

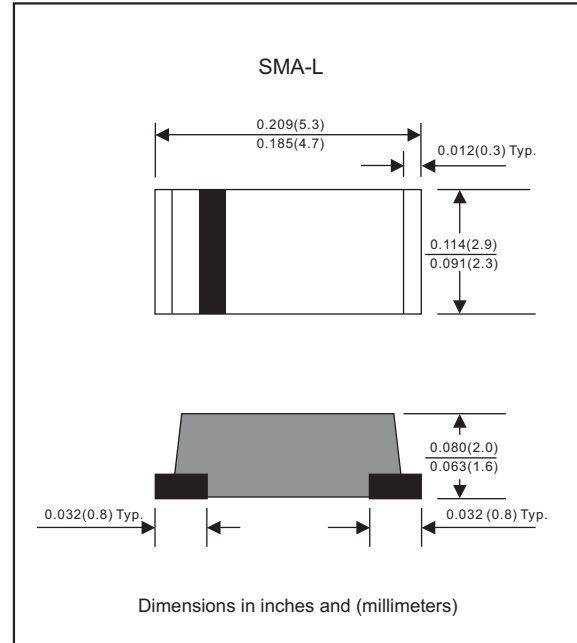
Features

- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low profile surface mounted application in order to optimize board space.
- High current capability.
- Fast switching for high efficiency.
- High surge current capability.
- Glass passivated chip junction.
- Moisture Sensivity Level 1
- **Pb-Free package is available**
RoHS product for packing code suffix "G"
Halogen free product for packing code suffix "H"

Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, JEDEC DO-214AC / SMA-L
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any
- Weight : Approximated 0.05 gram

Package outline



Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

| PARAMETER | CONDITIONS | Symbol | MIN. | TYP. | MAX. | UNIT |
|----------------------------|---|-----------|------|------|------|------------------|
| Forward rectified current | See Fig.2 | I_o | | | 1.0 | A |
| Forward surge current | 8.3ms single half sine-wave superimposed on rate load (JEDEC methode) | I_{FSM} | | | 30 | A |
| Reverse current | $V_R = V_{RRM}$ $T_J = 25^\circ\text{C}$ | I_R | | | 5.0 | μA |
| | $V_R = V_{RRM}$ $T_J = 125^\circ\text{C}$ | | | | 100 | |
| Diode junction capacitance | f=1MHz and applied 4V DC reverse voltage | C_J | | 15 | | pF |
| Storage temperature | | T_{STG} | -65 | | +175 | $^\circ\text{C}$ |

| SYMBOLS | V_{RRM}^{*1} (V) | V_{RMS}^{*2} (V) | V_R^{*3} (V) | V_F^{*4} (V) | t_{rr}^{*5} (ns) | Operating temperature T_J , ($^\circ\text{C}$) |
|----------|-----------------------|-----------------------|-------------------|-------------------|-----------------------|---|
| FFM101-L | 50 | 35 | 50 | 1.30 | 150 | -55 to +150 |
| FFM102-L | 100 | 70 | 100 | | | |
| FFM103-L | 200 | 140 | 200 | | | |
| FFM104-L | 400 | 280 | 400 | | 250 | |
| FFM105-L | 600 | 420 | 600 | | | |
| FFM106-L | 800 | 560 | 800 | | | |
| FFM107-L | 1000 | 700 | 1000 | 500 | | |

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage@ $I_F=1.0\text{A}$

*5 Maximum Reverse recovery time, note 1

Note 1. Reverse recovery time test condition, $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

