
Reel Taping Codes
(T19, T18, T4, T38, T26, T1N, T16, T12)

W = Approximately 50
D = 350ømax
A = Approximately 30ø
B = Approximately 95ø

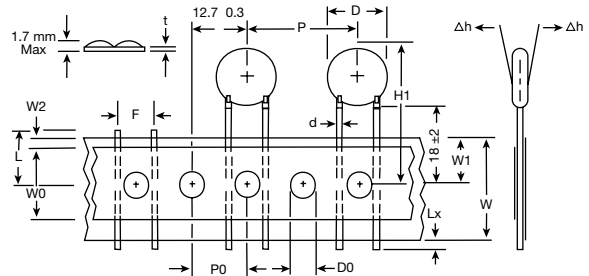
< 300VAC = 500 to 1,000 pieces
≥ 300VAC = 300 pieces

10mm Taping Specifications (continued)

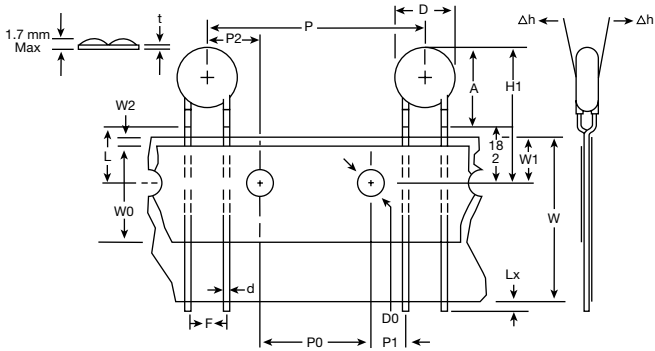
**Straight Lead
T7 (Ammo Box) and T18 (Reel)
(5mm Lead Spacing)**



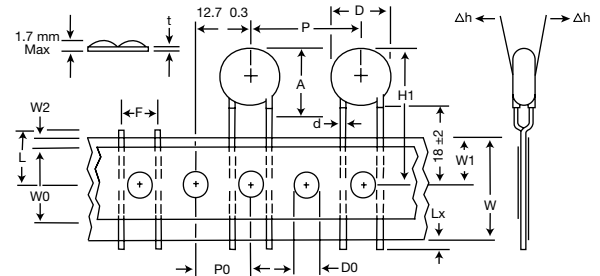
**Straight Lead
T36 (Ammo Box) and T19 (Reel)
(7.5mm Lead Spacing)**



**In-Line Crimp
T15 (Ammo Box) and T38 (Reel)
(5mm Lead Spacing)**



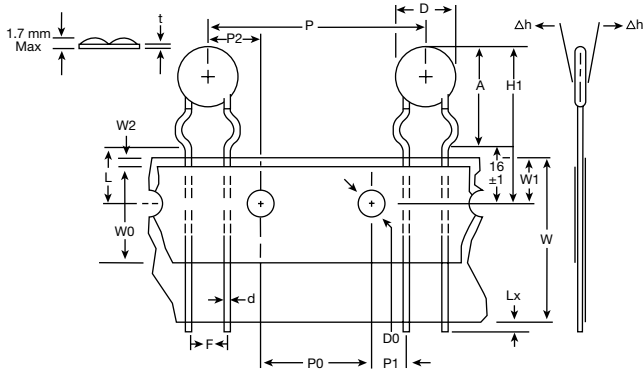
**In-Line Crimp
T43 (Ammo Box) and T4 (Reel)
(7.5mm Lead Spacing)**



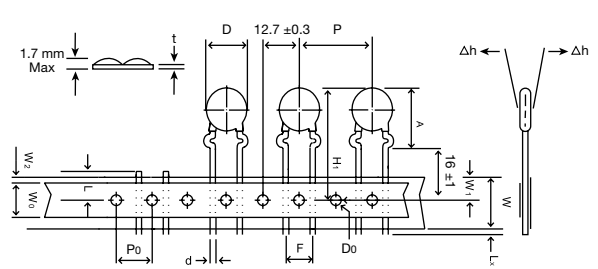
Based on EIA-468-B Specifications.

