

|                                                                                                                      |  |  |  |  |  |                |                        |             |             |
|----------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|----------------|------------------------|-------------|-------------|
|  <b>FUZETEC TECHNOLOGY CO., LTD.</b> |  |  |  |  |  | <b>NO.</b>     | <b>FMOV05-H Series</b> |             |             |
| <b>Product Specification and Approval Sheet</b>                                                                      |  |  |  |  |  | <b>Version</b> | <b>P1</b>              | <b>Page</b> | <b>1/14</b> |

## MOV Varistor Device: FMOV05-H Series (Preliminary)

### 1. Device Ratings and Characteristics

| Part Number | Maximum Continuous Voltage |       | Varistor Voltage (@1mA) |      |      | Maximum Clamping Voltage @Test Current (@8/20μs) |       | Maximum Energy (@10/1000μs) | Maximum Peak Current (@8/20μs) | Rated Power | Typical Capacitance (@1KHz) |
|-------------|----------------------------|-------|-------------------------|------|------|--------------------------------------------------|-------|-----------------------------|--------------------------------|-------------|-----------------------------|
|             | ACrms(V)                   | DC(V) | Vn(Vdc)                 | Min. | Max. | Vc(V)                                            | Ip(A) | (J)                         | (A)                            | (W)         | (pF)                        |
| FMOV05180-H | 11                         | 14    | 18                      | 16   | 20   | 36                                               | 1     | 0.9                         | 300                            | 0.02        | 1480                        |
| FMOV05220-H | 14                         | 18    | 22                      | 20   | 24   | 43                                               | 1     | 1.1                         | 300                            | 0.02        | 1320                        |
| FMOV05270-H | 17                         | 22    | 27                      | 24   | 30   | 53                                               | 1     | 1.4                         | 300                            | 0.02        | 1030                        |
| FMOV05330-H | 20                         | 26    | 33                      | 30   | 36   | 65                                               | 1     | 1.7                         | 300                            | 0.02        | 760                         |
| FMOV05390-H | 25                         | 31    | 39                      | 35   | 43   | 77                                               | 1     | 2.1                         | 300                            | 0.02        | 720                         |
| FMOV05470-H | 30                         | 38    | 47                      | 42   | 52   | 93                                               | 1     | 2.5                         | 300                            | 0.02        | 620                         |
| FMOV05560-H | 35                         | 45    | 56                      | 50   | 62   | 110                                              | 1     | 3.1                         | 300                            | 0.02        | 515                         |
| FMOV05680-H | 40                         | 56    | 68                      | 61   | 75   | 135                                              | 1     | 3.6                         | 300                            | 0.02        | 450                         |
| FMOV05201-H | 130                        | 170   | 200                     | 180  | 220  | 340                                              | 10    | 13                          | 1200                           | 0.05        | 100                         |
| FMOV05221-H | 140                        | 180   | 220                     | 198  | 242  | 360                                              | 10    | 14                          | 1200                           | 0.25        | 100                         |
| FMOV05241-H | 150                        | 200   | 240                     | 216  | 264  | 395                                              | 10    | 15                          | 1200                           | 0.25        | 95                          |
| FMOV05271-H | 175                        | 225   | 270                     | 243  | 297  | 455                                              | 10    | 18                          | 1200                           | 0.25        | 95                          |
| FMOV05301-H | 195                        | 250   | 300                     | 270  | 330  | 500                                              | 10    | 19                          | 1200                           | 0.25        | 90                          |
| FMOV05331-H | 215                        | 275   | 330                     | 297  | 363  | 550                                              | 10    | 21                          | 1200                           | 0.25        | 90                          |
| FMOV05361-H | 230                        | 300   | 360                     | 324  | 396  | 595                                              | 10    | 23                          | 1200                           | 0.25        | 85                          |
| FMOV05391-H | 250                        | 320   | 390                     | 351  | 429  | 650                                              | 10    | 25                          | 1200                           | 0.25        | 80                          |
| FMOV05431-H | 275                        | 350   | 430                     | 387  | 473  | 710                                              | 10    | 28                          | 1200                           | 0.25        | 75                          |
| FMOV05471-H | 300                        | 385   | 470                     | 423  | 517  | 775                                              | 10    | 30                          | 1200                           | 0.25        | 70                          |
| FMOV05511-H | 320                        | 420   | 510                     | 459  | 561  | 845                                              | 10    | 30                          | 1200                           | 0.25        | 65                          |
| FMOV05561-H | 350                        | 460   | 560                     | 504  | 616  | 915                                              | 10    | 30                          | 1200                           | 0.25        | 60                          |
| FMOV05621-H | 395                        | 510   | 620                     | 558  | 682  | 1020                                             | 10    | 30                          | 1200                           | 0.25        | 55                          |
| FMOV05681-H | 420                        | 560   | 680                     | 612  | 748  | 1120                                             | 10    | 30                          | 1200                           | 0.25        | 50                          |
| FMOV05751-H | 465                        | 615   | 750                     | 675  | 825  | 1235                                             | 10    | 33                          | 1200                           | 0.25        | 40                          |

NOTE : Specification subject to change without notice.

2022/7/8

|                                                                                                                       |                |                        |             |             |
|-----------------------------------------------------------------------------------------------------------------------|----------------|------------------------|-------------|-------------|
|  <b>FUZETEC TECHNOLOGY CO., LTD.</b> | <b>NO.</b>     | <b>FMOV05-H Series</b> |             |             |
| <b>Product Specification and Approval Sheet</b>                                                                       | <b>Version</b> | <b>P1</b>              | <b>Page</b> | <b>2/14</b> |

## 2. Agency Approvals

| Agency                                                                            | Agency Approvals                                                                                                                                                       | Certificate No. |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
|  | UL1449 4 <sup>th</sup> & cUL                                                                                                                                           | In Process      |
|  | IEC 61051-1:2007<br>IEC 61051-2:1991<br>IEC 61051-2:1991/AMD1:2009<br>IEC 61051-2-2:1991<br>IEC 62368-1:2018/G.8.1<br>IEC 60950-1:2005/AMD1:2009/AMD2:2013,<br>Annex Q | In Process      |

|                                                                                                                      |                |                        |             |             |
|----------------------------------------------------------------------------------------------------------------------|----------------|------------------------|-------------|-------------|
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| <b>Product Specification and Approval Sheet</b>                                                                      | <b>Version</b> | <b>P1</b>              | <b>Page</b> | <b>3/14</b> |

