

Single Layer Varistor (VC32/VC40)

AVX Single Layer Ceramic

Transient Voltage Suppression and ESD Protection Devices



GENERAL DESCRIPTION

- SMD Zinc Oxide based Ceramic Chip
- Silver Termination System
- Protective Glass Coating on Metallized Surface
- Tape and Reel Packaging (Bulk option available)

TYPICAL APPLICATIONS

This is a SMD version of the leaded disk varistors. Used typically to reduce transient phenomena in a very wide range of product/field. Some examples of the areas of application are given below :

- Telecommunications
- Automotive
- Consumer Electronics
- Industrial Applications

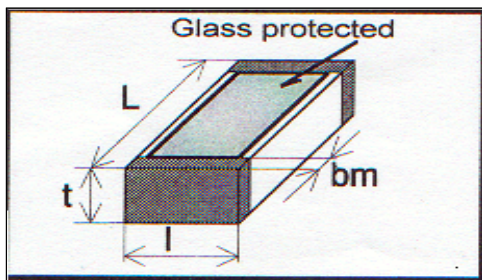


GENERAL CHARACTERISTICS

Storage Temperature: -55C to +125C

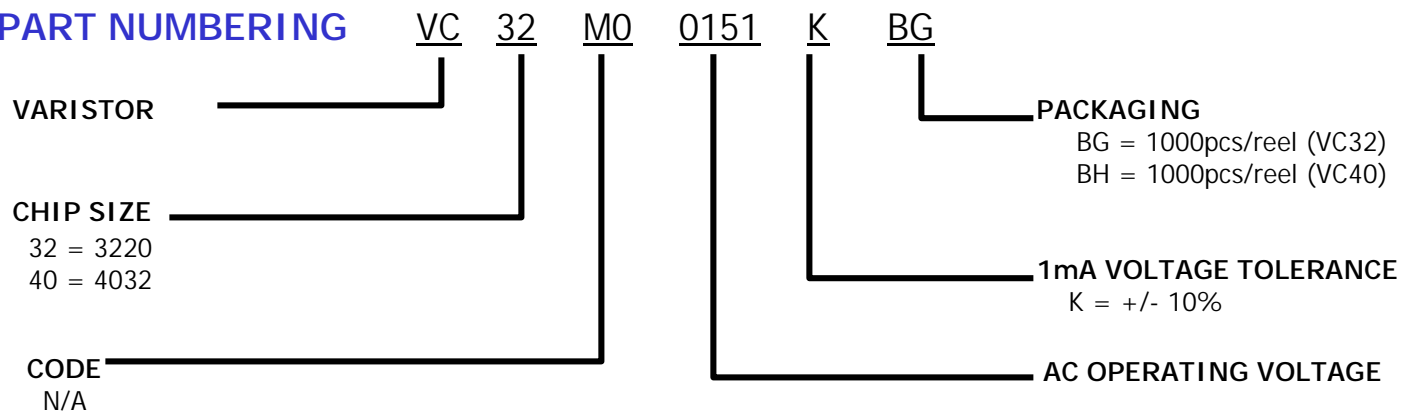
Operating Temperature: -55C to +125C

PHYSICAL DIMENSIONS



| Symbol | VC32 | | VC40 | |
|--------|----------|----------|----------|----------|
| | Min (mm) | Max (mm) | Min (mm) | Max (mm) |
| L | 7.90 | 8.51 | 9.50 | 10.50 |
| L | 4.70 | 5.26 | 7.50 | 8.50 |
| T | | 2.03 | | 3.5 |
| bm | 0.40 | 1.30 | 0.40 | 1.30 |

