



SPECIFICATIONS

PRODUCT : VARISTOR

TYPE : GNR40D□□□K

MODEL : M

CITATION :

REVISION : B01

TOTAL PAGES : 5 PAGE : 1/5

RELEASED DATE : Feb. 06, 2002

REVISION HISTORY

| NO | REV. DATE | DCR NO. | DESCRIPTION OF CHANGE | REV. |
|----|--------------|---------|-----------------------|------|
| 1 | Feb. 06,2002 | | NEW RELEASE | B01 |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |

Approved by


Checked by

Edited by

Yu-Chang Huang

Cloud Chen

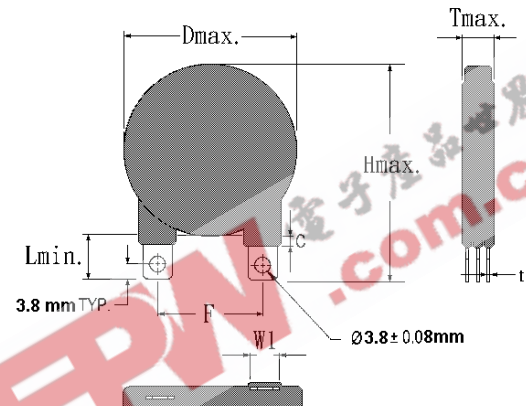
Andy Chiang

| | | | | | | |
|--|---------------------------------------|-----------|-------|-----------|-----------|-----|
|  | TYPE | 錯誤! 連結無效。 | MODEL | 錯誤! 連結無效。 | PAGE | 2/5 |
| CITATION | 錯誤! 連結無效。 | | | DATE | 錯誤! 連結無效。 | |
| SUBJECT | QUALITY APPROVAL and STRUCTURE | | | REV. | 錯誤! 連結無效。 | |


1. QUALITY SYSTEM APPROVAL

ISO9001 Certificate of approval No.97-HOU-AQ-1382

2. STRUCTURE

| NO. | ITEM | DESCRIPTION | | |
|-----|------------------|--|----------|--------------|
| 2.1 | Main Material | Zinc Oxide | | |
| 2.2 | Coating Material | Epoxy Resin | | |
| 2.3 | Marking | GNR, Part number | | |
| 2.4 | Appearance | Without dirt and crack, marking should be clear | | |
| 2.5 | Dimensions |  <p style="text-align: right;">Unit: mm</p> | D(max.) | 48.0 |
| | | | H(max.) | 60.2 |
| | | | T(max.) | * (1) |
| | | | F | 25.4± 0.5 |
| | | | T | 0.5± 0.1 |
| | | | L(min.) | 16.5 |
| | | | C(max.) | 3.18 |
| | | | Wl(max.) | 7.0 |
| | | | | |


* (1) See Page 3, Dimensions Table

| | | | | | | |
|--|-----------|-----------|-------|-----------|-----------|-----|
|  | TYPE | 錯誤! 連結無效。 | MODEL | 錯誤! 連結無效。 | PAGE | 3/5 |
| CITATION | 錯誤! 連結無效。 | | | DATE | 錯誤! 連結無效。 | |

| | | | |
|---------|-------------------------|------|-----------|
| SUBJECT | DIMENSIONS TABLE | REV. | 錯誤! 連結無效。 |
|---------|-------------------------|------|-----------|

| Part No. | T _{max.} |
|----------|-------------------|
| 40D201K | 7.8 |
| 40D241K | 8.2 |
| 40D271K | 8.6 |
| 40D331K | 9.0 |
| 40D361K | 9.3 |
| 40D391K | 9.6 |
| 40D431K | 10.0 |
| 40D471K | 10.5 |
| 40D511K | 10.7 |
| 40D621K | 11.4 |
| 40D681K | 11.9 |
| 40D751K | 12.5 |
| 40D781K | 12.7 |
| 40D821K | 13.2 |
| 40D911K | 14.0 |
| 40D951K | 14.5 |
| 40D102K | 15.0 |
| 40D112K | 16.0 |


Unit:mm

| | | | | | | |
|--|-----------------------------------|-----------|-------|-----------|-----------|-----|
|  | TYPE | 錯誤! 連結無效。 | MODEL | 錯誤! 連結無效。 | PAGE | 4/5 |
| CITATION | 錯誤! 連結無效。 | | | DATE | 錯誤! 連結無效。 | |
| SUBJECT | ELECTRICAL CHARACTERISTICS | | | REV. | 錯誤! 連結無效。 | |

