

## 1-Line, Uni-directional, Transient Voltage Suppressor



& E í ì ì ò r î >

## Features

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" 6WDQG RII YROWDJH 9 0D[
" 7UDQVLHQW SURWHFWLRQ IRU HDFK O
,(& (6' " N9 FRQWDFW
,(& ()7 $ QV
,(& VXUJH $ V
" /RZ OHDNDJH FXUUHQW
" 8OWUD ORZ FDSDFLWDQFH &- S) W
" /RZ FODPSLQJ YROWDJH
9&/ 9 W\ S # ,33 $ 7/3
" 5R+6 &RPSOLDQW

```

## Applications

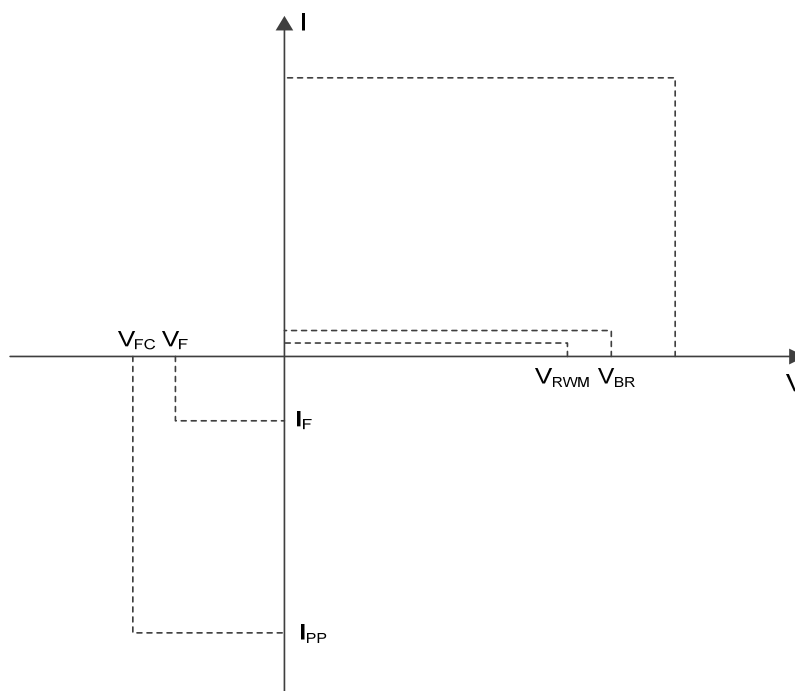
" 3RZHU VXSSO\ SURWHFWLRQ  
" 3RZHU PDQDJHPHQW

## Mechanical Data

```
" 3DFNDJH ' )1 /
" &DVH 0DWHULDO 3*UHHQ' 0ROGLQJ &R
" 0RLVWXUH 6HQVLWLYLW\ /HYHO SHU
" 0DUNLQJ WQLRQ DHH %HORZ
```



## Definitions of electrical characteristics

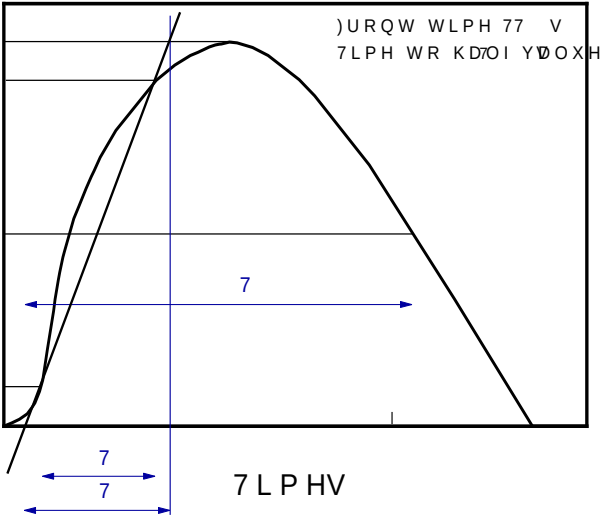






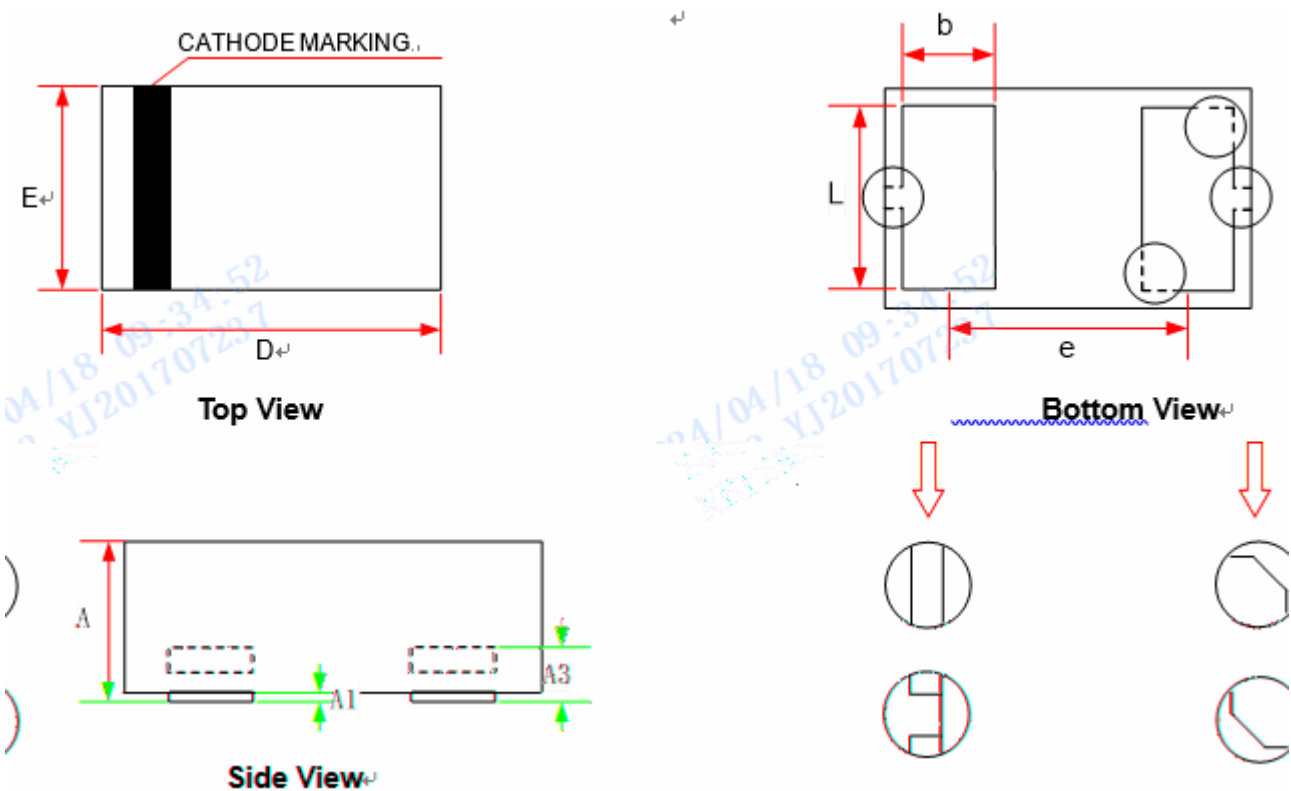
vCharacteristics (Typical)

Fig.1 8/20μs waveform per IEC61000-4-5





vOutline Dimensions



| Symbol | Pin Number |       |       |
|--------|------------|-------|-------|
|        | Pin 1      | Pin 2 | Pin 3 |
| 1      | 1          | 2     | 3     |
| 2      | 4          | 5     | 6     |
| 3      | 7          | 8     | 9     |
| 4      | 10         | 11    | 12    |
| 5      | 13         | 14    | 15    |
| 6      | 16         | 17    | 18    |
| 7      | 19         | 20    | 21    |
| 8      | 22         | 23    | 24    |
| 9      | 25         | 26    | 27    |
| 10     | 28         | 29    | 30    |
| 11     | 31         | 32    | 33    |
| 12     | 34         | 35    | 36    |
| 13     | 37         | 38    | 39    |
| 14     | 40         | 41    | 42    |
| 15     | 43         | 44    | 45    |
| 16     | 46         | 47    | 48    |
| 17     | 49         | 50    | 51    |
| 18     | 52         | 53    | 54    |
| 19     | 55         | 56    | 57    |
| 20     | 58         | 59    | 60    |
| 21     | 61         | 62    | 63    |
| 22     | 64         | 65    | 66    |
| 23     | 67         | 68    | 69    |
| 24     | 70         | 71    | 72    |
| 25     | 73         | 74    | 75    |
| 26     | 76         | 77    | 78    |
| 27     | 79         | 80    | 81    |
| 28     | 82         | 83    | 84    |
| 29     | 85         | 86    | 87    |
| 30     | 88         | 89    | 90    |
| 31     | 91         | 92    | 93    |
| 32     | 94         | 95    | 96    |
| 33     | 97         | 98    | 99    |
| 34     | 100        | 101   | 102   |
| 35     | 103        | 104   | 105   |
| 36     | 106        | 107   | 108   |
| 37     | 109        | 110   | 111   |
| 38     | 112        | 113   | 114   |
| 39     | 115        | 116   | 117   |
| 40     | 118        | 119   | 120   |
| 41     | 121        | 122   | 123   |
| 42     | 124        | 125   | 126   |
| 43     | 127        | 128   | 129   |
| 44     | 130        | 131   | 132   |
| 45     | 133        | 134   | 135   |
| 46     | 136        | 137   | 138   |
| 47     | 139        | 140   | 141   |
