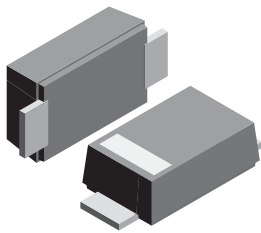




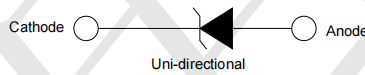
DESCRIPTION:

TVS diodes can be used in a wide range of applications which like consumer electronic products, automotive industries, munitions, telecommunications, aerospace industries, and intelligent control systems.

Package and Pin Configuration



SOD123FL



Maximum Ratings $T_A = 25^{\circ}\text{C}$ unless otherwise specified

| PARAMETER | SYMBOL | LIMIT | UNITS |
|--|-----------------------|-------------|----------------------|
| Peak Pulse Power Dissipation($t_p = 10/1000 \text{ us}$) | $P_{PP}^{(1,2)}$ | 400 | W |
| Peak Pulse Current on $t_p = 10/1000 \text{ us}$ waveform ^(Fig.2) | $I_{PPM}^{(1)}$ | See table 1 | A |
| ESD IEC61000-4-2(Air) | V_{ESD} | ± 30 | kV |
| ESD IEC61000-4-2(Contact) | | ± 30 | |
| Typical Thermal Resistance Junction to Ambient | $R_{\theta JA}^{(3)}$ | 200 | $^{\circ}\text{C/W}$ |
| Operating Junction Temperature Range | T_J | -55~150 | $^{\circ}\text{C}$ |
| Storage Temperature Range | T_{STG} | -65~150 | $^{\circ}\text{C}$ |



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TPTVSxS1UR series

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

ELECTRICAL CHARACTERISTICS(T_A=25°C)

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| Part Number | V _{RWM} | V _{BR} | | | I _R @V _{RWM} | V _C @I _{PP} | |
|--------------|------------------|-----------------|------|----------------|----------------------------------|---------------------------------|------|
| | | Min. | Max. | I _T | | V | A |
| UNI | V | V | V | mA | uA | V | A |
| TPTVS6V0S1UR | 6 | 6.67 | 7.37 | 10 | 50 | 10.3 | 38.8 |
| TPTVS6V5S1UR | 6.5 | 7.22 | 7.98 | 10 | 40 | 11.2 | 35.7 |
| TPTVS7V0S1UR | 7 | 7.78 | 8.6 | 10 | 40 | 12 | 33.3 |
| TPTVS7V5S1UR | 7.5 | 8.33 | 9.21 | 1 | 30 | 12.9 | 31 |
| TPTVS8V0S1UR | 8 | 8.89 | 9.83 | 1 | 5 | 13.6 | 29.4 |
| TPTVS8V5S1UR | 8.5 | 9.44 | 10.4 | 1 | 5 | 14.4 | 27.8 |
| TPTVS9V0S1UR | 9 | 10 | 11.1 | 1 | 0.5 | 15.4 | 26 |
| TPTVS10VS1UR | 10 | 11.1 | 12.3 | 1 | 0.5 | 17 | 23.5 |
| TPTVS11VS1UR | 11 | 12.2 | 13.5 | 1 | 0.5 | 18.2 | 22 |
| TPTVS12VS1UR | 12 | 13.3 | 14.7 | 1 | 0.5 | 19.9 | 20.1 |
| TPTVS13VS1UR | 13 | 14.4 | 15.9 | 1 | 0.1 | 21.5 | 18.6 |
| TPTVS14VS1UR | 14 | 15.6 | 17.2 | 1 | 0.1 | 23.2 | 17.2 |
| TPTVS15VS1UR | 15 | 16.7 | 18.5 | 1 | 0.1 | 24.4 | 16.4 |
| TPTVS16VS1UR | 16 | 17.8 | 19.7 | 1 | 0.1 | 26 | 15.4 |
| TPTVS17VS1UR | 17 | 18.9 | 20.9 | 1 | 0.1 | 27.6 | 14.5 |
| TPTVS18VS1UR | 18 | 20 | 22.1 | 1 | 0.1 | 29.2 | 13.7 |
| TPTVS20VS1UR | 20 | 22.2 | 24.5 | 1 | 0.1 | 32.4 | 12.3 |
| TPTVS22VS1UR | 22 | 24.4 | 26.9 | 1 | 0.1 | 35.5 | 11.3 |
| TPTVS24VS1UR | 24 | 26.7 | 29.5 | 1 | 0.1 | 38.9 | 10.3 |
| TPTVS26VS1UR | 26 | 28.9 | 31.9 | 1 | 0.1 | 42.1 | 9.5 |
| TPTVS28VS1UR | 28 | 31.1 | 34.4 | 1 | 0.1 | 45.4 | 8.8 |
| TPTVS30VS1UR | 30 | 33.3 | 36.8 | 1 | 0.1 | 48.4 | 8.3 |
| TPTVS33VS1UR | 33 | 36.7 | 40.6 | 1 | 0.1 | 53.3 | 7.5 |
| TPTVS36VS1UR | 36 | 40 | 44.2 | 1 | 0.1 | 58.1 | 6.9 |
| TPTVS40VS1UR | 40 | 44.4 | 49.1 | 1 | 0.1 | 64.5 | 6.2 |
| TPTVS43VS1UR | 43 | 47.8 | 52.8 | 1 | 0.1 | 69.4 | 5.8 |
| TPTVS45VS1UR | 45 | 50 | 55.3 | 1 | 0.1 | 72.2 | 5.5 |
| TPTVS48VS1UR | 48 | 53.3 | 58.9 | 1 | 0.1 | 77.4 | 5.2 |
| TPTVS51VS1UR | 51 | 56.7 | 62.7 | 1 | 0.1 | 82.4 | 4.9 |
| TPTVS54VS1UR | 54 | 60 | 66.3 | 1 | 0.1 | 87.1 | 4.6 |
| TPTVS58VS1UR | 58 | 64.4 | 71.2 | 1 | 0.1 | 93.6 | 4.3 |
| TPTVS60VS1UR | 60 | 66.7 | 73.7 | 1 | 0.1 | 96.8 | 4.1 |
| TPTVS64VS1UR | 64 | 71.1 | 78.6 | 1 | 0.1 | 103 | 3.9 |