10mm Taping Specifications (continued)

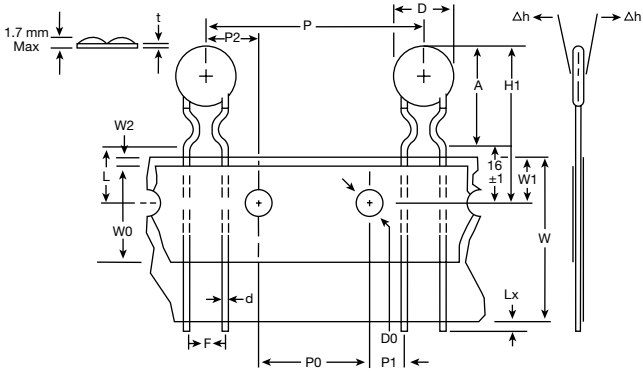
Outward Crimp
T10 (Ammo Box) and T26 (Reel)
(5mm Lead Spacing)



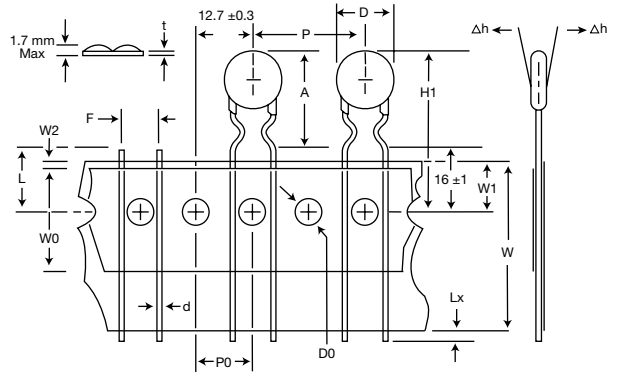
Outward Crimp
T1U (Ammo Box) and T1N (Reel)
(7.5mm Lead Spacing)



Inward Crimp
T6 (Ammo Box) and T12 (Reel)
(5mm Lead Spacing)



Inward Crimp
T8 (Ammo Box) and T16 (Reel)
(7.5mm Lead Spacing)



Based on EIA-468-B Specifications.