### 3. Reliability

| Characteristics                         | Standard                                                                                           | Test Conditions                                                                                                                                                        | Specifications                                                                                                                               |
|-----------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Robustness of terminations              | IEC 60068-2-21<br>Test Ua1                                                                         | F = 10 N (d ≤ 0.8 mm) , F = 20 N ( d = 1 mm)                                                                                                                           | $\Delta V_{1mA} / V_{1mA} \leq \pm 10\%$<br>No visible damage                                                                                |
| Solderability                           | IEC 60068-2-20<br>Test Ta (Method 1)                                                               | T = 235±5°C, d = 2±0.5s                                                                                                                                                | Approximately ≥ 95%                                                                                                                          |
| Resistance to soldering heat            | IEC 60068-2-20<br>Test Tb (Method 1A)                                                              | T = 260±5°C, d = 10±1s                                                                                                                                                 | $\Delta V_{1mA} / V_{1mA} \leq \pm 5\%$<br>No visible damage                                                                                 |
| Shock                                   | IEC 60068-2-27<br>Test Ea                                                                          | Pulse shape: half-sine. a = 490 m/s <sup>2</sup> ,<br>d = 11ms. N = 6 x 3 shocks                                                                                       | $\Delta V_{1mA} / V_{1mA} \leq \pm 5\%$<br>No visible damage                                                                                 |
| Vibration                               | IEC 60068-2-6<br>Test Fc Method B4                                                                 | Frequency range: 10 Hz to 55 Hz ,a = 0.75 mm<br>or 98 m/s <sup>2</sup> (whichever is the less), d = 3x2 h                                                              | $\Delta V_{1mA} / V_{1mA} \leq \pm 5\%$<br>No visible damage                                                                                 |
| Needle flame test                       | IEC 60695-11-5                                                                                     | Severity: Vertical 10 s                                                                                                                                                | Duration of burning:<br>5 s max.                                                                                                             |
| Voltage under pulse condition           | IEC 61051-2                                                                                        | At class current, 8/20 μs,                                                                                                                                             | As specified in specification                                                                                                                |
| Voltage proof                           | IEC 61051-2                                                                                        | Metal balls method (4.8.1.2) 2500 V, 60 s                                                                                                                              | No breakdown or flashover                                                                                                                    |
| Pulse current<br>- 8/20 μs              | IEC 61051-2                                                                                        | 8/20 μs, 10 times, I <sub>peak</sub> =0.25*I <sub>max</sub>                                                                                                            | $\Delta V/V \leq \pm 10\%$<br>No visible damage                                                                                              |
| Pulse current<br>- 10/1000 μs           | IEC 61051-2                                                                                        | 10/1000 μs, 10 times, I <sub>peak</sub> = 0.0075* I <sub>max</sub>                                                                                                     | $\Delta V_{1mA} / V_{1mA} \leq \pm 10\%$<br>No visible damage                                                                                |
| Combination pulse                       | IEC 62368-1                                                                                        | Additional test:<br>10 pulses (combination pulse 6KV/3KA),<br>in one direction, 1 per min                                                                              | $\Delta V_{1mA} / V_{1mA} \leq \pm 10\%$<br>No visible damage<br>U ≤ 1.1 U <sub>initial</sub><br>Voltage proof:<br>No breakdown or flashover |
| Rapid change of temperature             | IEC 60068-2-14<br>Test Na                                                                          | N = 5 cycles, d = 30 min , θA = -40±3°C,<br>θB = 85±2°C                                                                                                                | $\Delta V_{1mA} / V_{1mA} \leq \pm 10\%$<br>No visible damage                                                                                |
| Climatic sequence                       | IEC 60068-2-2 Test Ba<br>IEC 60068-2-30 Test Db<br>IEC 60068-2-1 Test Aa<br>IEC 60068-2-30 Test Db | Dry heat, Test Ba:16±2h, T = 85±2°C<br>Damp heat, Test Db first cycle :24h, T = 55±2°C<br>Cold, Test Aa :2h, T = -40±3°C<br>Damp heat Test Ba remaining cycles:5 cycle | $\Delta V_{1mA} / V_{1mA} \leq \pm 10\%$<br>No visible damage<br>R <sub>ISO</sub> ≥ 100MΩ<br>Voltage proof:<br>No breakdown or flashover     |
| Endurance at upper category temperature | IEC 61051-1 (4.21)                                                                                 | T: max temperature as specified ,<br>Duration: 1000 h, Voltage: max. a. c. voltage                                                                                     | $\Delta V/V \leq \pm 10\%$<br>No visible damage<br>R <sub>ISO</sub> ≥ 1000MΩ<br>U ≤ 1,1 U <sub>initial</sub>                                 |

**NOTE : Specification subject to change without notice.**

|                                                                                                                      |                |                        |             |             |
|----------------------------------------------------------------------------------------------------------------------|----------------|------------------------|-------------|-------------|
|  <b>FUZETEC TECHNOLOGY CO., LTD.</b> | <b>NO.</b>     | <b>FMOV05-H Series</b> |             |             |
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| Characteristics                       | Standard                  | Test Conditions                                                                                                                                        | Specifications                                                      |
|---------------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Damp heat<br>(Steady state)           | IEC 60068-2-78<br>Test Ca | T = 40±2°C, RH = 93(+2/-3)%, 56d ,<br>4 specimens: No voltage applied ,Other 4<br>specimens:<br>Applied voltage: 10% of the max. d. c. voltage         | $\Delta V_{1mA}/V_{1mA} \leq \pm 10\%$<br>$R_{iso} \geq 100M\Omega$ |
| Maximum Peak<br>Current               | Specification Standard    | I <sub>max</sub> , 8/20 μs, 1 time.                                                                                                                    | $\Delta V_{1mA}/V_{1mA} \leq \pm 10\%$<br>No visible damage         |
| Nominal Discharge<br>Current Test     | UL1449 4th                | I <sub>n</sub> , 8/20 μs, 15 times, Interval 60s                                                                                                       | $\Delta V/V \leq \pm 10\%$<br>No visible damage                     |
| Varistor Voltage<br>Temp. Coefficient | Specification Standard    | $\frac{V_{mAat\ 85^{\circ}C} - V_{mAat\ 25^{\circ}C}}{V_{mAat\ 25^{\circ}C}} \times \frac{1}{60} \times 100(\%/^{\circ}C)$                             | $0.05 \leq TC \leq 0.05(\%/^{\circ}C)$                              |
| High Temperature<br>Storage           | IEC60068-2-2              | 1000h, T = 125±2°C                                                                                                                                     | $\Delta V/V \leq \pm 5\%$<br>No visible damage                      |
| Max. Energy                           | Specification Standard    | 10/1000 μs, 1 times, Max. Energy                                                                                                                       | $\Delta V/V \leq \pm 10\%$<br>No visible damage                     |
| Operating duty cycle<br>test *        | UL1449                    | 6 kV/3 kA combination wave surges,<br>phase angle of 90 (+0, -15) degrees, positive<br>polarity 8times, negative polarity 7 times,<br>interval of 60s. | $\Delta V/V \leq \pm 10\%$<br>No visible damage                     |
| Surge Immunity<br>Test *              | IEC 61000-4-5             | 4kV/2kA combination wave surges,<br>phase angle of 90 (+0, -15) degrees, positive<br>polarity 20times, negative polarity 20times,<br>interval of 60s.  | $\Delta V/V \leq \pm 10\%$<br>No visible damage                     |

