

LAUBE

METAL OXIDE VARISTORS

(Part Numbering, Dimension, & Packaging Specifications)

[D5 to D20 Straight Lead Dimension](#)

[32D, 40D, & 53D Dimension](#)

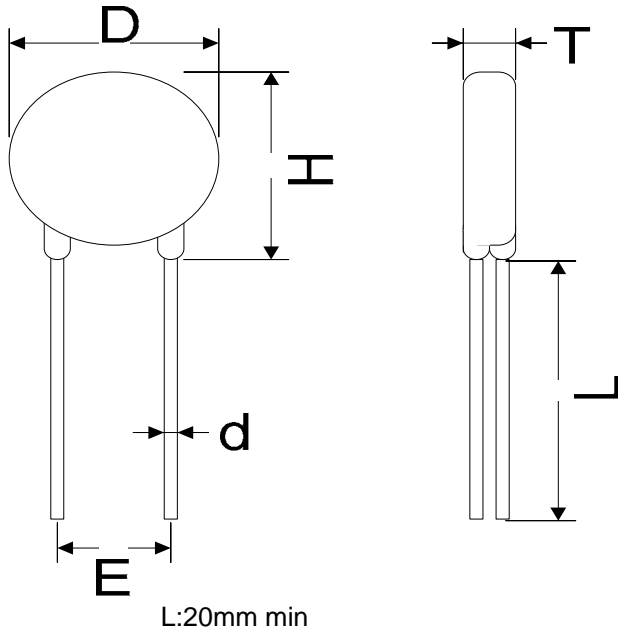
[D5 to D20 Taping Specification](#)

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D5 to D20 Straight Lead Dimension

S : Straight Lead



unit:mm

| SIZE | D max | H max | H1 max | d ±0.05 | E ±0.8 |
|------|----------|----------|-----------|------------|-----------|
| D05 | 7 | 10 | 13 | 0.6 | 5 |
| D07 | 9 | 12 | 15 | 0.6 | 5 |
| D10 | 13 | 16 | 19.5 | 0.8 | 7.5 |
| D14 | 17 | 20 | 23 | 0.8 | 7.5 |
| D20 | 23 | 27 | 30 | 0.8 | 7.5 |
| | | | | 1.0 | 10 |

*H₁ for C / I / Y lead type

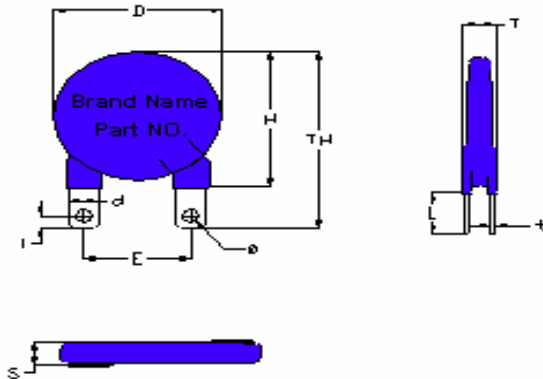
T Thickness (max.)