Rating and characteristic curves

FIG.1-TYPICAL FORWARD CHARACTERISTICS

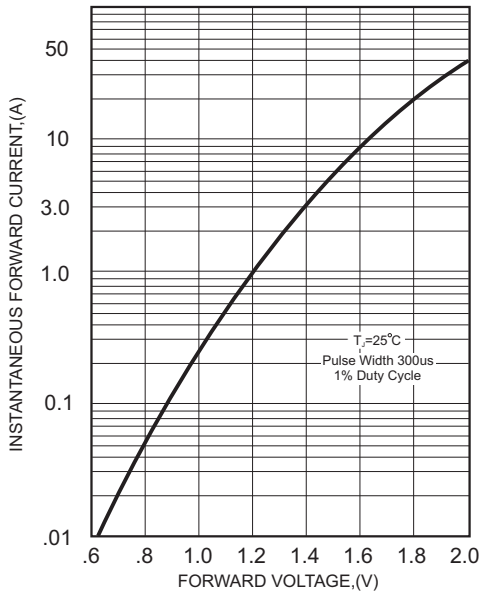


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

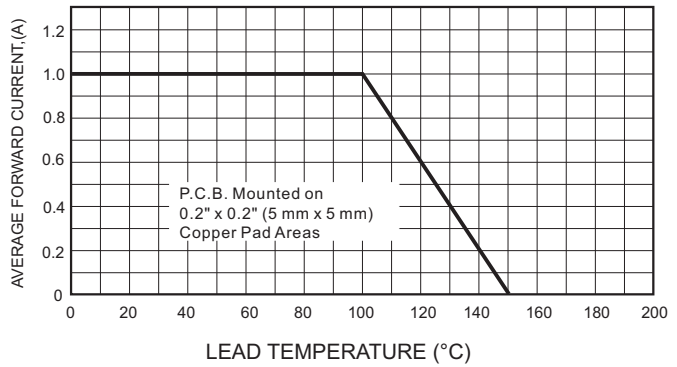


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

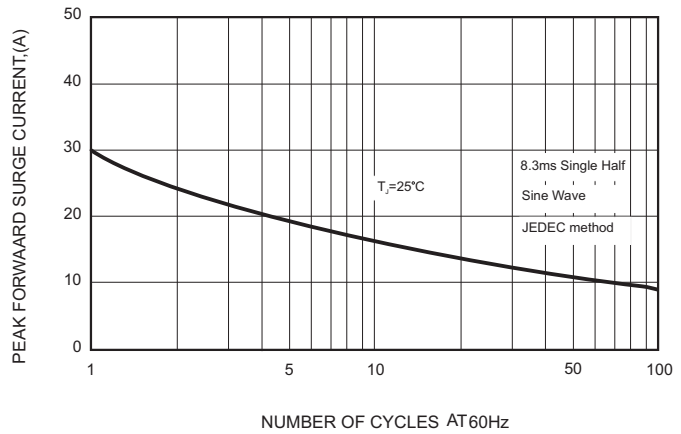
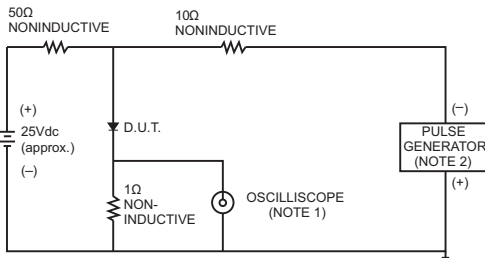


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

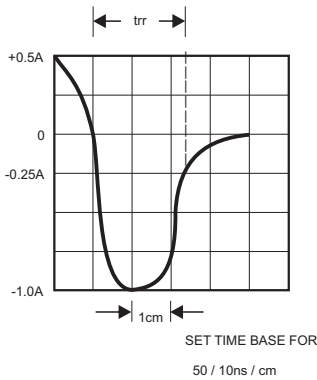
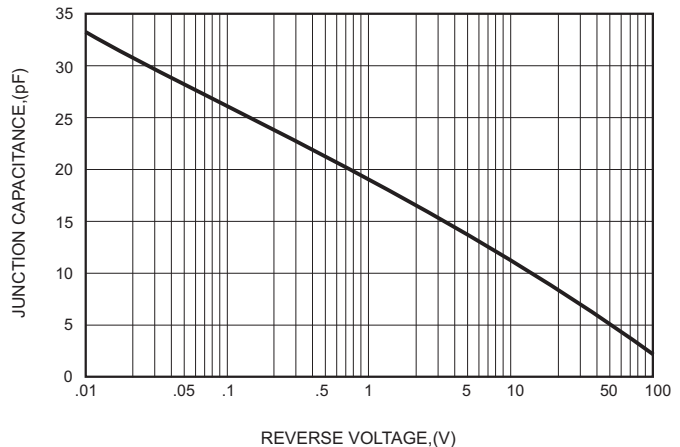




FIG.5-TYPICAL JUNCTION CAPACITANCE



Pinning information

| Pin | Simplified outline | Symbol |
|----------------------------|---|---|
| Pin1 cathode Pin2 anode |  |  |

Reel packing

| PACKAGE | REEL SIZE | REEL (pcs) | COMPONENT SPACING (m/m) | BOX (pcs) | INNER BOX (m/m) | REEL DIA, (m/m) | CARTON SIZE (m/m) | CARTON (pcs) | APPROX. GROSS WEIGHT (kg) |
|---------|-----------|------------|-------------------------|-----------|-----------------|-----------------|-------------------|--------------|---------------------------|
| SMA-L | 7" | 2,000 | 4.0 | 20,000 | 183*170*183 | 178 | 382*356*387 | 160,000 | 15.5 |
| SMA-L | 13" | 7,500 | 4.0 | 15,000 | 337*337*37 | 330 | 350*330*360 | 120,000 | 14.2 |

Marking

| Type number | Marking code |
|-------------|--------------|
| FFM101-L | F11 |
| FFM102-L | F12 |
| FFM103-L | F13 |
| FFM104-L | F14 |
| FFM105-L | F15 |
| FFM106-L | F16 |
| FFM107-L | F17 |

Note: L: Package code, SMA-L

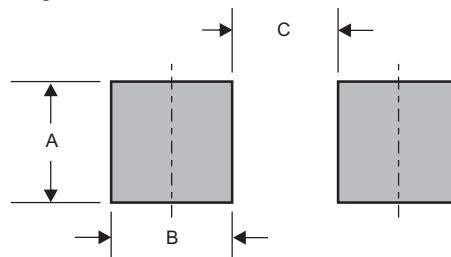
-T: Taping Reel

Pb-Free package is available

RoHS product for packing code suffix "G"