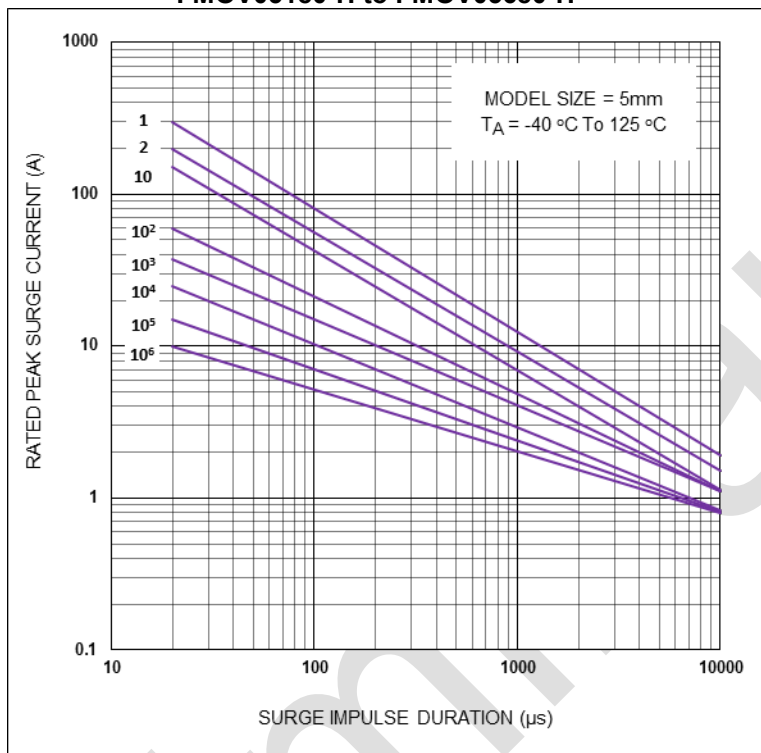
\* (According to customer requirements to meet the test items)