| 48     | 142        | 143   | 144   |
| 49     | 145        | 146   | 147   |
| 50     | 148        | 149   | 150   |
| 51     | 151        | 152   | 153   |
| 52     | 154        | 155   | 156   |
| 53     | 157        | 158   | 159   |
| 54     | 160        | 161   | 162   |
| 55     | 163        | 164   | 165   |
| 56     | 166        | 167   | 168   |
| 57     | 169        | 170   | 171   |
| 58     | 172        | 173   | 174   |
| 59     | 175        | 176   | 177   |
| 60     | 178        | 179   | 180   |
| 61     | 181        | 182   | 183   |
| 62     | 184        | 185   | 186   |
| 63     | 187        | 188   | 189   |
| 64     | 190        | 191   | 192   |
| 65     | 193        | 194   | 195   |
| 66     | 196        | 197   | 198   |
| 67     | 199        | 200   | 201   |
| 68     | 202        | 203   | 204   |
| 69     | 205        | 206   | 207   |
| 70     | 208        | 209   | 210   |
| 71     | 211        | 212   | 213   |
| 72     | 214        | 215   | 216   |
| 73     | 217        | 218   | 219   |
| 74     | 220        | 221   | 222   |
| 75     | 223        | 224   | 225   |
| 76     | 226        | 227   | 228   |
| 77     | 229        | 230   | 231   |
| 78     | 232        | 233   | 234   |
| 79     | 235        | 236   | 237   |
| 80     | 238        | 239   | 240   |
| 81     | 241        | 242   | 243   |
| 82     | 244        | 245   | 246   |
| 83     | 247        | 248   | 249   |
| 84     | 250        | 251   | 252   |
| 85     | 253        | 254   | 255   |
| 86     | 256        | 257   | 258   |
| 87     | 259        | 260   | 261   |
| 88     | 262        | 263   | 264   |
| 89     | 265        | 266   | 267   |
| 90     | 268        | 269   | 270   |
| 91     | 271        | 272   | 273   |
| 92     | 274        | 275   | 276   |
| 93     | 277        | 278   | 279   |
| 94     | 280        | 281   | 282   |
| 95     | 283        | 284   | 285   |
| 96     | 286        | 287   | 288   |
| 97     | 289        | 290   | 291   |
| 98     | 292        | 293   | 294   |
| 99     | 295        | 296   | 297   |
| 100    | 298        | 299   | 300   |
| 101    | 301        | 302   | 303   |
| 102    | 304        | 305   | 306   |
| 103    | 307        | 308   | 309   |
| 104    | 310        | 311   | 312   |
| 105    | 313        | 314   | 315   |
| 106    | 316        | 317   | 318   |
| 107    | 319        | 320   | 321   |
| 108    | 322        | 323   | 324   |
| 109    | 325        | 326   | 327   |
| 110    | 328        | 329   | 330   |
| 111    | 331        | 332   | 333   |
| 112    | 334        | 335   | 336   |
| 113    | 337        | 338   | 339   |
| 114    | 340        | 341   | 342   |
| 115    | 343        | 344   | 345   |
| 116    | 346        | 347   | 348   |
| 117    | 349        | 350   | 351   |
| 118    | 352        | 353   | 354   |
| 119    | 355        | 356   | 357   |