14mm Taping Specifications

| Item | Symbol | Straight Leads | | Outward Crimp | | Inline Crimp | | Inward Crimp | |
|--|--------|----------------|------------|---------------|------------|--------------|------------|--------------|------------|
| | | T36, T19 | T7, T18 | T1U, T1N | T10, T26 | T43, T4 | T15, T38 | T8, T16 | T6, T12 |
| Body Diameter | D | 16.5 max | 16.5 max | 16.5 max | 16.5 max | 16.5 max | 16.5 max | 16.5 max | 16.5 max |
| Lead Wire Diameter | d | 0.8 ± 0.06 | 0.8 ± 0.06 | 0.8 ± 0.06 | 0.8 ± 0.06 | 0.8 ± 0.06 | 0.8 ± 0.06 | 0.8 ± 0.06 | 0.8 ± 0.06 |
| Pitch of Component | P | 25.4 ± 1 | 25.4 ± 1 | 25.4 ± 1 | 25.4 ± 1 | 25.4 ± 1 | 25.4 ± 1 | 25.4 ± 1 | 25.4 ± 1 |
| Feed Hole Pitch | P0 | 12.7 ± 0.3 | 12.7 ± 0.3 | 12.7 ± 0.3 | 12.7 ± 0.3 | 12.7 ± 0.3 | 12.7 ± 0.3 | 12.7 ± 0.3 | 12.7 ± 0.3 |
| Feed Hole Center to Lead | P1 | | 3.85 ± 0.7 | | 3.85 ± 0.7 | | 3.85 ± 0.7 | | 3.85 ± 0.7 |
| Lead to Lead Distance (Center to Center) | F | 7.5 ± 0.8 | 5.0 ± 0.8 | 7.5 ± 0.8 | 5.0 ± 0.8 | 7.5 ± 0.8 | 5.0 ± 0.8 | 7.5 ± 0.8 | 5.0 ± 0.8 |
| Component Alignment | Δh | 2.0 max | 2.0 max | 2.0 max | 2.0 max | 2.0 max | 2.0 max | 2.0 max | 2.0 max |
| Basepaper Tape Width | W | 18 +1/-0.5 | 18 +1/-0.5 | 18 +1/-0.5 | 18 +1/-0.5 | 18 +1/-0.5 | 18 +1/-0.5 | 18 +1/-0.5 | 18 +1/-0.5 |
| Adhesive Tape Width | W0 | 10 min | 10 min | 10 min | 10 min | 10 min | 10 min | 10 min | 10 min |
| Hole Position | W1 | 9 ± 0.5 | 9 ± 0.5 | 9 ± 0.5 | 9 ± 0.5 | 9 ± 0.5 | 9 ± 0.5 | 9 ± 0.5 | 9 ± 0.5 |
| Adhesive Tape Border | W2 | 3 max | 3 max | 3 max | 3 max | 3 max | 3 max | 3 max | 3 max |
| Component Height | H1 | 37 max | 37 max | 40 max | 40 max | 40 max | 40 max | 40 max | 40 max |
| Lead-Wire Protrusion | Lx | 1.0 max | 1.0 max | 1.0 max | 1.0 max | 1.0 max | 1.0 max | 1.0 max | 1.0 max |
| Feed Hole Diameter | D0 | 4 ± 0.2 | 4 ± 0.2 | 4 ± 0.2 | 4 ± 0.2 | 4 ± 0.2 | 4 ± 0.2 | 4 ± 0.2 | 4 ± 0.2 |
| Total Tape Thickness | t | »0.7 max | »0.7 max | »0.7 max | »0.7 max | »0.7 max | »0.7 max | »0.7 max | »0.7 max |
| Length of Clipped Lead | L | 11 max | 11 max | 11 max | 11 max | 11 max | 11 max | 11 max | 11 max |
| Component Height from Seating Plane | A | — | — | 22.5 max | 22.5 max | 22.5 max | 22.5 max | 22.5 max | 22.5 max |
| Hole Center to Component Center | P2 | | 6.35 ± 0.7 | | 6.35 ± 0.7 | | 6.35 ± 0.7 | | 6.35 ± 0.7 |

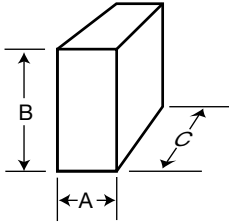
All dimensions are in Millimeters.

Note: Basepaper Thickness = 0.375mm ± 0.1mm (Ammo Box), 0.53mm ± 0.1mm (Reel)

Adhesive Tape Thickness = 0.16mm ± 0.03mm

Largest voltage which can be taped is 460VAC. For 320VAC and larger, only T15, T43, T38 or T4 is available

14mm Taping Specifications (continued)



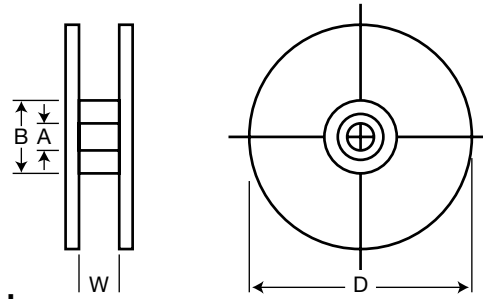
Ammo Box

Ammo Box Taping Codes
(T7, T36, T15, T43, T1U, T10, T8, T6)

A = 65 max
B = 250 max
C = 340 max

< 300VAC = 500 to 1,000 pieces
≥ 300VAC = 300 pieces

All dimensions are in Millimeters.