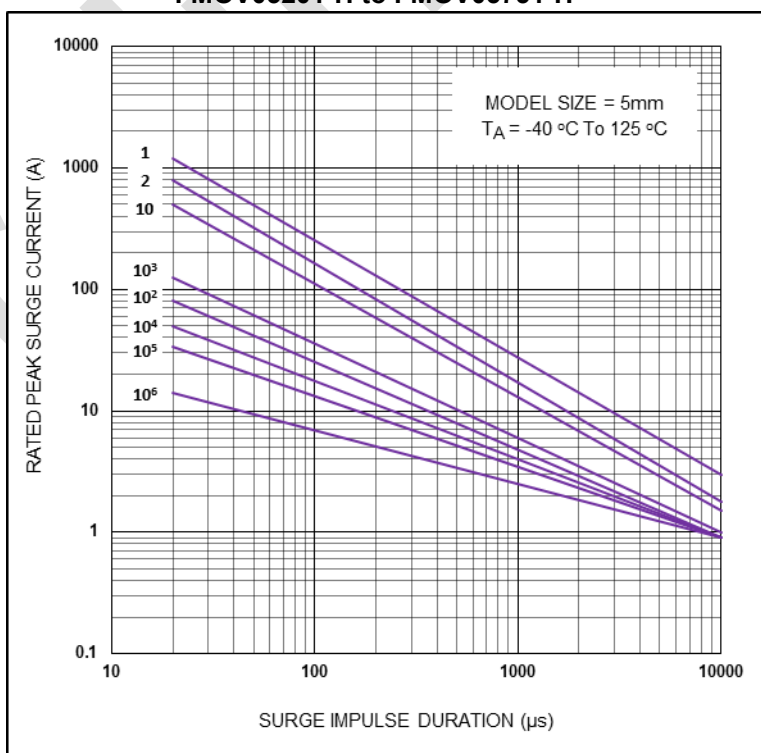
## 4. Impulse Life Time Rating Curves

### FMOV05-H Series

FMOV05180-H to FMOV05680-H



FMOV05201-H to FMOV05751-H

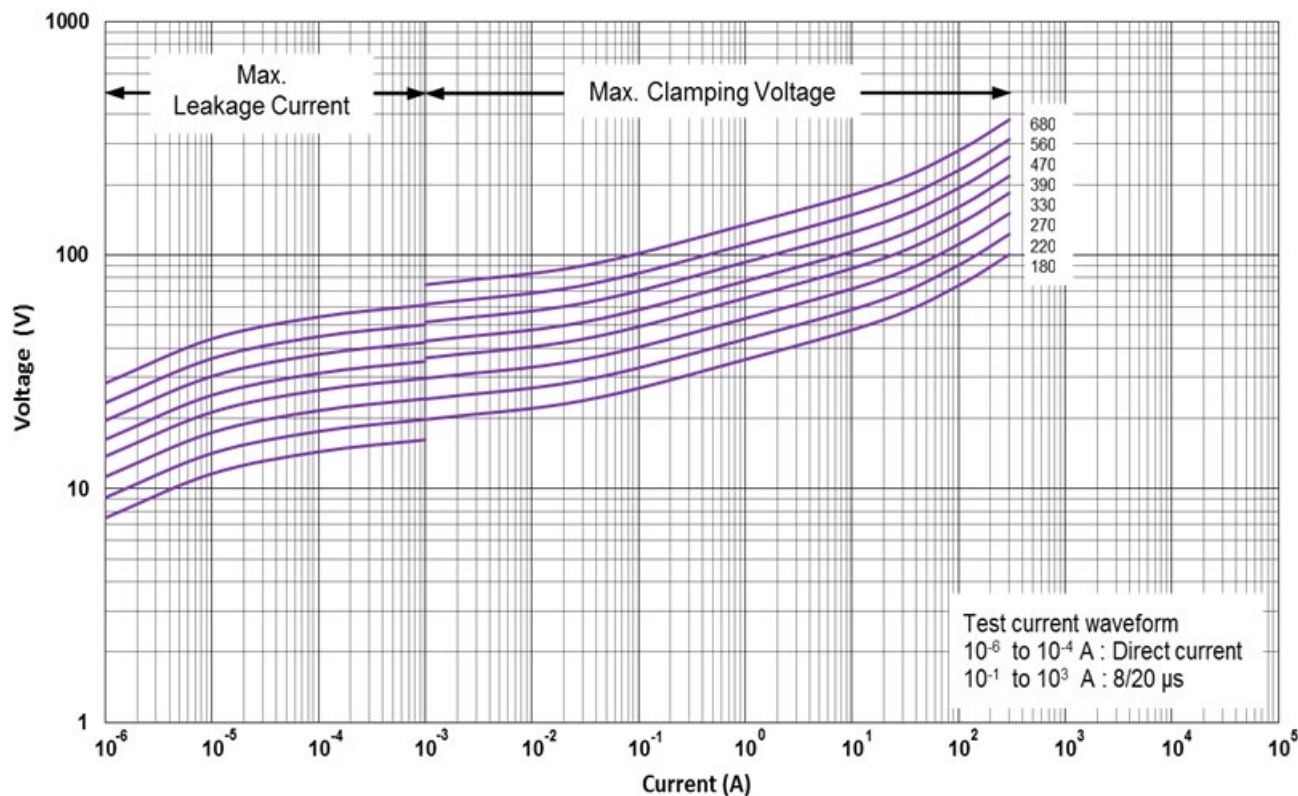


NOTE : Specification subject to change without notice.

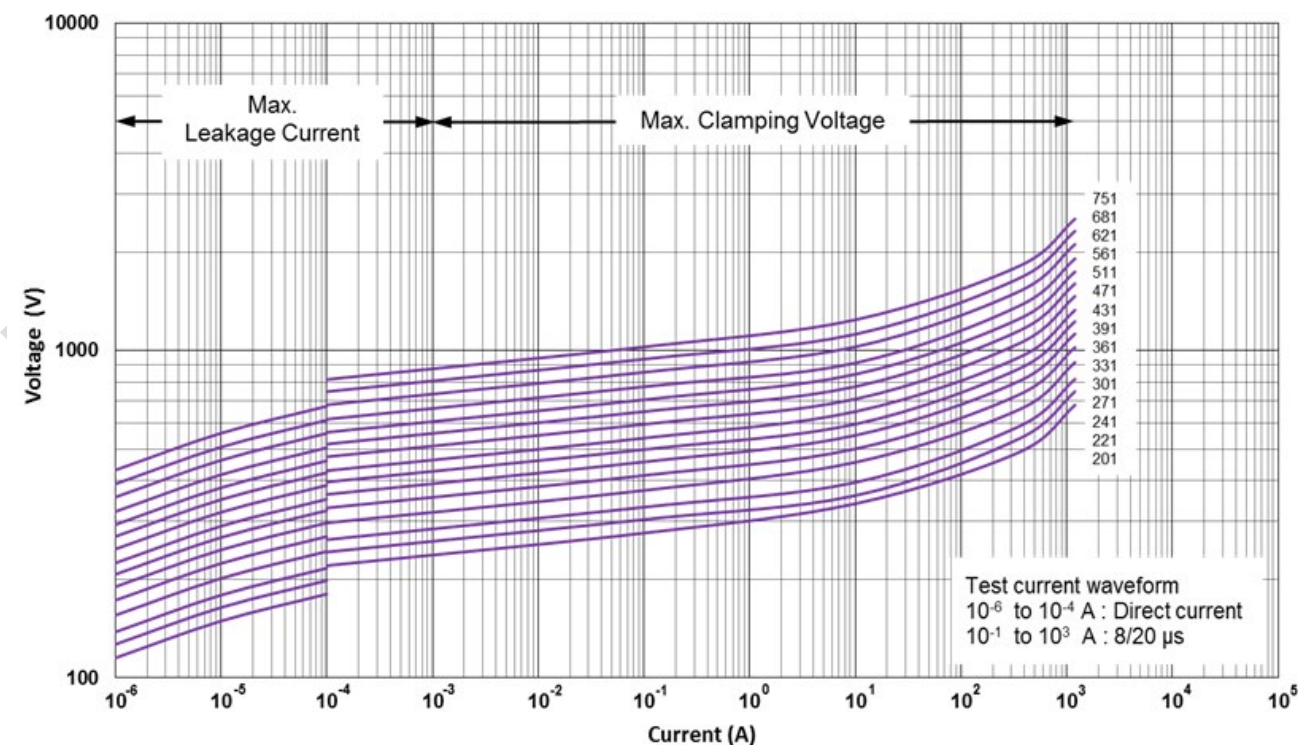


## 5. V-I Curves

(FMOV05180-H to FMOV05680-H)



(FMOV05201-H to FMOV05751-H)