PART NUMBERING



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ELECTRICAL CHARACTERISTICS

| Part Number | Vnom (1mA) | Vrms | Vdc | Vclamp (8x20us) | | Max Peak Current (8x20us) | | | | | Energy (10x1000us) J | Typical Cap. pF |
|---------------|---------------|------|-----|--------------------|----|------------------------------|---------|----------|----------|--------------|----------------------------|-----------------------|
| | | | | Vp | Ip | 1 Surge | 2 Surge | 10 Surge | 20 Surge | 100 Surge | | |
| VC32M00140K-- | 22 | 14 | 18 | 47 | 5 | 100 | 50 | 25 | 20 | 12 | 0.8 | 1600 |
| VC32M00170K-- | 27 | 17 | 22 | 57 | 5 | 100 | 50 | 25 | 20 | 12 | 1 | 1300 |
| VC32M00200K-- | 33 | 20 | 26 | 68 | 5 | 100 | 50 | 25 | 20 | 12 | 1.2 | 1100 |
| VC32M00250K-- | 39 | 25 | 31 | 79 | 5 | 100 | 50 | 25 | 20 | 12 | 1.5 | 900 |
| VC32M00300K-- | 47 | 30 | 38 | 92 | 5 | 100 | 50 | 25 | 20 | 12 | 1.8 | 800 |
| VC32M00350K-- | 56 | 35 | 45 | 107 | 5 | 100 | 50 | 25 | 20 | 12 | 2.3 | 700 |
| VC32M00400K-- | 68 | 40 | 56 | 127 | 5 | 100 | 50 | 25 | 20 | 12 | 3 | 600 |
| VC32M00500K-- | 82 | 50 | 66 | 135 | 10 | 400 | 200 | 100 | 80 | 50 | 4 | 500 |
| VC32M00600K-- | 100 | 60 | 81 | 165 | 10 | 400 | 200 | 100 | 80 | 50 | 5 | 400 |
| VC32M00750K-- | 120 | 75 | 102 | 200 | 10 | 400 | 200 | 100 | 80 | 50 | 6 | 300 |
| VC32M00950K-- | 150 | 95 | 127 | 250 | 10 | 400 | 200 | 100 | 80 | 50 | 8 | 250 |
| VC32M01150K-- | 180 | 115 | 150 | 295 | 10 | 400 | 200 | 100 | 80 | 50 | 10 | 200 |
| VC32M00131K-- | 200 | 130 | 175 | 340 | 10 | 400 | 200 | 100 | 80 | 50 | 11 | 180 |
| VC32M00141K-- | 220 | 140 | 180 | 360 | 10 | 400 | 200 | 100 | 80 | 50 | 12 | 160 |
| VC32M00151K-- | 240 | 150 | 200 | 395 | 10 | 400 | 200 | 100 | 80 | 50 | 13 | 150 |
| VC32M01750K-- | 270 | 175 | 225 | 455 | 10 | 400 | 200 | 100 | 80 | 50 | 15 | 135 |
| VC32M00231K-- | 360 | 230 | 300 | 595 | 10 | 400 | 200 | 100 | 80 | 50 | 20 | 100 |
| VC32M00251K-- | 390 | 250 | 330 | 650 | 10 | 400 | 200 | 100 | 80 | 50 | 21 | 90 |
| VC32M02750K-- | 430 | 275 | 368 | 710 | 10 | 400 | 200 | 100 | 80 | 50 | 23 | 80 |
| VC32M00301K-- | 470 | 300 | 385 | 775 | 10 | 400 | 200 | 100 | 80 | 50 | 23 | 70 |
| | | | | | | | | | | | | |
| VC40M00140K-- | 22 | 14 | 18 | 43 | 5 | 250 | 125 | 64 | 50 | 40 | 0.9 | 3000 |
| VC40M00170K-- | 27 | 17 | 22 | 53 | 5 | 250 | 125 | 64 | 50 | 40 | 1.1 | 2400 |
| VC40M00200K-- | 33 | 20 | 26 | 65 | 5 | 250 | 125 | 64 | 50 | 40 | 1.3 | 1900 |
| VC40M00250K-- | 39 | 25 | 31 | 77 | 5 | 250 | 125 | 64 | 50 | 40 | 1.6 | 1500 |
| VC40M00300K-- | 47 | 30 | 38 | 93 | 5 | 250 | 125 | 64 | 50 | 40 | 2 | 1300 |
| VC40M00350K-- | 56 | 35 | 45 | 110 | 5 | 250 | 125 | 64 | 50 | 40 | 2.5 | 1000 |
| VC40M00400K-- | 68 | 40 | 56 | 135 | 5 | 250 | 125 | 64 | 50 | 40 | 3.2 | 850 |
| VC40M00500K-- | 82 | 50 | 66 | 135 | 10 | 1200 | 600 | 300 | 240 | 120 | 4.2 | 700 |
| VC40M00600K-- | 100 | 60 | 81 | 165 | 10 | 1200 | 600 | 300 | 240 | 120 | 5.5 | 530 |
| VC40M00750K-- | 120 | 75 | 102 | 200 | 10 | 1200 | 600 | 300 | 240 | 120 | 6.5 | 500 |
| VC40M00950K-- | 150 | 95 | 127 | 250 | 10 | 1200 | 600 | 300 | 240 | 120 | 8.8 | 450 |
| VC40M01150K-- | 180 | 115 | 150 | 300 | 10 | 1200 | 600 | 300 | 240 | 120 | 11 | 320 |
| VC40M00131K-- | 200 | 130 | 175 | 340 | 10 | 1200 | 600 | 300 | 240 | 120 | 12 | 250 |
| VC40M00141K-- | 220 | 140 | 180 | 360 | 10 | 1200 | 600 | 300 | 240 | 120 | 13 | 240 |
| VC40M00151K-- | 240 | 150 | 200 | 395 | 10 | 1200 | 600 | 300 | 240 | 120 | 14 | 220 |
| VC40M01750K-- | 270 | 175 | 225 | 455 | 10 | 1200 | 600 | 300 | 240 | 120 | 16 | 200 |
| VC40M00231K-- | 360 | 230 | 300 | 595 | 10 | 1200 | 600 | 300 | 240 | 120 | 22 | 170 |
| VC40M00251K-- | 390 | 250 | 330 | 650 | 10 | 1200 | 600 | 300 | 240 | 120 | 23 | 160 |
| VC40M02750K-- | 430 | 275 | 368 | 710 | 10 | 1200 | 600 | 300 | 240 | 120 | 25 | 150 |
| VC40M00301K-- | 470 | 300 | 385 | 775 | 10 | 1200 | 600 | 300 | 240 | 120 | 25 | 140 |