| 120    | 358        | 359   | 360   |
| 121    | 361        | 362   | 363   |
| 122    | 364        | 365   | 366   |
| 123    | 367        | 368   | 369   |
| 124    | 370        | 371   | 372   |
| 125    | 373        | 374   | 375   |
| 126    | 376        | 377   | 378   |
| 127    | 379        | 380   | 381   |
| 128    | 382        | 383   | 384   |
| 129    | 385        | 386   | 387   |
| 130    | 388        | 389   | 390   |
| 131    | 391        | 392   | 393   |
| 132    | 394        | 395   | 396   |
| 133    | 397        | 398   | 399   |
| 134    | 400        | 401   | 402   |
| 135    | 403        | 404   | 405   |
| 136    | 406        | 407   | 408   |
| 137    | 409        | 410   | 411   |
| 138    | 412        | 413   | 414   |
| 139    | 415        | 416   | 417   |
| 140    | 418        | 419   | 420   |
| 141    | 421        | 422   | 423   |
| 142    | 424        | 425   | 426   |
| 143    | 427        | 428   | 429   |
| 144    | 430        | 431   | 432   |
| 145    | 433        | 434   | 435   |
| 146    | 436        | 437   | 438   |
| 147    | 439        | 440   | 441   |
| 148    | 442        | 443   | 444   |
| 149    | 445        | 446   | 447   |
| 150    | 448        | 449   | 450   |
| 151    | 451        | 452   | 453   |
| 152    | 454        | 455   | 456   |
| 153    | 457        | 458   | 459   |
| 154    | 460        | 461   | 462   |
| 155    | 463        | 464   | 465   |
| 156    | 466        | 467   | 468   |
| 157    | 469        | 470   | 471   |
| 158    | 472        | 473   | 474   |
| 159    | 475        | 476   | 477   |
| 160    | 478        | 479   | 480   |
| 161    | 481        | 482   | 483   |
| 162    | 484        | 485   | 486   |
| 163    | 487        | 488   | 489   |
| 164    | 490        | 491   | 492   |
| 165    | 493        | 494   | 495   |
| 166    | 496        | 497   | 498   |
| 167    | 499        | 500   | 501   |
| 168    | 502        | 503   | 504   |
| 169    | 505        | 506   | 507   |
| 170    | 508        | 509   | 510   |
| 171    | 511        | 512   | 513   |
| 172    | 514        | 515   | 516   |
| 173    | 517        | 518   | 519   |
| 174    | 520        | 521   | 522   |
| 175    | 523        | 524   | 525   |
| 176    | 526        | 527   | 528   |
| 177    | 529        | 530   | 531   |
| 178    | 532        | 533   | 534   |
| 179    | 535        | 536   | 537   |
| 180    | 538        | 539   | 540   |
| 181    | 541        | 542   | 543   |
| 182    | 544        | 545   | 546   |
| 183    | 547        | 548   | 549   |
| 184    | 550        | 551   | 552   |
| 185    | 553        | 554   | 555   |
| 186    | 556        | 557   | 558   |
| 187    | 559        | 560   | 561   |
| 188    | 562        | 563   | 564   |
| 189    | 565        | 566   | 567   |
| 190    | 568        | 569   | 570   |
| 191    | 571        | 572   | 573   |