unit:mm

| Part Code | D05 | D07 | D10 | D14 | D20 |
|-----------|-----|-----|------|------|------|
| 182K | | | 12.5 | 12.5 | 15.6 |
| 152K | | | 11.0 | 11.0 | 13.2 |
| 112K | | | 8.5 | 8.5 | 10.1 |
| 102K | | | 8.3 | 8.3 | 9.5 |
| 911K | | | 8.1 | 8.1 | 9.0 |
| 821K | | 6.9 | 7.9 | 7.9 | 8.5 |
| 781K | | 6.7 | 7.7 | 7.7 | 8.4 |
| 751K | 6.5 | 6.5 | 7.5 | 7.5 | 8.2 |
| 681K | 6.4 | 6.4 | 7.1 | 7.1 | 7.8 |
| 621K | 6.4 | 6.4 | 7.1 | 7.1 | 7.5 |
| 561K | 6.2 | 6.2 | 6.7 | 6.7 | 7.0 |
| 511K | 5.8 | 5.8 | 6.4 | 6.4 | 6.8 |
| 471K | 5.6 | 5.6 | 6.1 | 6.1 | 6.6 |
| 431K | 5.3 | 5.3 | 5.9 | 5.9 | 6.4 |
| 391K | 5.1 | 5.1 | 5.7 | 5.7 | 6.2 |
| 361K | 5.0 | 5.0 | 5.5 | 5.5 | 6.2 |
| 331K | 4.8 | 4.8 | 5.3 | 5.3 | 5.9 |
| 301K | 4.7 | 4.7 | 5.1 | 5.1 | 5.7 |
| 271K | 4.5 | 4.5 | 5.0 | 5.0 | 5.6 |
| 251K | 4.4 | 4.4 | 4.9 | 4.9 | 5.5 |
| 241K | 4.3 | 4.3 | 4.8 | 4.8 | 5.4 |
| 221K | 4.2 | 4.2 | 4.7 | 4.7 | 5.3 |
| 201K | 4.1 | 4.1 | 4.5 | 4.5 | 5.0 |
| 181K | 4.1 | 4.1 | 4.5 | 4.5 | 5.0 |
| 151K | 4.8 | 4.8 | 5.2 | 5.2 | 5.6 |
| 121K | 4.5 | 4.5 | 4.9 | 4.9 | 5.3 |
| 101K | 4.3 | 4.3 | 4.7 | 4.7 | 5.1 |
| 820K | 4.1 | 4.1 | 4.5 | 4.5 | 4.9 |
| 680K | 4.5 | 5.2 | 5.3 | 5.3 | 5.8 |
| 560K | 4.5 | 5.0 | 5.1 | 5.1 | 5.7 |
| 470K | 4.5 | 4.9 | 5.0 | 5.0 | 5.6 |
| 390K | 4.5 | 4.8 | 4.9 | 4.9 | 5.5 |
| 330K | 4.5 | 4.9 | 5.0 | 5.0 | 5.4 |
| 270K | 4.5 | 4.7 | 4.8 | 4.8 | 5.3 |
| 220K | 4.5 | 4.6 | 4.7 | 4.7 | 5.2 |
| 180L | 4.5 | 4.5 | 4.6 | 4.6 | 5.1 |
| 120M | 4.3 | 4.3 | 4.5 | 4.5 | |
| 8R0M | 4.3 | 4.3 | | | |

32D, 40D,53D Dimension

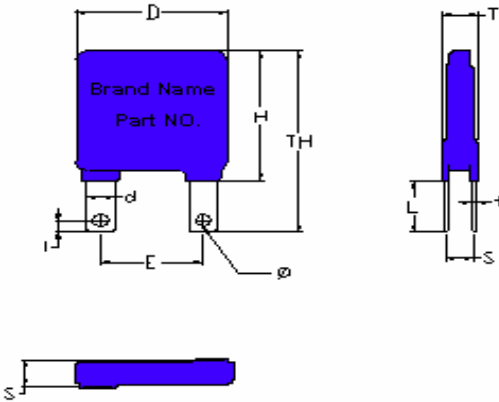
32D, 40D,53D Straight Lead Dimension



unit : mm

| SIZE | 32D | 40D | 53D |
|---------|------|------|----------|
| D max | 37.0 | 46.0 | 59.0 |
| H max | 42.0 | 51.0 | 64.0 |
| TH max | 56.2 | 60.2 | 78.1 |
| E ± 0.8 | 25.4 | 25.4 | 25.4 |
| d ± 0.2 | 7.06 | 7.06 | 9.53±0.5 |
| Ø±0.1 | 3.81 | 3.81 | 3.81 |
| t ± 0.1 | 0.5 | 0.5 | 0.5 |
| L min | 12.0 | 9.0 | 12.7 |
| l ±0.15 | 3.68 | 3.68 | 3.68 |

34S Straight Lead Dimension



unit : mm

| SIZE | 34S |
|---------|------|
| D max | 38.0 |
| H max | 42.0 |
| TH max | 55.0 |
| E ± 0.8 | 25.4 |
| d ± 0.2 | 7.06 |
| Ø±0.1 | 3.81 |
| t ± 0.1 | 0.5 |
| L min | 10.2 |
| l ±0.15 | 3.68 |

Mechanical Dimensions(32D,34S,40D,53D)