Reel

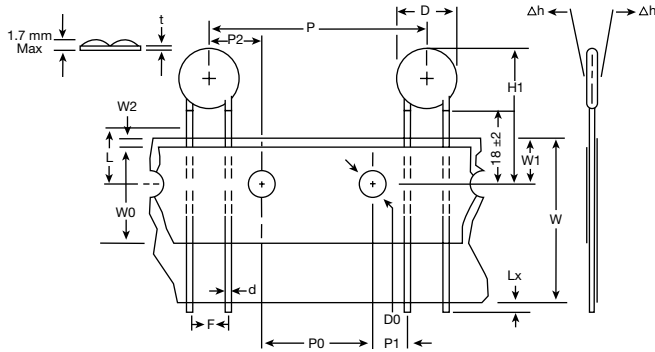
Reel Taping Codes
(T19, T18, T4, T38, T26, T1N, T16, T12)

W = Approximately 50
D = 350ømax
A = Approximately 30ø
B = Approximately 95ø

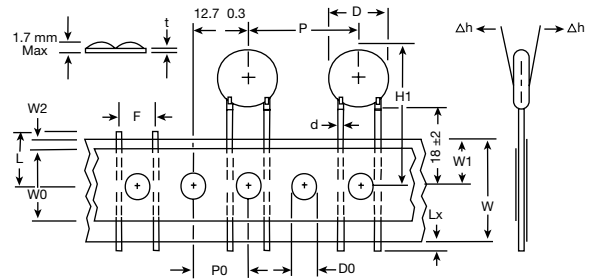
< 300VAC = 500 to 1,000 pieces
≥ 300VAC = 300 pieces

14mm Taping Specifications (continued)

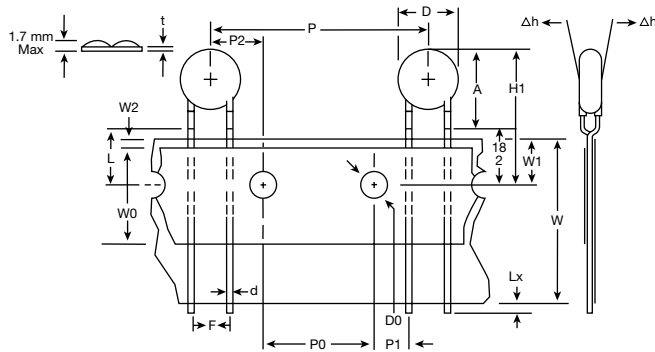
Straight Lead
T7 (Ammo Box) and T18 (Reel)
(5mm Lead Spacing)



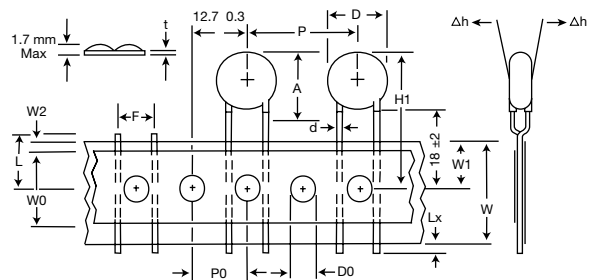
Straight Lead
T36 (Ammo Box) and T19 (Reel)
(7.5mm Lead Spacing)



In-Line Crimp
T15 (Ammo Box) and T38 (Reel)
(5mm Lead Spacing)



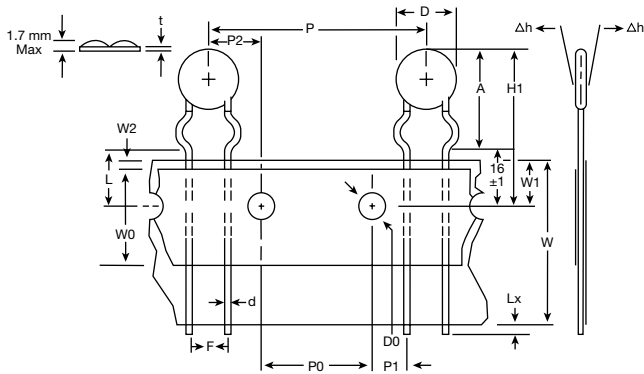
In-Line Crimp
T43 (Ammo Box) and T4 (Reel)
(7.5mm Lead Spacing)