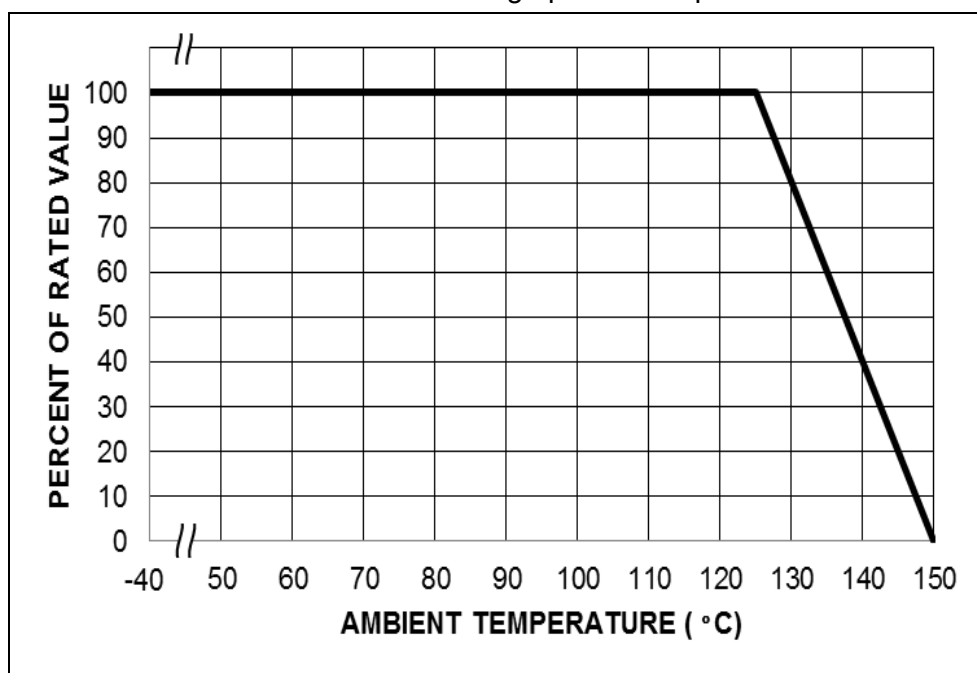


NOTE : Specification subject to change without notice.

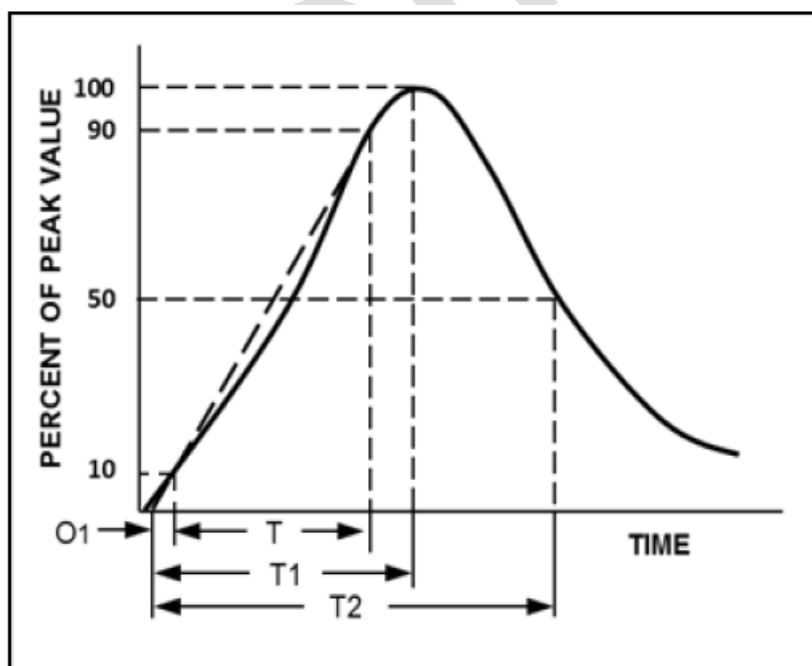


## 6. Power Derating Curve

Should transients occur in rapid succession, the average power dissipation is the energy (watt-seconds) per pulse times the number of pulses per second. The power so developed must be with the specifications shown on the Device Ratings and Specifications Table for the specific device. The operating values of a MOV need to be derated at high temperatures as shown above. Because varistors only dissipate a relatively small amount of average power they are not suitable for repetitive applications that involve substantial amounts of average power dissipation.



## 7. Surge Current Standard Waveform



O1 = Virtual Origin of Wave

T = Time from 10% to 90% of Peak

T1 = Rise Time = 1.25 x T

T2 = Decay Time

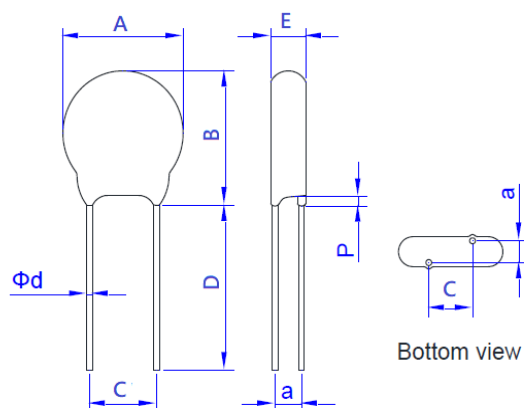
Example - For an 8/20  $\mu$ s Current Waveform:

8 $\mu$ s = T1 = Rise Time

20 $\mu$ s = T2 = Decay Time

|                                                                                                                      |                |                        |             |             |
|----------------------------------------------------------------------------------------------------------------------|----------------|------------------------|-------------|-------------|
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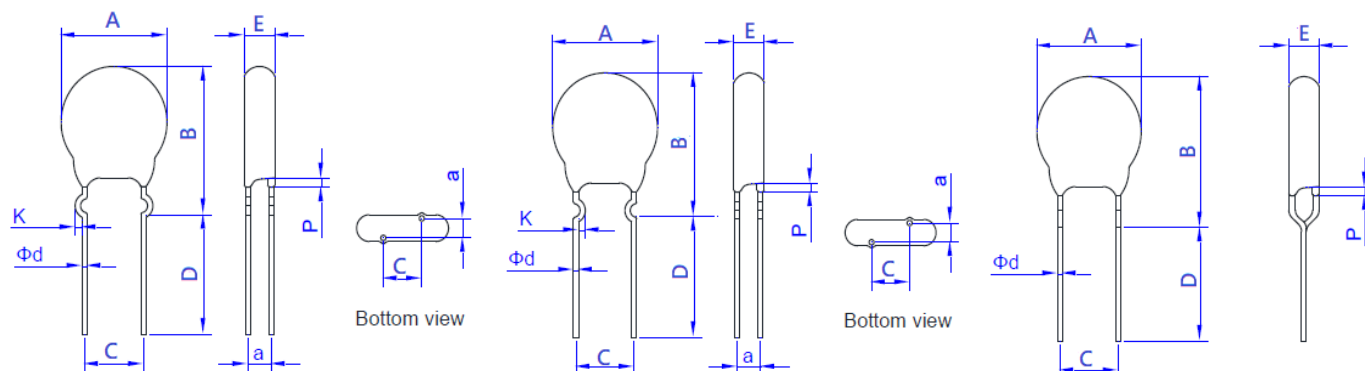
## 8. Dimension of Component for Standard Product