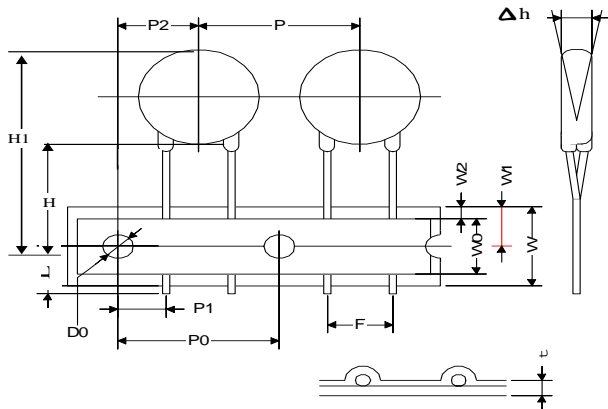
unit: mm

| Part Code | | 201K | 221K | 241K | 271K | 301K | 331K | 361K | 391K | 431K | 471K | 511K |
|-----------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Tmax | 32D/ 34D | 5.6 | 5.7 | 5.8 | 6.0 | 6.1 | 6.3 | 6.6 | 6.8 | 7.1 | 7.4 | 7.5 |
| | 53D | 6.5 | 6.8 | 7.0 | 7.1 | ---- | 7.6 | 7.9 | 8.2 | 8.6 | 8.9 | 9.2 |
| S | 32D/ 34D | 2.5±1.0 | 2.6±1.0 | 2.6±1.0 | 2.7±1.0 | 2.8±1.0 | 2.9±1.0 | 3.2±1.0 | 3.4±1.0 | 3.7±1.2 | 3.8±1.2 | 4.1±1.2 |
| | 53D | 2.9±1.2 | 3.0±1.2 | 3.2±1.2 | 3.3±1.2 | ---- | 3.4±1.2 | 4.0±1.2 | 4.6±1.2 | 4.7±1.3 | 4.8±1.3 | 4.9±1.3 |

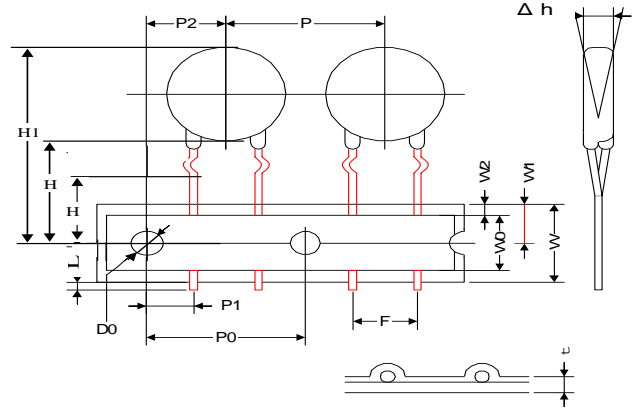
| Part Code | | 561K | 621K | 681K | 751K | 781K | 821K | 911K | 102K | 112K | 152K | 182K |
|-----------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Tmax | 32D/ 34D | 7.7 | 7.9 | 8.2 | 8.6 | 8.7 | 8.9 | 9.4 | 9.7 | 10.5 | 14.0 | 16.0 |
| | 53D | 9.6 | 9.9 | 10.1 | 10.5 | 10.8 | 11.3 | 11.7 | 12 | 12.5 | ---- | ---- |
| S | 32D/ 34D | 4.3±1.2 | 4.7±1.3 | 4.9±1.3 | 5.0±1.4 | 5.3±1.4 | 5.6±1.4 | 5.8±1.5 | 6.2±1.5 | 6.8±1.5 | 8.5±1.5 | 9.8±1.5 |
| | 53D | 5.1±1.3 | 5.4±1.4 | 5.5±1.4 | 5.8±1.4 | 5.9±1.5 | 6.1±1.5 | 6.3±1.5 | 6.5±1.5 | 7.2±1.5 | ---- | ---- |

TAPING SPECIFICATION

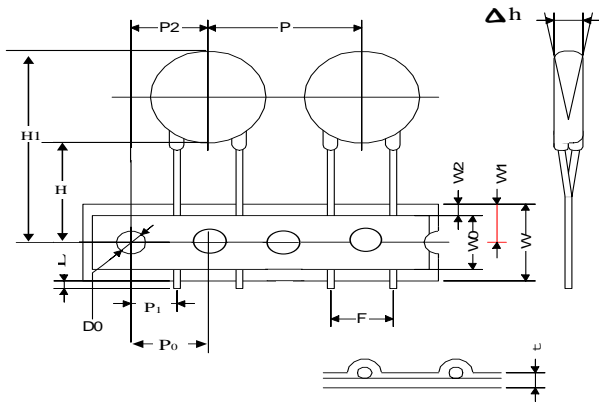
Straight Leads(5D,7D,10D)