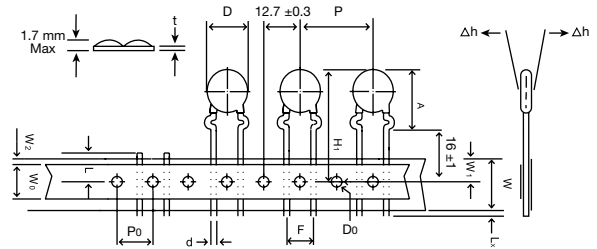
Based on EIA-468-B Specifications.

14mm Taping Specifications (continued)

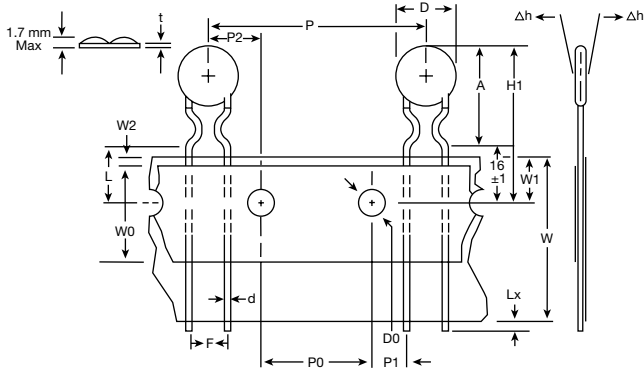
Outward Crimp
T10 (Ammo Box) and T26 (Reel)
(5mm Lead Spacing)



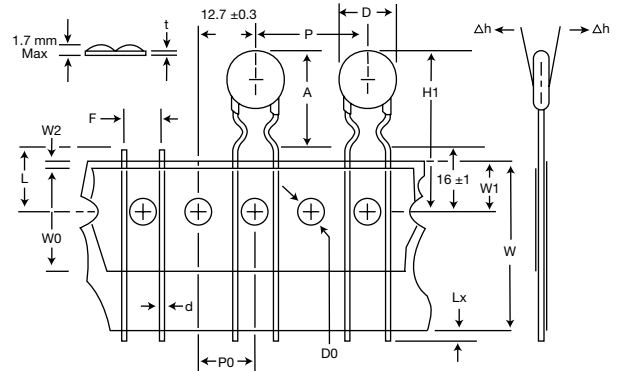
Outward Crimp
T1U (Ammo Box) and T1N (Reel)
(7.5mm Lead Spacing)



Inward Crimp
T6 (Ammo Box) and T12 (Reel)
(5mm Lead Spacing)



Inward Crimp
T8 (Ammo Box) and T16 (Reel)
(7.5mm Lead Spacing)