**Straight Lead Type (S)**

| Part Number | A    |      | B    | C    | D    | E    | P    | a    | Φd    |
|-------------|------|------|------|------|------|------|------|------|-------|
|             | Min. | Max. | Max. | ±1.0 | Typ. | Max. | Max. | ±1.0 | ±0.05 |
| FMOV05180-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 4.7  | 3.0  | 1.5  | 0.60  |
| FMOV05220-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 5.1  | 3.0  | 1.7  | 0.60  |
| FMOV05270-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 5.3  | 3.0  | 1.8  | 0.60  |
| FMOV05330-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 4.7  | 3.0  | 1.9  | 0.60  |
| FMOV05390-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 4.9  | 3.0  | 1.9  | 0.60  |
| FMOV05470-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 5.2  | 3.0  | 2.1  | 0.60  |
| FMOV05560-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 5.6  | 3.0  | 2.3  | 0.60  |
| FMOV05680-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 6.0  | 3.0  | 2.6  | 0.60  |
| FMOV05201-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 5.1  | 3.0  | 2.0  | 0.60  |
| FMOV05221-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 5.3  | 3.0  | 2.1  | 0.60  |
| FMOV05241-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 5.4  | 3.0  | 2.2  | 0.60  |
| FMOV05271-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 5.8  | 3.0  | 2.3  | 0.60  |
| FMOV05301-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 6.2  | 3.0  | 2.5  | 0.60  |
| FMOV05331-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 6.3  | 3.0  | 2.7  | 0.60  |
| FMOV05361-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 6.5  | 3.0  | 2.8  | 0.60  |
| FMOV05391-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 6.1  | 3.0  | 3.0  | 0.60  |
| FMOV05431-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 6.2  | 3.0  | 3.2  | 0.60  |
| FMOV05471-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 6.4  | 3.0  | 3.4  | 0.60  |
| FMOV05511-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 6.5  | 3.0  | 3.7  | 0.60  |
| FMOV05561-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 6.8  | 3.0  | 3.9  | 0.60  |
| FMOV05621-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 7.1  | 3.0  | 4.3  | 0.60  |
| FMOV05681-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 7.4  | 3.0  | 4.7  | 0.60  |
| FMOV05751-H | 5.5  | 7.5  | 10.0 | 5.0  | 25.0 | 7.8  | 3.0  | 5.1  | 0.60  |

Unit: mm



**Outside Kink Lead (O)**

**Inside Kink Lead (K)**

**In Line Kink Lead (I)**

| Part Number | A    |      | B    | C    | D    | E    | P    | K    |      | a    | Φd    |
|-------------|------|------|------|------|------|------|------|------|------|------|-------|
|             | Min. | Max. | Max. | ±1.0 | Typ. | Max. | Max. | Min. | Max. | ±1.0 | ±0.05 |
| FMOV05180-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 4.7  | 3.0  | 0.8  | 1.6  | 1.5  | 0.60  |
| FMOV05220-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 5.1  | 3.0  | 0.8  | 1.6  | 1.7  | 0.60  |
| FMOV05270-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 5.3  | 3.0  | 0.8  | 1.6  | 1.8  | 0.60  |
| FMOV05330-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 4.7  | 3.0  | 0.8  | 1.6  | 1.9  | 0.60  |
| FMOV05390-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 4.9  | 3.0  | 0.8  | 1.6  | 1.9  | 0.60  |
| FMOV05470-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 5.2  | 3.0  | 0.8  | 1.6  | 2.1  | 0.60  |
| FMOV05560-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 5.6  | 3.0  | 0.8  | 1.6  | 2.3  | 0.60  |
| FMOV05680-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 6.0  | 3.0  | 0.8  | 1.6  | 2.6  | 0.60  |
| FMOV05201-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 5.1  | 3.0  | 0.8  | 1.6  | 2.0  | 0.60  |
| FMOV05221-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 5.3  | 3.0  | 0.8  | 1.6  | 2.1  | 0.60  |
| FMOV05241-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 5.4  | 3.0  | 0.8  | 1.6  | 2.2  | 0.60  |
| FMOV05271-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 5.8  | 3.0  | 0.8  | 1.6  | 2.3  | 0.60  |
| FMOV05301-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 6.2  | 3.0  | 0.8  | 1.6  | 2.5  | 0.60  |
| FMOV05331-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 6.3  | 3.0  | 0.8  | 1.6  | 2.7  | 0.60  |
| FMOV05361-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 6.5  | 3.0  | 0.8  | 1.6  | 2.8  | 0.60  |
| FMOV05391-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 6.1  | 3.0  | 0.8  | 1.6  | 3.0  | 0.60  |
| FMOV05431-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 6.2  | 3.0  | 0.8  | 1.6  | 3.2  | 0.60  |
| FMOV05471-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 6.4  | 3.0  | 0.8  | 1.6  | 3.4  | 0.60  |
| FMOV05511-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 6.5  | 3.0  | 0.8  | 1.6  | 3.7  | 0.60  |
| FMOV05561-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 6.8  | 3.0  | 0.8  | 1.6  | 3.9  | 0.60  |
| FMOV05621-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 7.1  | 3.0  | 0.8  | 1.6  | 4.3  | 0.60  |
| FMOV05681-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 7.4  | 3.0  | 0.8  | 1.6  | 4.7  | 0.60  |
| FMOV05751-H | 5.5  | 7.5  | 13.0 | 5.0  | 25.0 | 7.8  | 3.0  | 0.8  | 1.6  | 5.1  | 0.60  |