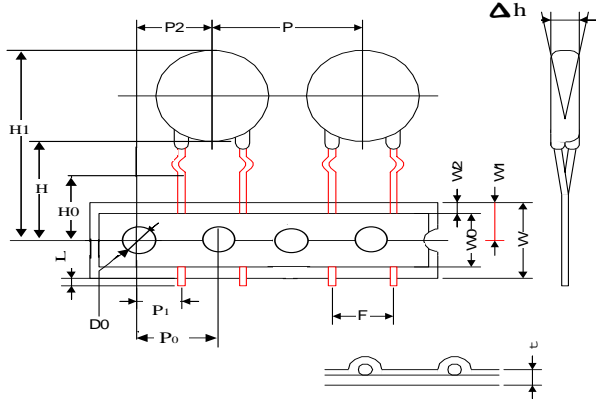
Crimped Leads(5D,7D,10D)



Straight Leads(10D,14D,20D)



Crimped Leads(10D,14D,20D)



| Symbol | Parameter | 05D | 07D | 10D | | 14D | 20D | |
|---------|--------------------------------------|----------|----------|----------|----------|----------|----------|--------|
| P | Pitch of Component | 12.7±1.0 | 12.7±1.0 | 12.7±1.0 | 25.4±1.0 | 25.4±1.0 | 25.4±1.0 | |
| P0 | Feed Hole Pitch | 12.7±0.3 | 12.7±0.3 | 12.7±0.3 | 25.4±1.0 | 25.4±1.0 | 25.4±1.0 | |
| P1 | Feed Hole Center to Lead | 3.85±0.7 | 3.85±0.7 | 3.85±0.7 | 8.95±0.7 | 8.95±0.7 | 8.95±0.7 | |
| P2 | Hole Center to Component Center | 6.35±1.3 | 6.35±1.3 | 6.35±1.3 | 12.7±1.3 | 12.7±1.3 | 12.7±1.3 | |
| F | Lead to Lead Distance | 5.0±0.5 | 5.0±0.5 | 5.0±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 | 10±0.5 |
| Δh | Component Alignment | 0±2 | 0±2 | 0±2 | 0±2 | 0±2 | 0±2 | |
| W | Tape Width | 18.0±1.0 | 18.0±1.0 | 18.0±1.0 | | 18.0±1.0 | 18.0±1.0 | |
| W0 | Hold Down Tape Width | 12.5max. | 12.5max. | 12.5max. | | 12.5max. | 12.5max. | |
| W1 | Hold Position | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | | 9.0±0.5 | 9.0±0.5 | |
| W2 | Hold Down Tape Position | 3.0max. | 3.0max. | 3.0max. | | 3.0max. | 3.0max. | |
| H | Height from Tape Center to Component | 20.0±2.0 | 20.0±2.0 | 20.0±2.0 | | 20.0±2.0 | 20.0±2.0 | |
| H1 | Component Height | 29.0max. | 32.0max. | 36.0max. | | 40.0max. | 46.5max. | |
| H0(Y,C) | Height from Tape Center to Component | 16±1 | 16±1 | 16±1 | | 16±1 | 16±1 | |
| L | Length of Clipped Lead | 1.0max. | 1.0max. | 1.0max. | | 1.0max. | 1.0max. | |
| D0 | Feed Hole Diameter | 4.0±0.2 | 4.0±0.2 | 4.0±0.2 | | 4.0±0.2 | 4.0±0.2 | |
| t | Total Tape Thickness | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | | 0.6±0.3 | 0.6±0.3 | |

PACKAGING SPECIFICATIONS

UNIT:mm

| Packing | Dimensions | Symbol | 5D | 7D | 9/10D | 14D | 18/20D | 25D | 32D | 34S | 40D | | |
|---------|-------------|-------------|-------------------|-------------|-------------|--------|--------|-----|-------------|-----|-----|--|--|
| BULK | | LP | 250 mm | | | | | | | | | | |
| | | WP | 165 mm | | | | | | | | | | |
| | | HP | 60 mm | | | | | | | | | | |
| | | Pag | 210 x 225mm | | | | | | 150 x 185mm | | | | |
| | | Carton | 350 x 250 x 200mm | | | | | | | | | | |
| AMMO | | LP | 330 mm | 335 mm | 345 mm | | | | | | | | |
| | | WP | 310 mm | 243 mm | 345 mm | | | | | | | | |
| | | HP | 50 mm | 50 mm | 65 mm | | | | | | | | |
| | | Carton | 350x270x330 | 355x260x537 | 360x360x480 | | | | | | | | |
| | | REEL | | RD | 360 mm | 340 mm | | | | | | | |
| RD1 | 30± 0.5 mm | 30± 0.5 mm | | | | | | | | | | | |
| RW | 45 mm | 51 mm | | 53 mm | | | | | | | | | |
| RW1 | 50 mm | 56 mm | | 58 mm | | | | | | | | | |
| LP | 365 mm | 345 mm | | | | | | | | | | | |
| WP | 365 mm | 345 mm | | | | | | | | | | | |
| HP | 57 mm | 65 mm | | | | | | | | | | | |
| Carton | 380x380x480 | 360x360x480 | | | | | | | | | | | |

