

## SMAG Plastic-Encapsulate Diodes

### Schottky Rectifier

#### Features

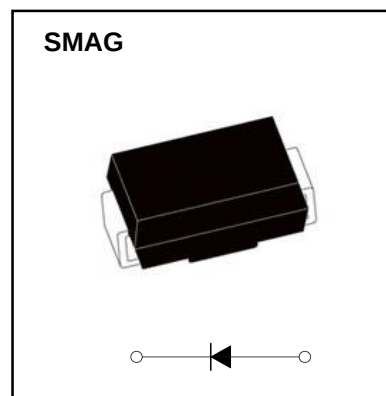
- $I_O$  5A
- $V_{RRM}$  60V
- High surge current capability
- Polarity: Color band denotes cathode
- Low  $V_f$

#### Applications

- Rectifier

#### Marking

- SS56L



#### Limiting Values(Absolute Maximum Rating)

| Item                                 | Symbol      | Unit             | Test Conditions                                         | SS56L      |
|--------------------------------------|-------------|------------------|---------------------------------------------------------|------------|
| Repetitive Peak Reverse Voltage      | $V_{RRM}$   | V                |                                                         | 60         |
| Maximum RMS Voltage                  | $V_{RMS}$   | V                |                                                         | 42         |
| Average Forward Current              | $I_{F(AV)}$ | A                | 60Hz Half-sine wave,<br>Resistance load                 | 5.0        |
| Surge(Non-repetitive)Forward Current | $I_{FSM}$   | A                | 60Hz Half-sine wave,<br>1 cycle, $T_a=25^\circ\text{C}$ | 120        |
| Junction Temperature                 | $T_J$       | $^\circ\text{C}$ |                                                         | -55 ~ +150 |
| Storage Temperature                  | $T_{STG}$   | $^\circ\text{C}$ |                                                         | -55 ~ +150 |

#### Electrical Characteristics ( $T=25^\circ\text{C}$ Unless otherwise specified)

| Item                           | Symbol           | Unit               | Test Condition                                            |                         | SS56L |
|--------------------------------|------------------|--------------------|-----------------------------------------------------------|-------------------------|-------|
| Peak Forward Voltage           | $V_F$            | V                  | $I_F=5.0\text{A}$                                         | $T_a=25^\circ\text{C}$  | 0.50  |
| Peak Reverse Current           | $I_{RRM1}$       | mA                 | $V_{RM}=V_{RRM}$                                          | $T_a=25^\circ\text{C}$  | 0.3   |
|                                | $I_{RRM2}$       |                    |                                                           | $T_a=100^\circ\text{C}$ | 50    |
| Thermal Resistance(Typical)    | $R_{\theta J-A}$ | $^\circ\text{C/W}$ | Between junction and ambient                              |                         | 75    |
|                                | $R_{\theta J-L}$ |                    | Between junction and lead                                 |                         | 27    |
| Junction Capacitance (Typical) | $C_j$            | pF                 | Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C |                         | 400   |

#### Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on FR4 PCB double sided copper mini pad

## Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

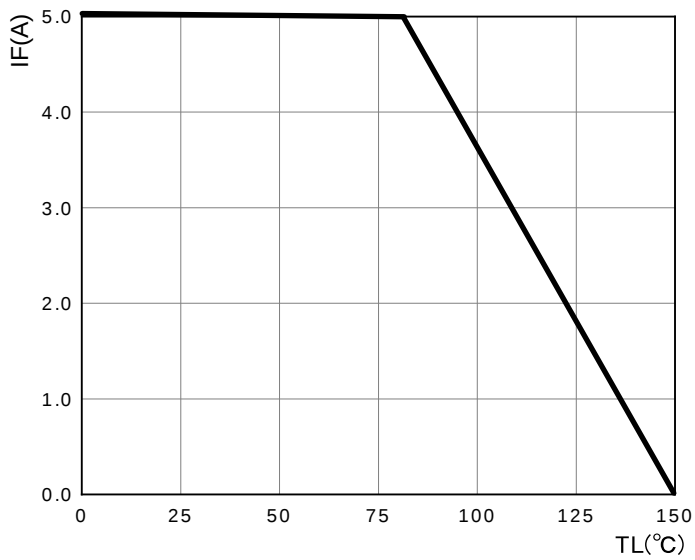


FIG 2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



FIG.3: TYPICAL FORWARD CHARACTERISTICS

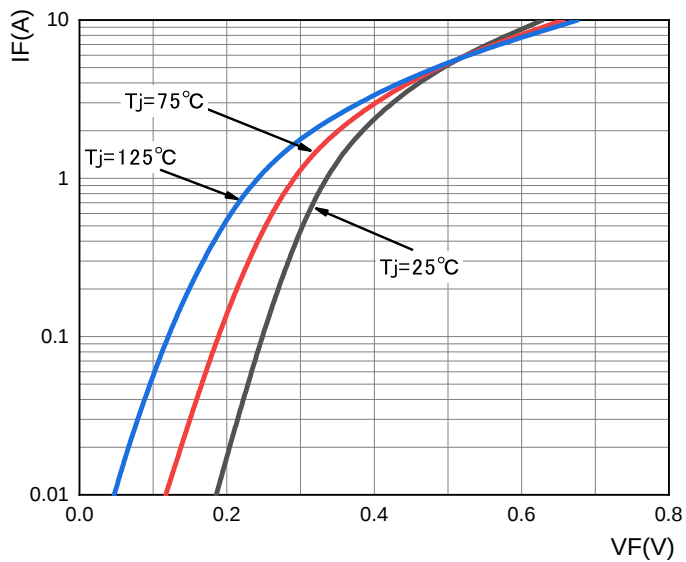
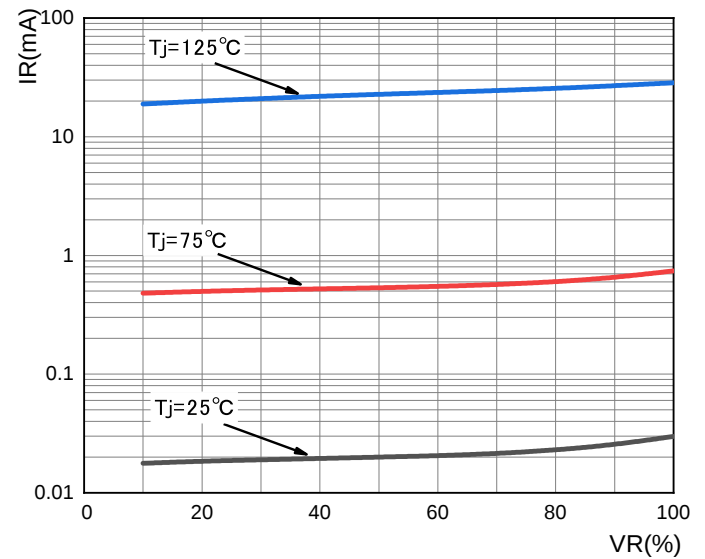
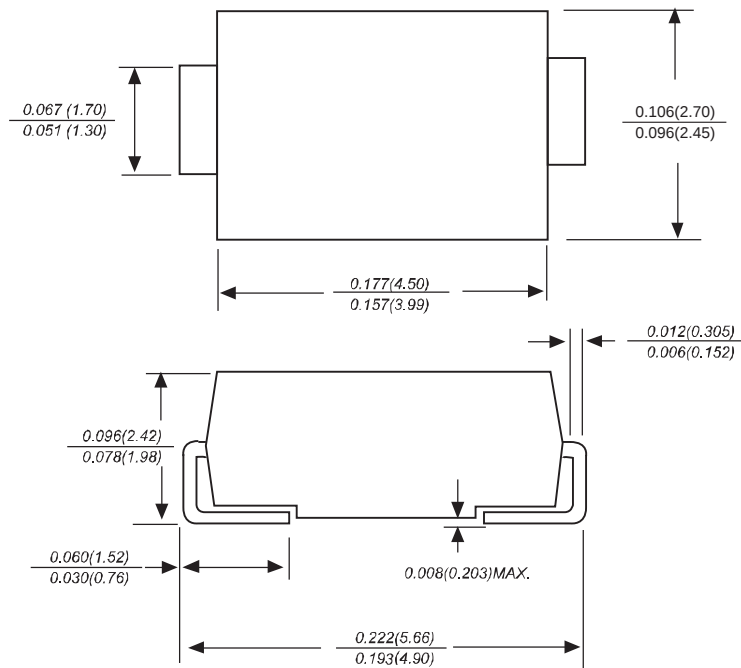


FIG.4: TYPICAL REVERSE CHARACTERISTICS

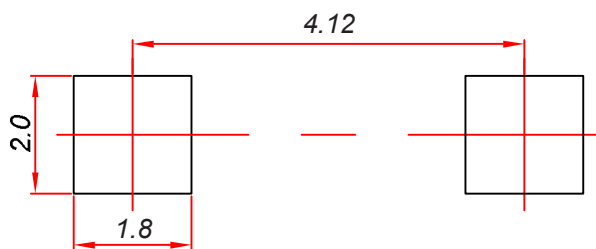


## SMAG Package Outline Dimensions



Dimensions in inches and (millimeters)