| 192    | 574        | 575   | 576   |
| 193    | 577        | 578   | 579   |
| 194    | 580        | 581   | 582   |
| 195    | 583        | 584   | 585   |
| 196    | 586        | 587   | 588   |
| 197    | 589        | 590   | 591   |
| 198    | 592        | 593   | 594   |
| 199    | 595        | 596   | 597   |
| 200    | 598        | 599   | 600   |
| 201    | 601        | 602   | 603   |
| 202    | 604        | 605   | 606   |
| 203    | 607        | 608   | 609   |
| 204    | 610        | 611   | 612   |
| 205    | 613        | 614   | 615   |
| 206    | 616        | 617   | 618   |
| 207    | 619        | 620   | 621   |
| 208    | 622        | 623   | 624   |
| 209    | 625        | 626   | 627   |
| 210    | 628        | 629   | 630   |
| 211    | 631        | 632   | 633   |
| 212    | 634        | 635   | 636   |
| 213    | 637        | 638   | 639   |
| 214    | 640        | 641   | 642   |
| 215    | 643        | 644   | 645   |
| 216    | 646        | 647   | 648   |
| 217    | 649        | 650   | 651   |
| 218    | 652        | 653   | 654   |
| 219    | 655        | 656   | 657   |
| 220    | 658        | 659   | 660   |
| 221    | 661        | 662   | 663   |
| 222    | 664        | 665   | 666   |
| 223    | 667        | 668   | 669   |
| 224    | 670        | 671   | 672   |
| 225    | 673        | 674   | 675   |
| 226    | 676        | 677   | 678   |
| 227    | 679        | 680   | 681   |
| 228    | 682        | 683   | 684   |
| 229    | 685        | 686   | 687   |
| 230    | 688        | 689   | 690   |
| 231    | 691        | 692   | 693   |
| 232    | 694        | 695   | 696   |
| 233    | 697        | 698   | 699   |
| 234    | 700        | 701   | 702   |
| 235    | 703        | 704   | 705   |
| 236    | 706        | 707   | 708   |
| 237    | 709        | 710   | 711   |
| 238    | 712        | 713   | 714   |
| 239    | 715        | 716   | 717   |
| 240    | 718        | 719   | 720   |
| 241    | 721        | 722   | 723   |
| 242    | 724        | 725   | 726   |
| 243    | 727        | 728   | 729   |
| 244    | 730        | 731   | 732   |
| 245    | 733        | 734   | 735   |
| 246    | 736        | 737   | 738   |
| 247    | 739        | 740   | 741   |
| 248    | 742        | 743   | 744   |
| 249    | 745        | 746   | 747   |
| 250    | 748        | 749   | 750   |
| 251    | 751        | 752   | 753   |
| 252    | 754        | 755   | 756   |
| 253    | 757        | 758   | 759   |
| 254    | 760        | 761   | 762   |
| 255    | 763        | 764   | 765   |
| 256    | 766        | 767   | 768   |
| 257    | 769        | 770   | 771   |
| 258    | 772        | 773   | 774   |
| 259    | 775        | 776   | 777   |
| 260    | 778        | 779   | 780   |
| 261    | 781        | 782   | 783   |
| 262    | 784        | 785   | 786   |
