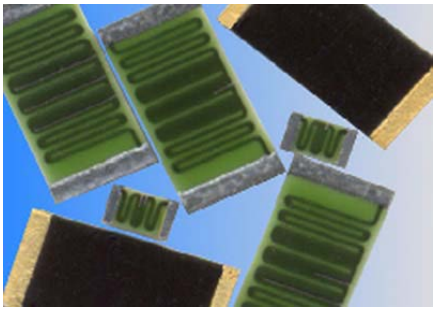
Features:

- Absolute voltage ratings up to 40,000 volts
- Ohmic values to 50G
- Available with wire bondable terminations
- Tight tolerances to 0.1%
- Utilizes fine film resistor deposition technology
- Superior pulse handling capabilities
- Low TCR to 25 ppm/ºC
- Low VCR to 1 ppm/volt
- Very low noise
- Ultra high stability
- Custom sizes available
- Higher or lower resistance values may be available (contact factory)
- Standard HVC parts are unmarked
- RoHS compliant / lead-free

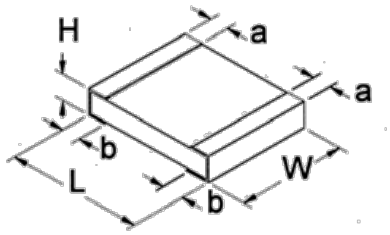


## Electrical Specifications

| Type / Code | Power Rating (Watts) @ 70ºC | Maximum Working Voltage (1) | Absolute Maximum Voltage (2) | Resistane Temperature Coefficient | Ohmic Range (Ω) and Tolerance | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 0.1% | 0.25% | 0.5% | 1% | 2% | 5% | 10% | 20% |
| HVC0603 | 0.06W | 400V | 5KV | ± 50 ppm/ºC<br>± 100 ppm/ºC<br>± 200 ppm/ºC | - | | 10K - 10M | 10K - 100M<br>10K - 500M | 10K - 500M<br>10K - 1G | | 10K - 1G<br>10K - 10G | 10K - 50G |
| HVC0805 | 0.2W | 600V | 10KV | ± 50 ppm/ºC<br>± 100 ppm/ºC<br>± 200 ppm/ºC | - | | 10K - 10M | 10K - 500M<br>10K - 1G | | 10K - 500M<br>10K - 1G | 10K - 1G<br>10K - 10G | 10K - 50G |
| HVC1206 | 0.33 | 1500V | 15KV | ± 25 ppm/ºC<br>± 50 ppm/ºC<br>± 100 ppm/ºC<br>± 200 ppm/ºC | 1M - 10M<br>100K - 10M<br>10K - 10M | 1M - 100M<br>100K - 100M<br>10K - 100M | 100K - 500M<br>10K - 500M | 10K - 1G | 10K - 1G<br>10K - 10G | | 10K - 50G | |
| HVC2010 | 1W | 2000V | 20KV | ± 25 ppm/ºC<br>± 50 ppm/ºC<br>± 100 ppm/ºC<br>± 200 ppm/ºC | 1M - 10M<br>100K - 10M<br>10K - 10M | 1M - 100M<br>100K - 100M<br>10K - 100M | 100K - 500M<br>10K - 500M | 10K - 1G | 10K - 1G<br>10K - 10G | | 10K - 50G | |
| HVC2512 | 2W | 3000V | 25KV | ± 25 ppm/ºC<br>± 50 ppm/ºC<br>± 100 ppm/ºC<br>± 200 ppm/ºC | 1M - 100M<br>100K - 100M<br>10K - 100M | 1M - 500M<br>100K - 500M<br>10K - 500M | 100K - 1G<br>10K - 1G | 10K - 10G | | | 100K - 10G<br>100K - 50G | |
| HVC3512 | 3W | 3500V | 40KV | ± 25 ppm/ºC<br>± 50 ppm/ºC<br>± 100 ppm/ºC<br>± 200 ppm/ºC | 1M - 100M<br>100K - 100M<br>10K - 100M | 1M - 500M<br>100K - 500M<br>10K - 500M | 100K - 1G<br>10K - 1G | 10K - 10G | | | 100K - 10G<br>100K - 50G | |

(1) The continuous maximum voltage applied cannot exceed the maximum power rating and is ohmic value dependent.
(2) To achieve, the terminals must be properly isolated from each other with appropriate potting material.
Note: Other case sizes and tolerances are available.