RATINGS AND V-I CHARACTERISTICS CURVES ($T_A=25^\circ\text{C}$, unless otherwise noted)

Fig. 1 - Peak Pulse Power Rating Curve

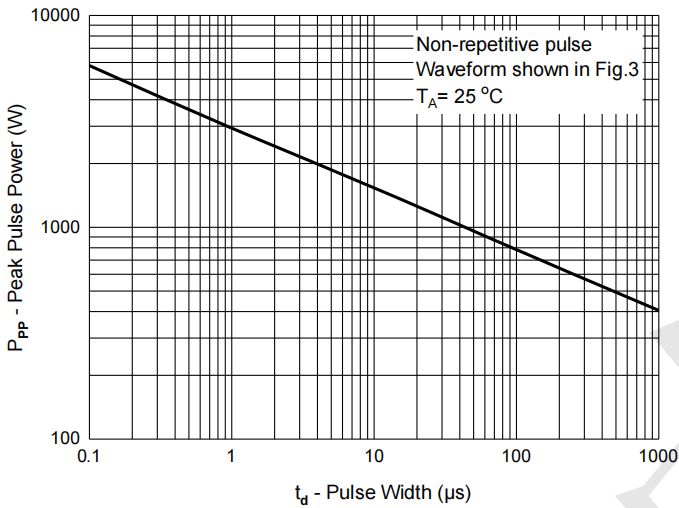


Fig. 2 - Typical Junction Capacitance

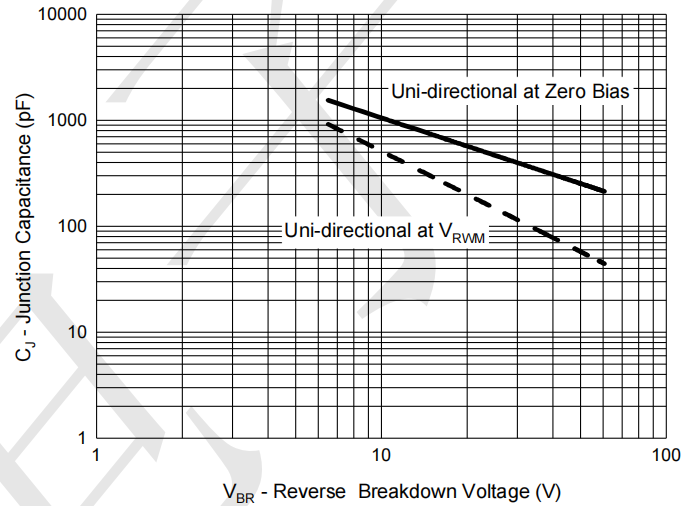


Fig. 3 - Pulse Waveform

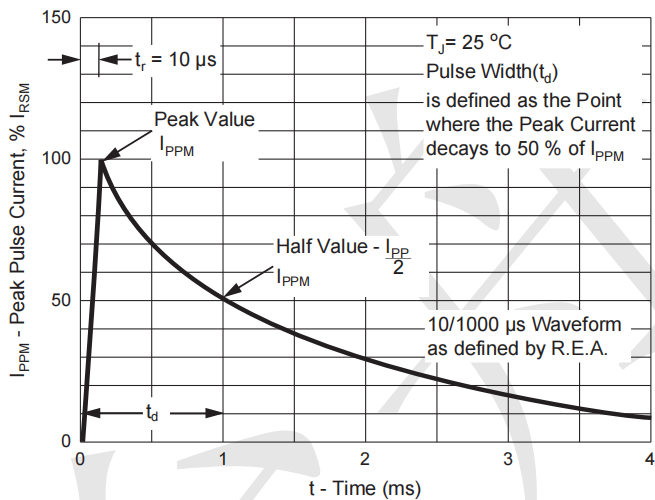
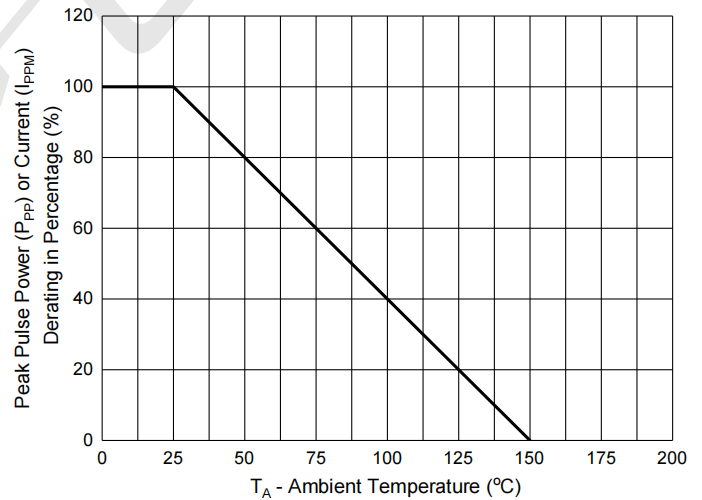


Fig. 4 - Pulse Derating Curve





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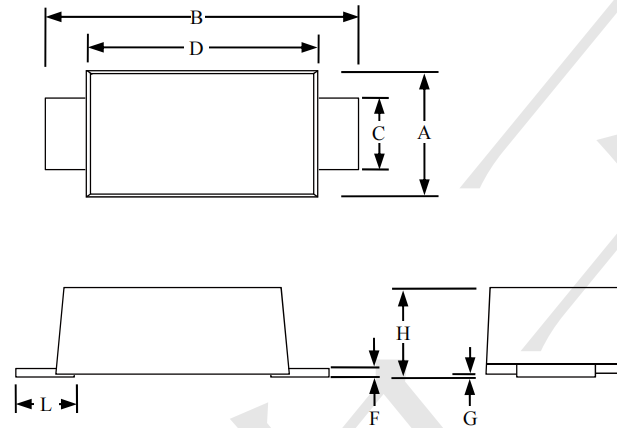
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TPTVSxS1UR series

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

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Package Outline Dimensions: SOD-123FL



| SOD-123FL | | | | | | |
|-----------|--------|-----|-------|-------------|-----|------|
| Dimension | Inches | | | Millimeters | | |
| | MIN | NOM | MAX | MIN | NOM | MAX |
| A | 0.059 | | 0.079 | 1.5 | | 2 |
| B | 0.134 | | 0.154 | 3.4 | | 3.9 |
| C | 0.028 | | 0.047 | 0.7 | | 1.2 |
| D | 0.098 | | 0.114 | 2.5 | | 2.9 |
| F | 0.002 | | 0.01 | 0.05 | | 0.26 |
| G | - | | 0.004 | - | | 0.1 |
| H | 0.037 | | 0.053 | 0.95 | | 1.35 |
| L | 0.014 | | 0.035 | 0.35 | | 0.9 |