20mm Taping Specifications

| Item | Symbol | Straight Leads | | Outward Crimp | | Inline Crimp | | Inward Crimp | |
|---|--------|----------------|------------|---------------|------------|--------------|------------|--------------|------------|
| | | T44, T1H | T5, T30 | T1X, T45 | T50, T2X | T2, T25 | T60, T3X | T40, T4X | T35, T2D |
| Body Diameter | D | 24 max | 24 max | 24 max | 24 max | 24 max | 24 max | 24 max | 24 max |
| Lead Wire Diameter | d | 0.8 ± 0.06 | 1.0 ± 0.1 | 0.8 ± 0.06 | 1.0 ± 0.1 | 0.8 ± 0.06 | 1.0 ± 0.1 | 0.8 ± 0.06 | 1.0 ± 0.1 |
| Pitch of Component | P | 25.4 ± 1 | 25.4 ± 1 | 25.4 ± 1 | 25.4 ± 1 | 25.4 ± 1 | 25.4 ± 1 | 25.4 ± 1 | 25.4 ± 1 |
| Feed Hole Pitch | P0 | 12.7 ± 0.3 | 12.7 ± 0.3 | 12.7 ± 0.3 | 12.7 ± 0.3 | 12.7 ± 0.3 | 12.7 ± 0.3 | 12.7 ± 0.3 | 12.7 ± 0.3 |
| Lead to Lead Distance (Center to Center) | F | 7.5 ± 0.8 | 10 ± 1 | 7.5 ± 0.8 | 10 ± 1 | 7.5 ± 0.8 | 10 ± 1 | 7.5 ± 0.8 | 10 ± 1 |
| Component Alignment | Δh | 2.0 max | 2.0 max | 2.0 max | 2.0 max | 2.0 max | 2.0 max | 2.0 max | 2.0 max |
| Basepaper Tape Width | W | 18+1/-0.5 | 18+1/-0.5 | 18+1/-0.5 | 18+1/-0.5 | 18+1/-0.5 | 18+1/-0.5 | 18+1/-0.5 | 18+1/-0.5 |
| Adhesive Tape Width | W0 | 10 min | 10 min | 10 min | 10 min | 10 min | 10 min | 10 min | 10 min |
| Hole Position | W1 | 9 ± 0.5 | 9 ± 0.5 | 9 ± 0.5 | 9 ± 0.5 | 9 ± 0.5 | 9 ± 0.5 | 9 ± 0.5 | 9 ± 0.5 |
| Adhesive Tape Border | W2 | 3 max | 3 max | 3 max | 3 max | 3 max | 3 max | 3 max | 3 max |
| Component Height | H1 | 48 max | 48 max | 48 max | 48 max | 48 max | 48 max | 48 max | 48 max |
| Lead-Wire Clinch Height | H0 | 18 ± 2 | 18 ± 2 | 16 ± 1 | 16 ± 1 | 16 ± 1 | 16 ± 1 | 16 ± 1 | 16 ± 1 |
| Lead-Wire Protrusion | Lx | 1.0 max | 1.0 max | 1.0 max | 1.0 max | 1.0 max | 1.0 max | 1.0 max | 1.0 max |
| Feed Hole Diameter | D0 | 4 ± 0.2 | 4 ± 0.2 | 4 ± 0.2 | 4 ± 0.2 | 4 ± 0.2 | 4 ± 0.2 | 4 ± 0.2 | 4 ± 0.2 |
| Total Tape Thickness | t | »0.7 max | »0.7 max | »0.7 max | »0.7 max | »0.7 max | »0.7 max | »0.7 max | »0.7 max |
| Length of Clipped Lead | L | 11 max | 11 max | 11 max | 11 max | 11 max | 11 max | 11 max | 11 max |
| Component Height from Seating Plane | A | — | — | 29 max | 29 max | 31 max | 31 max | 29 max | 29 max |

All dimensions are in Millimeters.

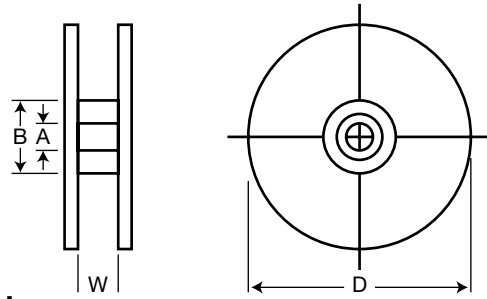
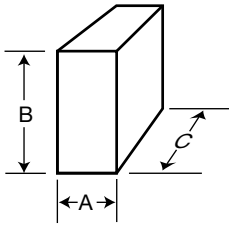
Note: Basepaper Thickness = 0.375mm ± 0.1mm (Ammo Box), 0.53mm ± 0.1mm (Reel).

Adhesive Tape Thickness = 0.16mm ± 0.03mm.

Largest voltage which can be taped is 460VAC.

