

/ Descriptions

40V                      5.0A    SMA  
Surface Mount Schottky Barrier Rectifier, Reverse Voltage:40V, Forward Current:5.0A,SMA package.

/ Features

Low power loss, high efficiency, High forward surge current capability, For use in low voltage, high frequency inverters, and polarity protection applications,For surface mounted applications,HF product.

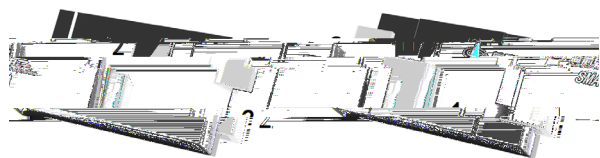
/ Applications

General purpose.

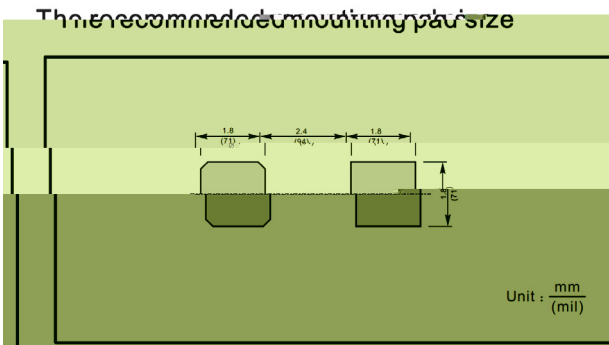
/ Equivalent Circuit



/ Pinning



| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |



/ Marking

See Marking Instructions.

/ Absolute Maximum Ratings( $T_a=25^\circ\text{C}$ )

| Parameter                                                                          | Symbol            | Rating     | Unit |
|------------------------------------------------------------------------------------|-------------------|------------|------|
| Maximum Repetitive Peak Reverse Voltage                                            | $V_{RRM}$         | 40         | V    |
| Maximum RMS voltage                                                                | $V_{RMS}$         | 28         | V    |
| Maximum DC Blocking Voltage                                                        | $V_{DC}$          | 40         | V    |
| Maximum Average Forward Rectified Current at $T_c=100^\circ\text{C}$               | $I_{F\text{ AV}}$ | 5          | A    |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load | $I_{FSM}$         | 150        | A    |
| Typical Junction Capacitance <sup>1)</sup>                                         | $C_i$             | 800        | pF   |
| Typical Thermal Resistance <sup>2)</sup>                                           | $R_{\theta JA}$   | 45         | /W   |
| Operating Junction Temperature Range                                               | $T_j$             | -55 ~ +150 |      |
| Storage Temperature Range                                                          | $T_{stg}$         | -55 ~ +150 |      |

Note:

- 1 Measured at 1 MHz and applied reverse voltage of 4 V D.C.
- 2 P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

/ Electrical Characteristics( $T_a=25^\circ\text{C}$ )

| Parameter                                              | Symbol | Test Conditions         | Rating | Unit |
|--------------------------------------------------------|--------|-------------------------|--------|------|
| Max Instantaneous Forward Voltage                      | $V_F$  | $I_F=5.0\text{A}$       | 0.45   | V    |
| Maximum DC Reverse Current at Rated DC Reverse Voltage | $I_R$  | $T_a=25^\circ\text{C}$  | 1.0    | mA   |
|                                                        |        | $T_a=100^\circ\text{C}$ | 50     |      |