Unit: mm



## 9. Tape and Reel Specifications

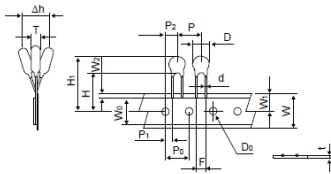


Figure: A

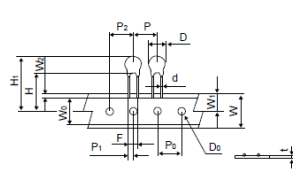


Figure: B

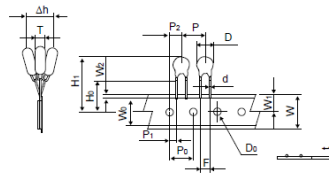


Figure: C

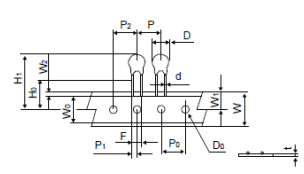


Figure: D

### Straight Leads

### Inline Kink Leads

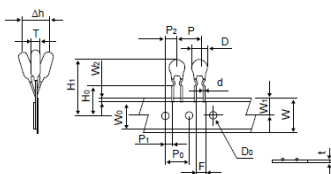


Figure: E

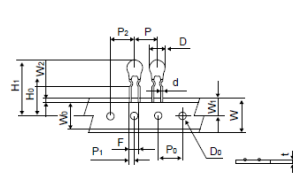


Figure: F

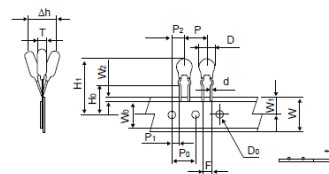


Figure: G

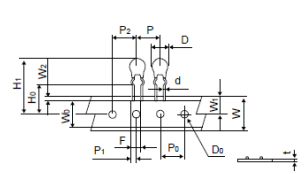


Figure: H

### Inside Kink Leads

### Outside Kink Leads

| Symbol        | Parameter                                 | FMOV05-H Series   |
|---------------|-------------------------------------------|-------------------|
| <b>P</b>      | Pitch of Component                        | 12.7±1.0          |
| <b>P0</b>     | Feed Hole Pitch                           | 12.7±0.2          |
| <b>P1</b>     | Feed Hole Center Lead                     | 3.85±0.7          |
| <b>P2</b>     | Hole center to Component Center           | 6.35±0.7          |
| <b>F</b>      | Lead to Lead Distance                     | 5.0±0.8           |
| <b>Δh</b>     | Component Alignment                       | 2.0 Max           |
| <b>W</b>      | Tape Width                                | 18.0+1.0<br>-0.5  |
| <b>W0</b>     | Hold Down Tape Width                      | 5.0 Min           |
| <b>W1</b>     | Hole Position                             | 9.0+0.75<br>-0.50 |
| <b>W2</b>     | Hold Down Tape Position                   | 3.0 Max           |
| <b>H</b>      | Height from Tape Center to Component Base | 18.0+2.0<br>-0    |
| <b>H0</b>     | Seating Plane Height                      | 16.0±0.5          |
| <b>H1</b>     | Component Height                          | 32.0 Max          |
| <b>D0</b>     | Feed Hole Diameter                        | 4.0±0.2           |
| <b>t</b>      | Total Tape Thickness                      | 0.7±0.2           |
| <b>L</b>      | Length of Clipped Lead                    | 11.0 Max          |
| <b>Figure</b> |                                           | ACEG              |

Unit: mm

NOTE : Specification subject to change without notice.



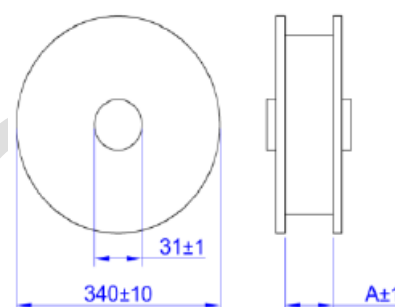
## 10. Packaging Specifications

### Bulk Product Packing

| Series          | Straight Lead Type<br>Quantity (pcs/bag) | Outside Kink Lead<br>Type Quantity<br>(pcs/bag) | Inside Kink Lead<br>Type Quantity<br>(pcs/bag) | In Line Kink Lead<br>Type Quantity<br>(pcs/bag) |
|-----------------|------------------------------------------|-------------------------------------------------|------------------------------------------------|-------------------------------------------------|
| FMOV05-H Series | 1000                                     | 1000                                            | 1000                                           | 1000                                            |

### Tape & Reel Product Packing

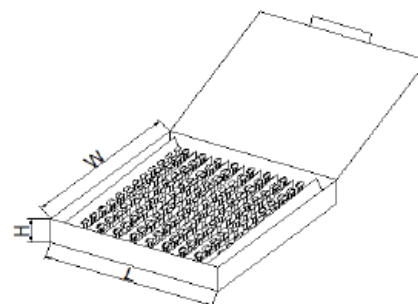
| Series               | A (mm) | Quantity (pcs/reel) |
|----------------------|--------|---------------------|
| FMOV05(201~621)-H-T- | 43     | 2000                |
| FMOV05(681~751)-H-T- |        | 1500                |



### Box Product Packing

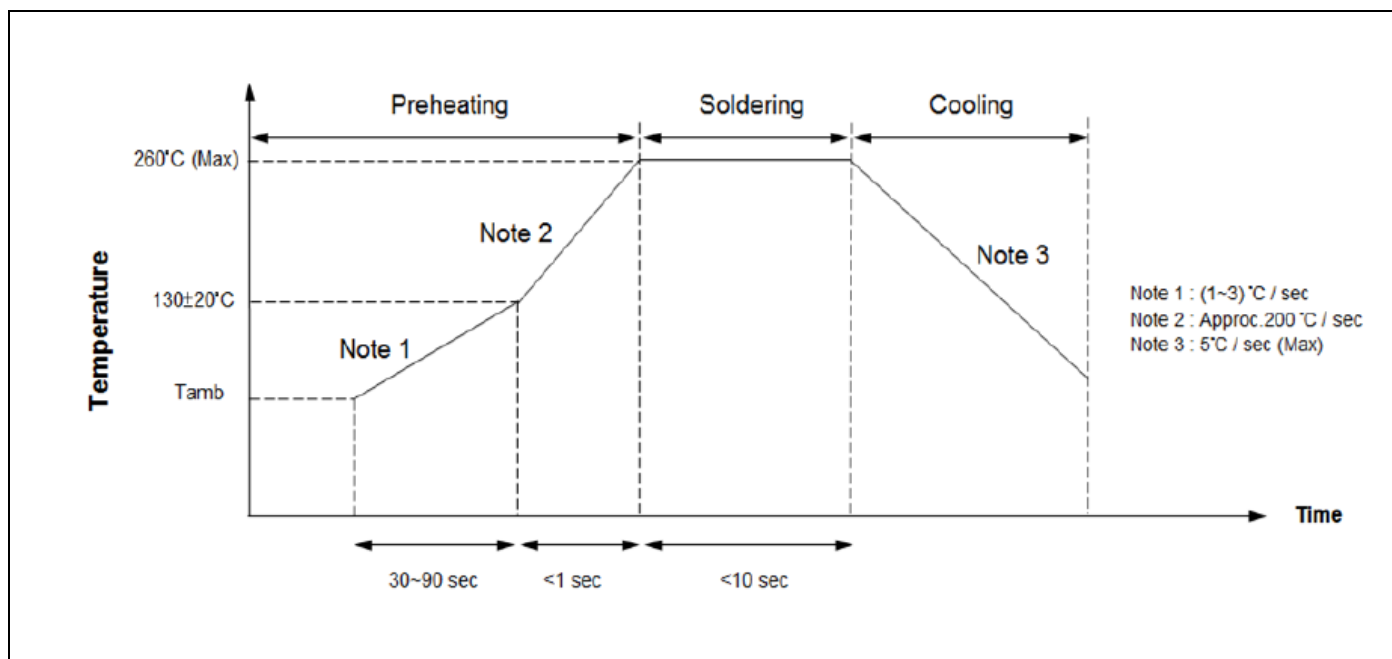
| Series               | Quantity (pcs/reel) |
|----------------------|---------------------|
| FMOV05(201~621)-H-T- | 1000                |
| FMOV05(681~751)-H-T- | 800                 |

| Series          | L±5 | W±5 | H±5 |
|-----------------|-----|-----|-----|
| FMOV05-H Series | 340 | 245 | 45  |