## SMAG Suggested Pad Layout



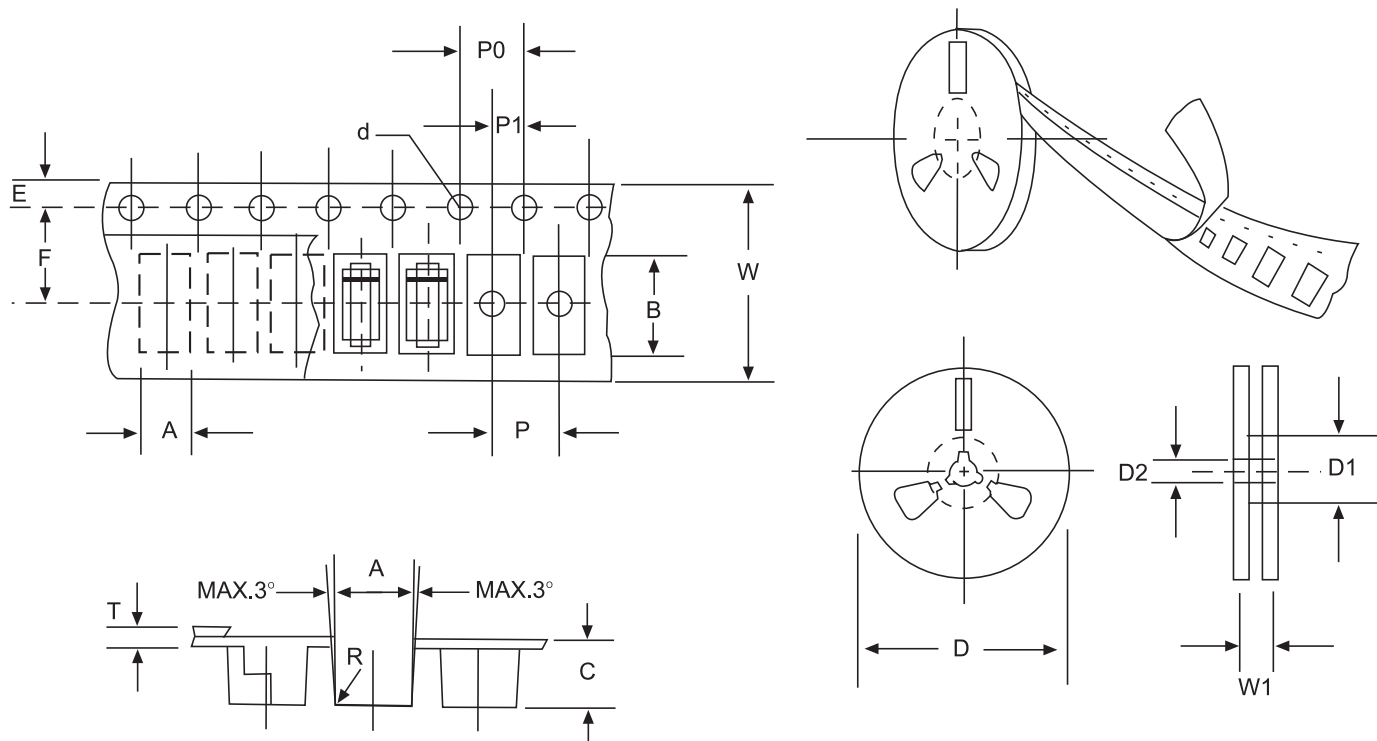
### Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.

### NOTICE

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## Reel Taping Specifications For Surface Mount Devices- SMAG



**Fig:CONFIGURATION OF FLAT MELF TAPING**

| ITEM                   | SYMBOL | SMAG mm(inch)             |
|------------------------|--------|---------------------------|
| Carrier width          | A      | 2.79±0.1(0.110±0.004)     |
| Carrier length         | B      | 5.33±0.1(0.210±0.004)     |
| Carrier depth          | C      | 2.36±0.1(0.093±0.004)     |
| Sprocket hole          | d      | 1.55±0.05 (0.061±0.002)   |
| Reel outside diameter  | D      | 279±2.0 (11± 0.079)       |
| Reel inner diameter    | D1     | 75 ±1.0 ( 2.95 ±0.039)    |
| Feed hole diameter     | D2     | 13±0.5(0.512±0.020)       |
| Sprocket hole position | E      | 1.75±0.1(0.069±0.004)     |
| Punch hole position    | F      | 5.5±0.05(0.217±0.002)     |
| Punch hole pitch       | P      | 4.0±0.1(0.157±0.004)      |
| Sprocket hole pitch    | P0     | 4.0±0.1(0.157±0.004)      |
| Embossment center      | P1     | 2.0±0.1(0.079±0.004)      |
| Total tape thickness   | T      | 0.28±0.02(0.011 ±0.0008 ) |
| Tape width             | W      | 12.0±0.2(0.472±0.008)     |
| Reel width             | W1     | 16.8±2.0(0.661±0.079)     |

NOTE: Devices are packed in accordance with EIA standard RS-481-A and specification given above.