## Mechanical Specifications



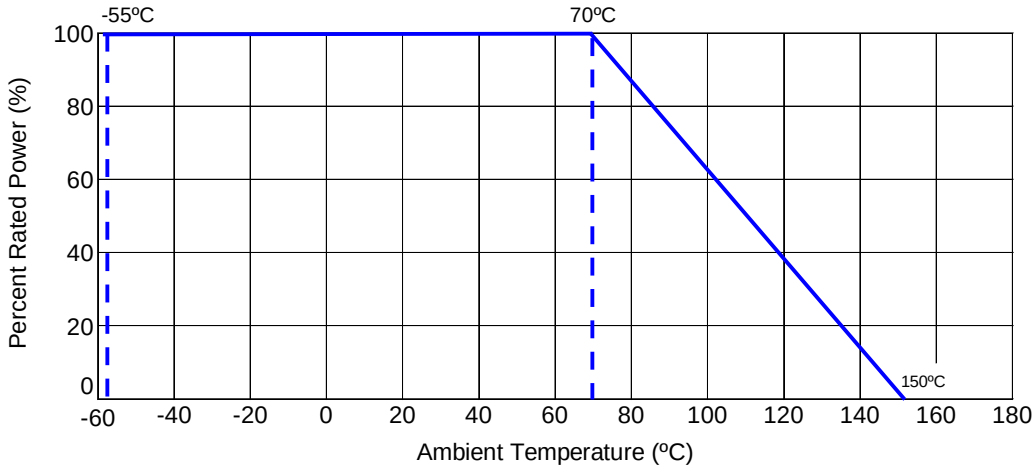

| Type / Code | L<br>Body Length | W<br>Body Width | H<br>Body Height (Max.) | a<br>Top Termination | b<br>Bottom Termination | Unit |
|---|---|---|---|---|---|---|
| HVC0603 | 0.063 + 0.01 / -0.005<br>1.60 + 0.25 / -0.13 | 0.031 ± 0.005<br>0.79 ± 0.13 | 0.020<br>0.51 | 0.010 ± 0.005<br>0.25 ± 0.13 | 0.012 ± 0.008<br>0.30 ± 0.20 | inches<br>mm |
| HVC0805 | 0.079 + 0.01 / -0.005<br>2.01 + 0.25 / -0.13 | 0.050 ± 0.005<br>1.27 ± 0.13 | 0.025<br>0.64 | 0.010 ± 0.005<br>0.25 ± 0.13 | 0.013 ± 0.008<br>0.33 ± 0.20 | inches<br>mm |
| HVC1206 | 0.126 + 0.01 / -0.005<br>3.20 + 0.25 / -0.13 | 0.063 ± 0.005<br>1.60 ± 0.13 | 0.030<br>0.76 | 0.010 ± 0.005<br>0.25 ± 0.13 | 0.020 ± 0.010<br>0.51 ± 0.25 | inches<br>mm |
| HVC2010 | 0.200 + 0.01 / -0.005<br>5.08 + 0.25 / -0.13 | 0.100 ± 0.005<br>2.54 ± 0.13 | 0.030<br>0.76 | 0.018 ± 0.010<br>0.46 ± 0.25 | 0.020 ± 0.010<br>0.51 ± 0.25 | inches<br>mm |
| HVC2512 | 0.250 + 0.01 / -0.005<br>6.35 + 0.25 / -0.13 | 0.125 ± 0.005<br>3.18 ± 0.13 | 0.030<br>0.76 | 0.020 ± 0.010<br>0.51 ± 0.25 | 0.024 ± 0.010<br>0.61 ± 0.25 | inches<br>mm |
| HVC3512 | 0.350 + 0.01 / -0.005<br>8.89 + 0.25 / -0.13 | 0.125 ± 0.005<br>3.18 ± 0.13 | 0.030<br>0.76 | 0.020 ± 0.010<br>0.51 ± 0.25 | 0.024 ± 0.010<br>0.61 ± 0.25 | inches<br>mm |

## Performance Characteristics

| Test | Test Method | Acceptable Parameter |
|---|---|---|
| Load Life | MIL-STD-202G<br>Method 108A<br>Test Condition D | ΔR = 2% |
| Temperature Cycle (Thermal Shock) | MIL-STD-202G<br>Method 107G<br>Test Condition A | ΔR = 0.02% |
| Resistance to Soldering Heat | IPC/EIA J-STD-002A<br>Paragraph 4.2.4 | IPC/EIA J-STD-002A<br>Paragraph 4.2.4.4 |
| Solderability | IPC/EIA J-STD-002A<br>Paragraph 4.2.2 | IPC/EIA J-STD-002A<br>Paragraph 4.2.2.4.2 |
| Short Time Overload | MIL-PRF-55342H<br>Pg. 32, Paragraph 4.8.6 | MIL-PRF-55342H<br>Pg 11, Paragraph 3.12 |

Operating Temperature Range: -55ºC to +150ºC

Power Derating Curve:




## How to Order

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **H** | **V** | **C** | **B** | **2** | **5** | **1** | **2** | **F** | **K** | **C** | **1** | **0** | **M** | **0** |

| Product Series | |
|---|---|
| HVCB | Solderable wraparound (100% matte tin) |
| HVCG | Wire bondable (gold) |
| HVCS | Solderable single surface (Sn/Pb) |
| HVCZ | Solderable single surface (100% matte tin) |

| Size | Power |
|---|---|
| 0603 | 0.06W |
| 0805 | 0.2W |
| 1206 | 0.33W |
| 2010 | 1W |
| 2512 | 2W |
| 3512 | 3W |

| Tolerance | |
|---|---|
| Code | Tol |
| B | 0.1% |
| C | 0.25% |
| D | 0.5% |
| F | 1% |
| G | 2% |
| J | 5% |
| K | 10% |
| M | 20% |

| Packaging | | | |
|---|---|---|---|
| Code | Description | Size | Quantity |
| T | 7" Reel - Paper Tape | 0603, 0805 | 5,000 |
| | 7" Reel - Plastic Tape | 1206, 2010 | 4,000 |
| | | 2512 | 2,000 |
| K | 7" Reel - Paper Tape | 0603, 0805, 1206 | 1,000 |
| | 7" Reel - Plastic Tape | 2010, 2512, 3512 | |
| D | 7" Reel - Paper Tape | 0603, 0805, 1206 | 500 |
| | 7" Reel - Plastic Tape | 2010, 2512, 3512 | |
| B | Bulk | All Sizes | 1,000 |

| TCR | |
|---|---|
| Code | ppm |
| E | 25 |
| C | 50 |
| D | 100 |
| L | 200 |
| M | 300 |

| Resistance Value |
|---|
| Four characters with the multiplier used as the decimal holder. |
| 10 Kohm = 10K0<br>1 Mohm = 1M00<br>10 Gohm = 10G0 |