## 11. Solder Recommendation



### Recommendation Reworking Conditions with Soldering Iron

| Item                              | Conditions  |
|-----------------------------------|-------------|
| Temperature of soldering Iron-tip | 360°C (Max) |
| Soldering Time                    | 3 sec (Max) |
| Distance from Varistor            | 2mm (Min)   |

### RoHS Compliant Declaration

We hereby declare that the components delivered to your company are compliant with RoHS Directive 2002/95/EC

### Storage Conditions of Products

#### (I) Storage Conditions:

- Storage Temperature: -10°C ~ +40°C
- Relative Humidity: ≤ 75%RH
- Keep away from corrosive atmosphere and sunlight
- Solvent Resistance: MIL-STD-202, Method 215F
- Moisture Sensitivity: Level 1, J-STD-020

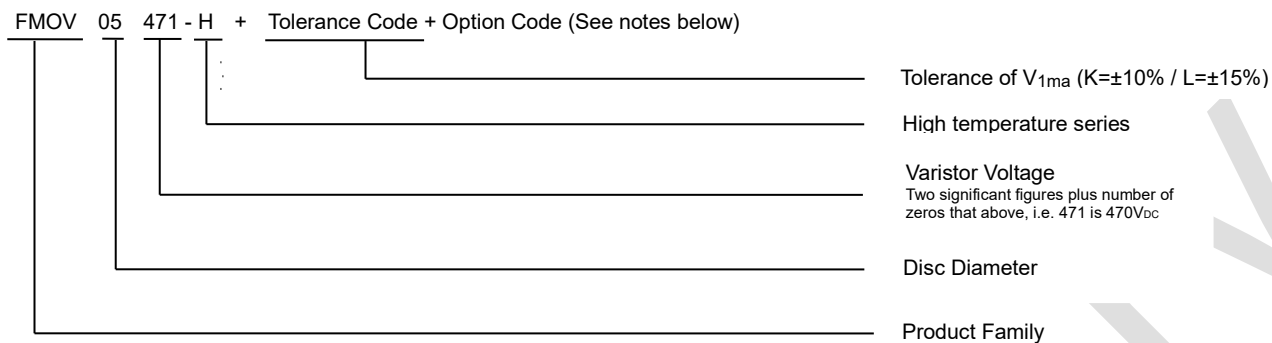
#### (II) Period of Storage: 1 year

**NOTE :** Specification subject to change without notice.

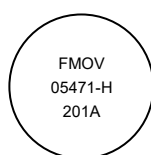


## 12. Part Numbering and Marking System

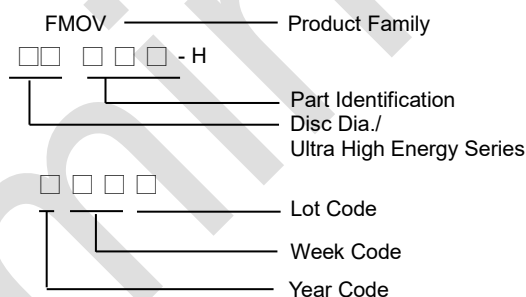
### Part Numbering System



### Marking System



Example



|                                                                                                                       |                |                        |             |              |
|-----------------------------------------------------------------------------------------------------------------------|----------------|------------------------|-------------|--------------|
|  <b>FUZETEC TECHNOLOGY CO., LTD.</b> | <b>NO.</b>     | <b>FMOV05-H Series</b> |             |              |
| <b>Product Specification and Approval Sheet</b>                                                                       | <b>Version</b> | <b>P1</b>              | <b>Page</b> | <b>14/14</b> |

### 13. Order Notes:

**Main Part Code:**

**Part No + Tolerance Code + Packaging + Lead Type Designators + Option Code**

**Ordering examples:**

| Straight Lead<br>Bulk Pack (Standard) | Straight Lead<br>(Short Cut) Bulk Pack | Straight Lead<br>Tape & Reel Pack | Straight Lead<br>Flat Box Pack |
|---------------------------------------|----------------------------------------|-----------------------------------|--------------------------------|
| FMOV05471-HKBS                        | FMOV05471-HKBSXXX                      | FMOV05471-HKTS                    | FMOV05471-HKAS                 |

| Outside Kink Lead<br>Bulk Pack | Outside Kink Lead<br>(Short Cut) Bulk Pack | Outside Kink Lead<br>Tape & Reel Pack | Outside Kink Lead<br>Flat Box Pack |
|--------------------------------|--------------------------------------------|---------------------------------------|------------------------------------|
| FMOV05471-HKBO                 | FMOV05471-HKBOXXX                          | FMOV05471-HKTO                        | FMOV05471-HKAO                     |

| Inside Kink Lead<br>Bulk Pack | Inside Kink Lead<br>(Short Cut) Bulk Pack | Inside Kink Lead<br>Tape & Reel Pack | Inside Kink Lead<br>Flat Box Pack |
|-------------------------------|-------------------------------------------|--------------------------------------|-----------------------------------|
| FMOV05471-HKBK                | FMOV05471-HKKBXXX                         | FMOV05471-HKTK                       | FMOV05471-HKAK                    |

| In Line Kink Lead<br>Bulk Pack | In Line Kink Lead<br>(Short Cut) Bulk Pack | In Line Kink Lead<br>Tape& Reel Pack | In Line Kink Lead<br>Flat Box Pack |
|--------------------------------|--------------------------------------------|--------------------------------------|------------------------------------|
| FMOV05471-HKBI                 | FMOV05471-HKBIXXX                          | FMOV05471-HKTI                       | FMOV05471-HKAI                     |