QUANTITY PER PACKING METHOD Unit: pcs

| Series | Bulk | | | Reel | | Ammo | | |
|---------|-----------|------|--------|------|--------|------|--------|------|
| | Bag | Box | Carton | Reel | Carton | Box | Carton | |
| 5D ALL | 1000 | 2000 | 12000 | 2000 | 16000 | 2000 | 10000 | |
| 7D ALL | 1000 | 2000 | 12000 | 2000 | 16000 | 2000 | 10000 | |
| 10D ALL | 500 | 1000 | 6000 | 500 | 3500 | 500 | 5000 | |
| 14D | 120M~471K | 500 | 1000 | 6000 | 500 | 3500 | 500 | 5000 |
| | 511K~182K | 250 | 500 | 3000 | 400 | 2800 | 500 | 5000 |
| 20D | 180L~471K | 250 | 500 | 3000 | 400 | 2800 | 400 | 2800 |
| | 511K~182K | 125 | 250 | 1500 | 300 | 2100 | 300 | 2100 |
| 32D ALL | 20 | 80 | 480 | | | | | |
| 34S ALL | 15 | 60 | 360 | | | | | |
| 40D ALL | 15 | 60 | 360 | | | | | |

PLS check again with our sales dept. before place your order.

HOW TO ORDER

| Brand Mark | Varistor Voltage | Tolerance | Type | Element Diameter | Product Series | Lead Form | Packing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|--|----------------------------------|------------------------|---|--|---|----------------------------------|---|---|---|-----|-----|--|---|-------|-------|--|----|-------|-------|--|----|-------|-------|-------|----|-------|--------|--------|----|--------|--|--|----|--------|--------|--|----|--------|--------|--|--|--|
| | The first two digits are significant figures and the third one denotes the number of Zeros following. Decimal point is express by R. | K : ±10% L : ±15% M : ±20% | D : Disk S : Square | 05 ψ05 mm 07 ψ07 mm 10 ψ 10 mm 14 ψ 14 mm 20 ψ 20 mm 32 ψ 32 mm 34 S34 mm 40 ψ 40 mm | N : Standard J : J Series S : High Surge C : Low Clamping K : Low Capacitance H : Housing | S : Straight Lead C : Crimped Lead I : Inner Crimped Y : Y Kink Lead | B : Bulk A : Ammo R : Reel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | Surge Current | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | <table border="1"> <thead> <tr> <th>ψ</th> <th>N</th> <th>J</th> <th>S</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>400</td> <td>800</td> <td></td> </tr> <tr> <td>7</td> <td>1,200</td> <td>1,750</td> <td></td> </tr> <tr> <td>10</td> <td>2,500</td> <td>3,500</td> <td></td> </tr> <tr> <td>14</td> <td>4,500</td> <td>6,000</td> <td>6,500</td> </tr> <tr> <td>20</td> <td>6,500</td> <td>10,000</td> <td>15,000</td> </tr> <tr> <td>32</td> <td>25,000</td> <td></td> <td></td> </tr> <tr> <td>34</td> <td>30,000</td> <td>40,000</td> <td></td> </tr> <tr> <td>40</td> <td>30,000</td> <td>40,000</td> <td></td> </tr> </tbody> </table> | ψ | N | J | S | 5 | 400 | 800 | | 7 | 1,200 | 1,750 | | 10 | 2,500 | 3,500 | | 14 | 4,500 | 6,000 | 6,500 | 20 | 6,500 | 10,000 | 15,000 | 32 | 25,000 | | | 34 | 30,000 | 40,000 | | 40 | 30,000 | 40,000 | | | |
| ψ | N | J | S | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 400 | 800 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 1,200 | 1,750 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 2,500 | 3,500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | 4,500 | 6,000 | 6,500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 6,500 | 10,000 | 15,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32 | 25,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 34 | 30,000 | 40,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | 30,000 | 40,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

★ Low Clamping : See product list
★ Low Capacitance : See product list