| 263    | 787        | 788   | 789   |
| 264    | 790        | 791   | 792   |
| 265    | 793        | 794   | 795   |
| 266    | 796        | 797   | 798   |
| 267    | 799        | 800   | 801   |
| 268    | 802        | 803   | 804   |
| 269    | 805        | 806   | 807   |
| 270    | 808        | 809   | 810   |
| 271    | 811        | 812   | 813   |
| 272    | 814        | 815   | 816   |
| 273    | 817        | 818   | 819   |
| 274    | 820        | 821   | 822   |
| 275    | 823        | 824   | 825   |
| 276    | 826        | 827   | 828   |
| 277    | 829        | 830   | 831   |
| 278    | 832        | 833   | 834   |
| 279    | 835        | 836   | 837   |
| 280    | 838        | 839   | 840   |
| 281    | 841        | 842   | 843   |
| 282    | 844        | 845   | 846   |
| 283    | 847        | 848   | 849   |
| 284    | 850        | 851   | 852   |
| 285    | 853        | 854   | 855   |
| 286    | 856        | 857   | 858   |
| 287    | 859        | 860   | 861   |
| 288    | 862        | 863   | 864   |
| 289    | 865        | 866   | 867   |
| 290    | 868        | 869   | 870   |
| 291    | 871        | 872   | 873   |
| 292    | 874        | 875   | 876   |
| 293    | 877        | 878   | 879   |
| 294    | 880        | 881   | 882   |
| 295    | 883        | 884   | 885   |
| 296    | 886        | 887   | 888   |
| 297    | 889        | 890   | 891   |
| 298    | 892        | 893   | 894   |
| 299    | 895        | 896   | 897   |
| 300    | 898        | 899   | 900   |
| 301    | 901        | 902   | 903   |
| 302    | 904        | 905   | 906   |
| 303    | 907        | 908   | 909   |
| 304    | 910        | 911   | 912   |
| 305    | 913        | 914   | 915   |
| 306    | 916        | 917   | 918   |
| 307    | 919        | 920   | 921   |
| 308    | 922        | 923   | 924   |
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| 315    | 943        | 944   | 945   |
| 316    | 946        | 947   | 948   |
| 317    | 949        | 950   | 951   |
| 318    | 952        | 953   | 954   |
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| 321    | 961        | 962   | 963   |
| 322    | 964        | 965   | 966   |
| 323    | 967        | 968   | 969   |
| 324    | 970        | 971   | 972   |
| 325    | 973        | 974   | 975   |
| 326    | 976        | 977   | 978   |
| 327    | 979        | 980   | 981   |
| 328    | 982        | 983   | 984   |
| 329    | 985        | 986   | 987   |
| 330    | 988        | 989   | 990   |
| 331    | 991        | 992   | 993   |
| 332    | 994        | 995   | 996   |
| 333    | 997        | 998   | 999   |
| 334    | 1000       | 1001  | 1002  |
| 335    | 1003       | 1004  | 1005  |
| 336    | 1006       | 1007  | 1008  |
| 337    | 1009       | 1010  | 1011  |
| 338    | 1012       | 1013  | 1014  |



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