For 320VAC and larger, only T2, T25, T60 or T3X is available

20mm Taping Specifications (continued)



Ammo Box

Ammo Box Taping Codes
(T44, T5, T2, T60, T45, T50, T40, T35)

A = 65 max, B = 250 max
C = 340 max

< 300VAC = 500 pieces, ≥ 300VAC = 300 pieces

Reel

Reel Taping Codes
(T1H, T30, T25, T3X, T1X, T2X, T4X, T2D)

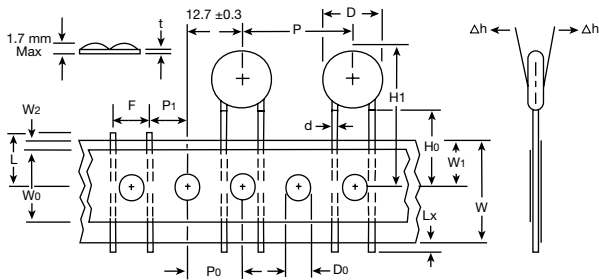
A = Approx. 30 ϕ , B = Approx. 95 ϕ
W = Approx. 50, D = 350 ϕ max

< 300VAC = 500 pieces, ≥ 300VAC = 300 pieces

All dimensions are in Millimeters.

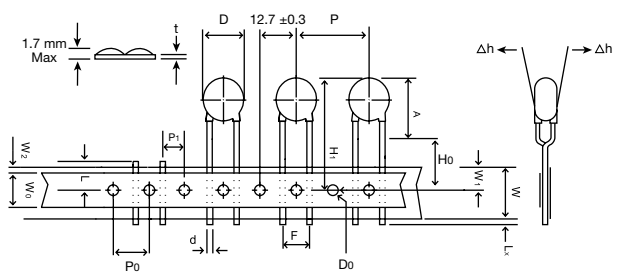
Straight Lead

T44 (Ammo Box) and T1H (Reel) (7.5mm Lead Spacing)
T5 (Ammo Box) and T30 (Reel) (10mm Lead Spacing)



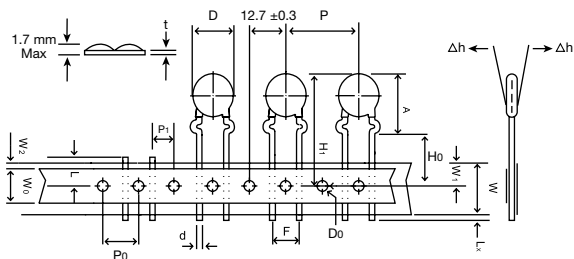
In-Line Crimp

T2 (Ammo Box) and T25 (Reel) (7.5mm Lead Spacing)
T60 (Ammo Box) and T3X (Reel) (10mm Lead Spacing)



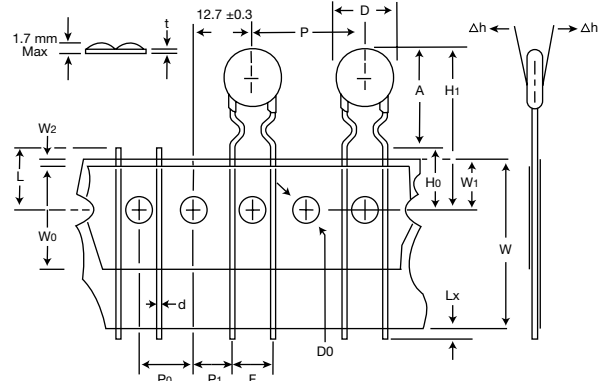
Outward Crimp

T45 (Ammo Box) and T1X (Reel) (7.5mm Lead Spacing)
T50 (Ammo Box) and T2X (Reel) (10mm Lead Spacing)



Inward Crimp

T40 (Ammo Box) and T4X (Reel) (7.5mm Lead Spacing)
T35 (Ammo Box) and T2D (Reel) (10mm Lead Spacing)



Based on EIA-468-B Specifications.

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