## / Electrical Characteristic Curve

Fig.1 Forward Current Derating Curve

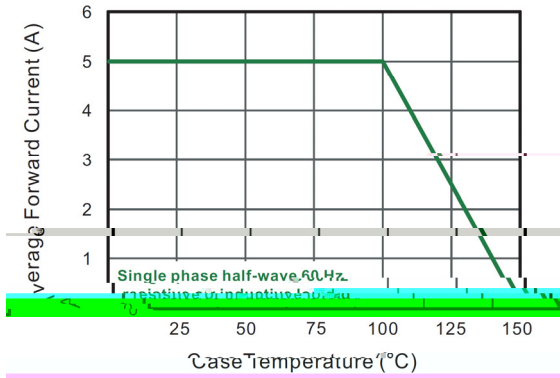


Fig.2 Typical Reverse Characteristics

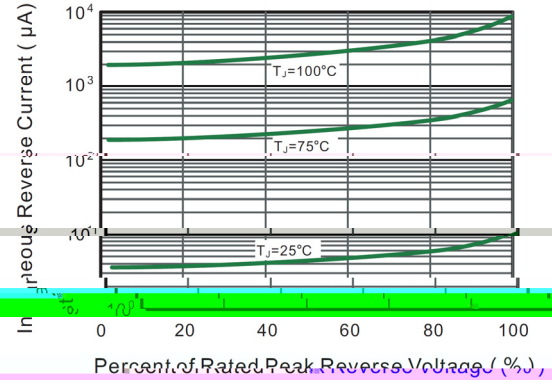


Fig.3 Typical Forward Characteristics

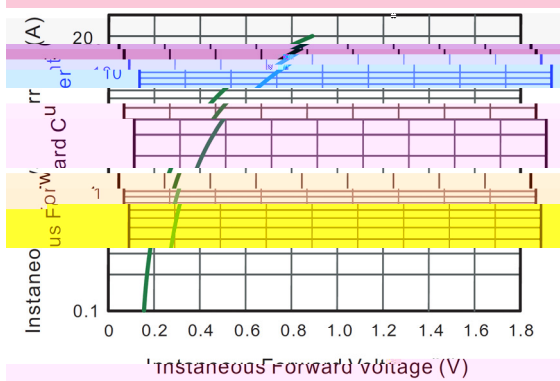


Fig.4 Typical Junction Capacitance

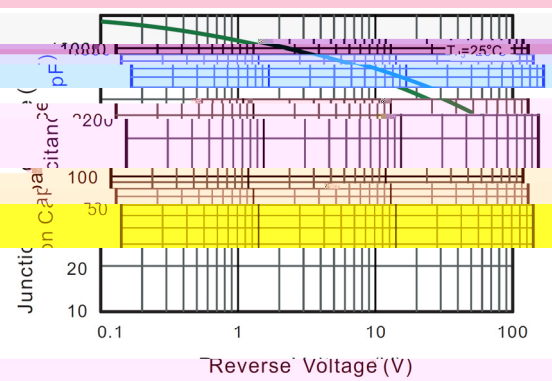


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

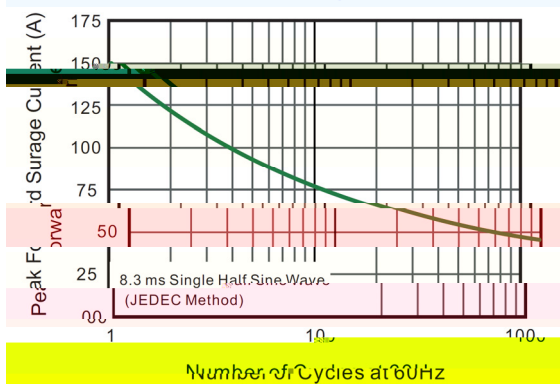
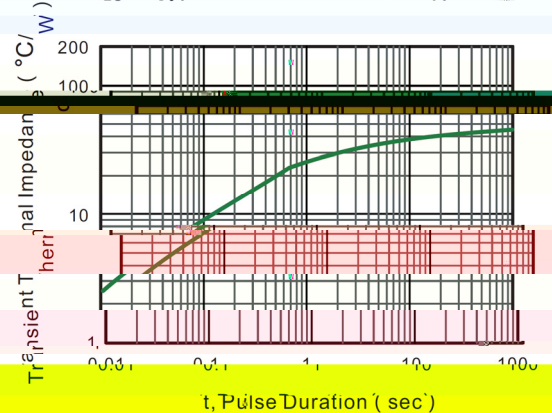
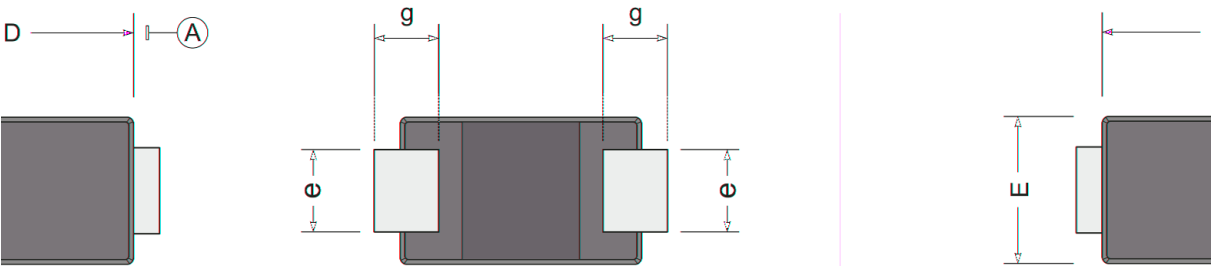
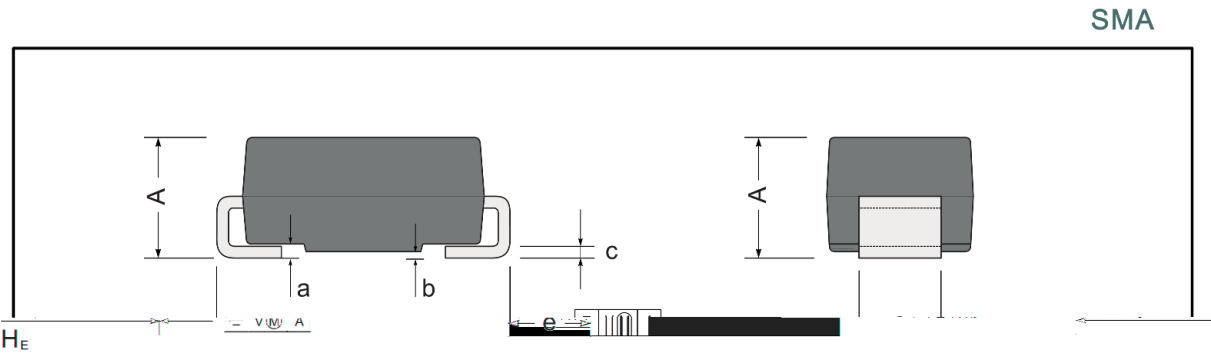