Halogen free product for packing code suffix "H"

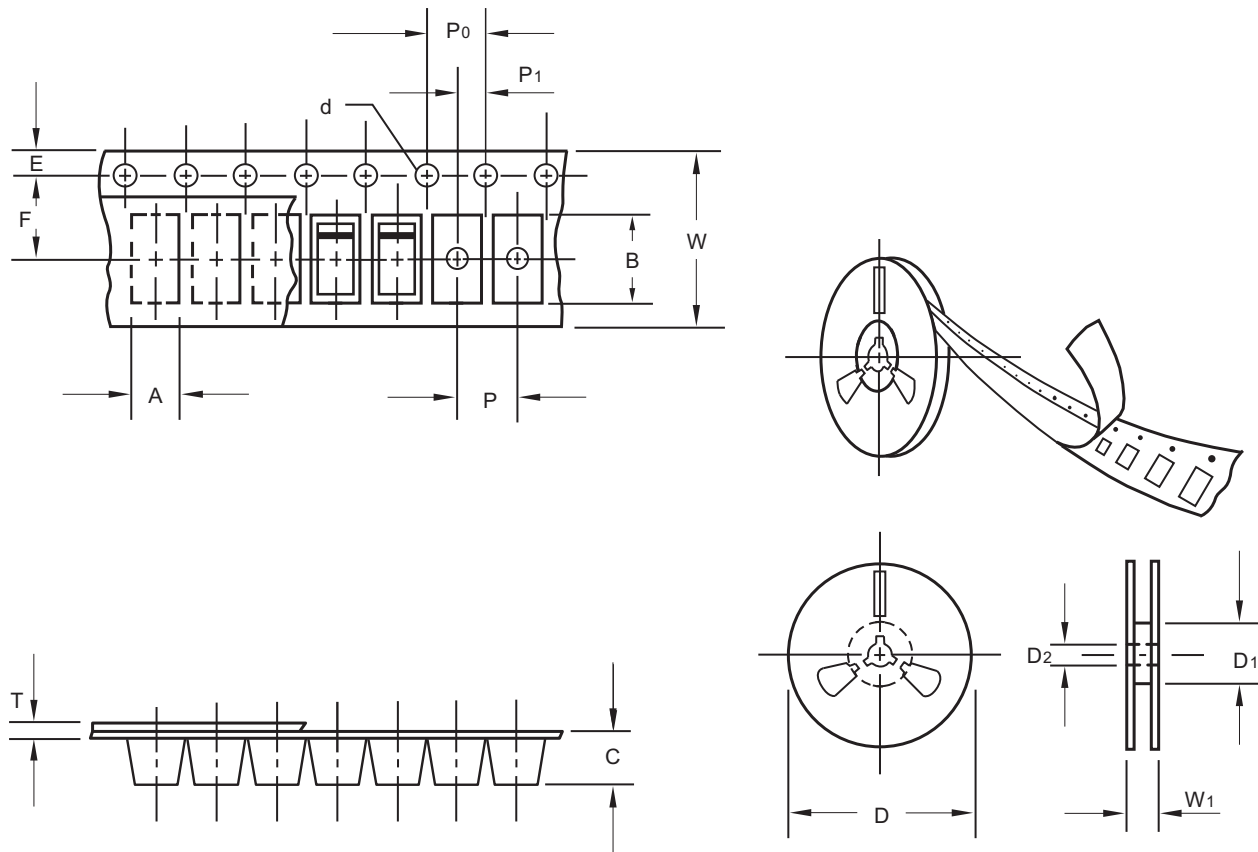
Suggested solder pad layout



Dimensions in inches and (millimeters)

| PACKAGE | A | B | C |
|---------|--------------|--------------|--------------|
| SMA-L | 0.110 (2.80) | 0.059 (1.50) | 0.110 (2.80) |

Packing information



unit:mm

| Item | Symbol | Tolerance | SMA |
|---------------------------|--------|-----------|--------|
| Carrier width | A | 0.1 | 2.80 |
| Carrier length | B | 0.1 | 5.00 |
| Carrier depth | C | 0.1 | 1.90 |
| Sprocket hole | d | 0.1 | 1.50 |
| 13" Reel outside diameter | D | 2.0 | 330.00 |
| 13" Reel inner diameter | D1 | min | 50.00 |
| 7" Reel outside diameter | D | 2.0 | 178.00 |
| 7" Reel inner diameter | D1 | min | 62.00 |
| Feed hole diameter | D2 | 0.5 | 13.00 |
| Sprocket hole position | E | 0.1 | 1.75 |
| Punch hole position | F | 0.1 | 5.50 |
| Punch hole pitch | P | 0.1 | 4.00 |
| Sprocket hole pitch | P0 | 0.1 | 4.00 |
| Embossment center | P1 | 0.1 | 2.00 |
| Overall tape thickness | T | 0.1 | 0.23 |
| Tape width | W | 0.3 | 12.00 |
| Reel width | W1 | 1.0 | 18.00 |

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.