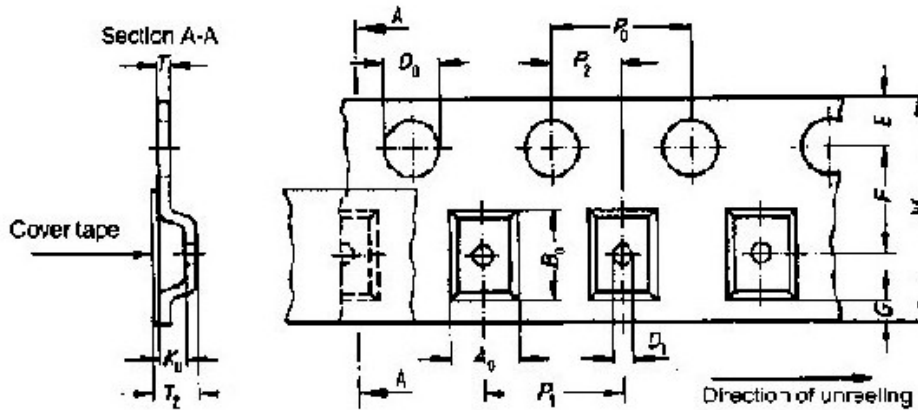
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TAPING SPECIFICATION



| Dimensions | 16mm | | Tolerance |
|------------------|-----------|------------|-----------------|
| | VC32 | VC40 | |
| $A_0 \times B_0$ | 5,3 x 8,7 | 8,6 x 10,6 | $\pm 0,50$ |
| K_0 | 2,50 | 5,00 | max. |
| T_2 | | | |
| T | 0,30 | 0,30 | $\pm 0,10$ |
| D_0 | 1,50 | 1,50 | +0,10/-0 |
| D_1 | | | |
| P_0 | 4,00 | 4,00 | $\pm 0,10^{1)}$ |
| P_2 | 2,00 | 2,00 | $\pm 0,10$ |
| P_1 | 8,00 | 12,00 | $\pm 0,10$ |
| W | 16,00 | 16,00 | $\pm 0,30$ |
| E | 1,75 | 1,75 | $\pm 0,10$ |
| F | 7,50 | 7,50 | $\pm 0,10$ |
| G | | | |

1) $\leq \pm 0.2$ mm over 10 sprocket holes



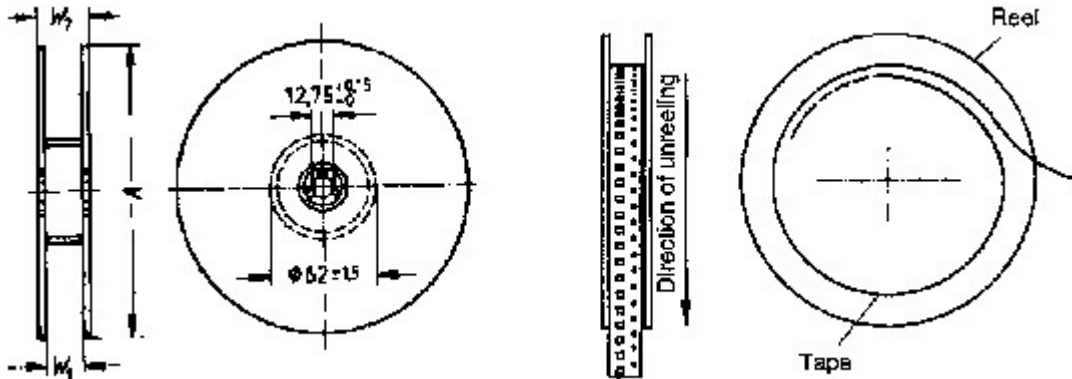
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REEL SPECIFICATION



| | |
|----------------|-------------------------|
| A (mm) | 330 ₋₂ |
| W ₁ | 16.4 _{+1.5/-0} |
| W ₂ | 22.4 |

Note: 1000 pieces per reel for both VC32 and VC40