Fig.6 Typical Transient Thermal Impedance



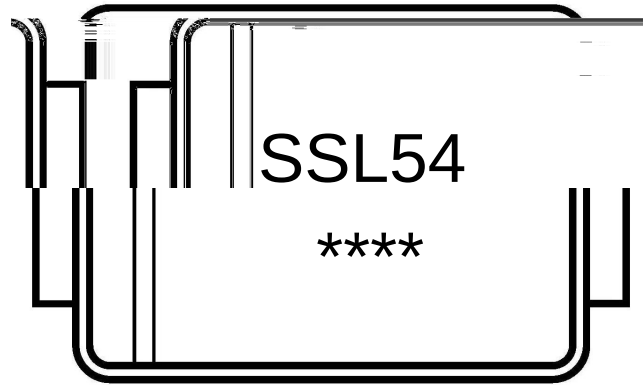
/ Package Dimensions



|     | D   | E   | H <sub>E</sub> | c    | e   | g   | b    | a   |
|-----|-----|-----|----------------|------|-----|-----|------|-----|
|     | 4.5 | 2.7 | 5.2            | 0.31 | 1.6 | 1.5 | 0.2  | 0.3 |
|     | 4.0 | 2.3 | 4.7            | 0.15 | 1.3 | 0.9 | 0.05 |     |
| max | 87  | 181 | 106            | 7.9  | 205 | 12  | 51   | 59  |
| min | 75  | 157 | 91             | 3.9  | 185 | 6   | 35   | 2   |

| UNIT |     | A   |
|------|-----|-----|
| mm   | max | 2.2 |
|      | min | 1.9 |
|      |     | mil |

/ Marking Instructions



SSL54

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Note:

SSL54      Product Type Code

\*\*\*\*      Lot No. Code, code change with Lot No

( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- 1

150 180

60 90sec;

1.Preheating:150~180 , Time:60~90sec.
- 2

245±5

5±0.5sec;

2.Peak Temp.:245±5 , Duration:5±0.5sec.
- 3

2 10 /sec.

3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260±5                      10±1 sec.                      Temp.:260±5℃                      Time:10±1 sec

/ Packaging SPEC.

/ REEL

| Package Type | Units      |                 |                 |                       |                 | Dimension (unit mm <sup>3</sup> ) |            |             |
|--------------|------------|-----------------|-----------------|-----------------------|-----------------|-----------------------------------|------------|-------------|
|              | Units/Reel | Reels/Inner Box | Units/Inner Box | Inner Boxes/Outer Box | Units/Outer Box | Reel                              | Inner Box  | Outer Box   |
| SMA          | 5,000      | 2               | 10,000          | 7                     | 70,000          | 13 ×12                            | 336×336×40 | 380×335×366 |

/ Notices