3. ELECTRICAL CHARACTERISTICS

| NO. | ITEM | PERFORMANCE | TEST METHODS |
|-----|--|---|---|
| 3.0 | Standard Conditions | | Unless otherwise specified, all tests are made under environmental conditions as given below: Temperature: 5~35°C Relative humidity: 45~85 % RH |
| 3.1 | Maximum Allowable Voltage | AC : * (2) Vrms DC : * (2) V | Maximum continuous sine wave(RMS) or DC voltage which may be applied. |
| 3.2 | Varistor Voltage | V _{1mA} : * (2) V | Voltage across the varistor measured at C _{mA} DC. |
| 3.3 | Varistor Voltage Temperature Coefficient | 0 ~ -0.05 %/°C | $\frac{V_{CmA \text{ at } 85^{\circ}\text{C}} - V_{CmA \text{ at } 25^{\circ}\text{C}}}{V_{CmA \text{ at } 25^{\circ}\text{C}}} \times \frac{1}{60} \times 100$ |
| 3.4 | Max. Clamping Voltage | * (2) V at * (2) A | Peak voltage across the varistor with a specified peak impulse current of 8x 20 μs waveform. |
| 3.5 | Withstanding Surge Current | * (2) A | The max. current within the varistor voltage change of less than ± 10% when one impulse current (8x 20 μs) applied. |
| | | | The max. current with a varistor voltage change of less than ± 10% when two times impulse current (8x 20 μs) are applied at intervals of 5 minutes. |
| 3.6 | Energy | * (2) Joule | The max. energy absorbed with a varistor voltage change of less than ± 10% when one impulse(10 x 1000 μs) is applied. |
| 3.7 | Surge Life | * (2) A | The max. current with a varistor voltage change of less than ± 10% when 10,000 times impulse current (8x 20 μs) are applied at intervals of 20 seconds at room temperature. |

* (2) See Page 5

| | | | | | | |
|--|-----------|-----------|-------|-----------|-----------|-----|
|  | TYPE | 錯誤! 連結無效。 | MODEL | 錯誤! 連結無效。 | PAGE | 5/5 |
| CITATION | 錯誤! 連結無效。 | | | DATE | 錯誤! 連結無效。 | |

| | | | |
|---------|-----------------------------------|------|-----------|
| SUBJECT | ELECTRICAL CHARACTERISTICS | REV. | 錯誤! 連結無效。 |
|---------|-----------------------------------|------|-----------|

| PART NUMBER | MAXIMUM ALLOWABLE VOLTAGE | | VARISTOR VOLTAGE | CLAMPING VOLTAGE (MAX.) | | SURGE CURRENT (8/20 μ s) | | MAXIMUM ENERGY (10/1000 μ s) | SURGE LIFE |
|-------------|---------------------------|-------|------------------|-------------------------|-------|------------------------------|---------|----------------------------------|------------|
| | AC _{rms} (V) | DC(V) | (V) | (V) | Ip(A) | Im(A) | | W _m (joule) | (A) |
| | | | | | | 1 TIME | 2 TIMES | | |
| 40D201K | 130 | 170 | 185~225 | 340 | 250 | 40000 | 25000 | 310 | 500 |
| 40D241K | 150 | 200 | 216~264 | 395 | | | | 360 | |
| 40D271K | 175 | 225 | 243~297 | 455 | | | | 390 | |
| 40D331K | 210 | 275 | 297~363 | 550 | | | | 460 | |
| 40D361K | 230 | 300 | 324~396 | 595 | | | | 475 | |
| 40D391K | 250 | 320 | 351~429 | 650 | | | | 490 | |
| 40D431K | 275 | 350 | 387~473 | 710 | | | | 550 | |
| 40D471K | 300 | 385 | 423~517 | 775 | | | | 600 | |
| 40D511K | 320 | 415 | 459~561 | 845 | | | | 640 | |
| 40D621K | 385 | 505 | 558~682 | 1025 | | | | 720 | |
| 40D681K | 420 | 560 | 612~748 | 1120 | | | | 750 | |
| 40D751K | 460 | 615 | 675~825 | 1240 | | | | 780 | |
| 40D781K | 485 | 640 | 702~858 | 1290 | | | | 820 | |
| 40D821K | 510 | 670 | 738~902 | 1355 | | | | 900 | |
| 40D911K | 550 | 745 | 819~1001 | 1500 | | | | 960 | |
| 40D951K | 575 | 765 | 885~1045 | 1570 | | | | 1000 | |
| 40D102K | 625 | 825 | 900~1100 | 1650 | | | | 1055 | |
| 40D112K | 680 | 895 | 990~1210 | 1815 | | | | 1155 | |