

SFM31 THRU SFM36

Super fast recovery type

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O Utilizing Flame Retardant Epoxy Molding Compound.
- For surface mounted applications.
- Exceeds environmental standards of MIL-S-19500 / 228
- Low leakage current

Mechanical data

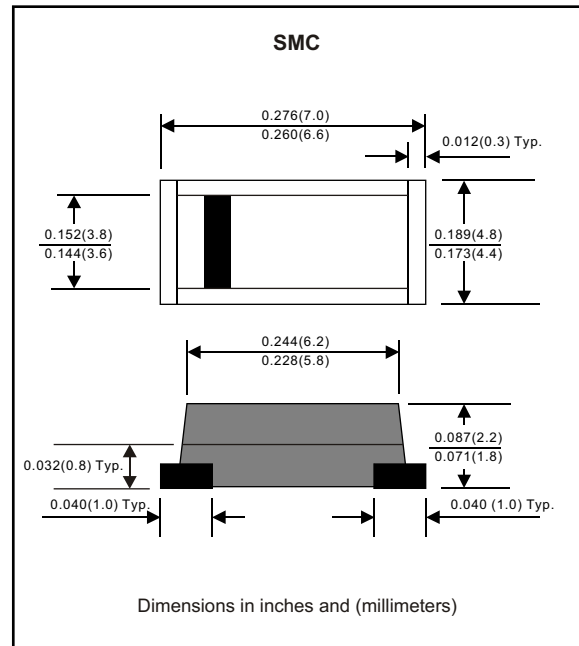
Case : Molded plastic, JEDECDO-214AB

Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Indicated by cathode band

Mounting Position : Any

Weight : 0.00585 ounce, 0.195 gram



MAXIMUM RATINGS (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

| PARAMETER | CONDITIONS | Symbol | MIN. | TYP. | MAX. | UNIT |
|----------------------------|---|-----------|------|------|------|-------------------------------|
| Forward rectified current | Ambient temperature = 50°C | I_O | | | 3.0 | A |
| Forward surge current | 8.3ms single half sine-wave superimposed on rate load (JEDEC methode) | I_{FSM} | | | 100 | A |
| Reverse current | $V_R = V_{RRM}$ $T_A = 25^{\circ}\text{C}$ | I_R | | | 5.0 | μA |
| | $V_R = V_{RRM}$ $T_A = 100^{\circ}\text{C}$ | | | | 100 | μA |
| Thermal resistance | Junction to ambient | R_{QJA} | | 16 | | $^{\circ}\text{C} / \text{w}$ |
| Diode junction capacitance | $f=1\text{MHz}$ and applied 4vDC reverse voltage | C_J | | 45 | | pF |
| Storage temperature | | T_{STG} | -55 | | +150 | $^{\circ}\text{C}$ |

| SYMBOLS | MARKING CODE | V_{RRM}^{*1} (V) | V_{RMS}^{*2} (V) | V_R^{*3} (V) | V_F^{*4} (V) | T_{RR}^{*5} (nS) | Operating temperature ($^{\circ}\text{C}$) |
|---------|--------------|-----------------------|-----------------------|-------------------|-------------------|-----------------------|---|
| SFM31 | S31 | 50 | 35 | 50 | 0.95 | 35 | -55 to +150 |
| SFM32 | S32 | 100 | 70 | 100 | | | |
| SFM33 | S33 | 150 | 105 | 150 | | | |
| SFM34 | S34 | 200 | 140 | 200 | 1.25 | | |
| SFM35 | S35 | 300 | 210 | 300 | | | |
| SFM36 | S36 | 400 | 280 | 400 | | | |

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage

*5 Reverse recovery time

RATING AND CHARACTERISTIC CURVES (SFM31 THRU SFM36)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

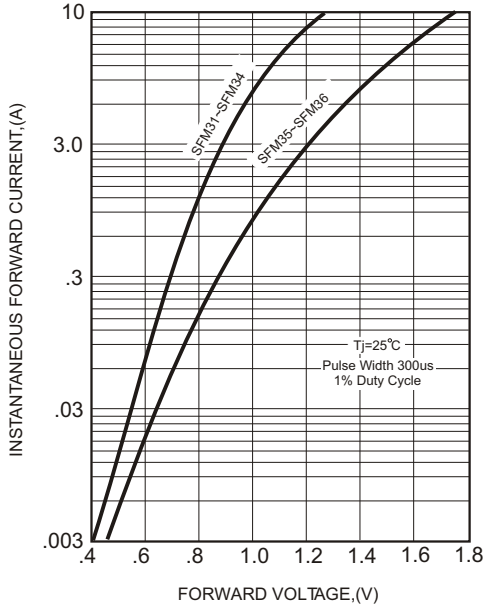


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

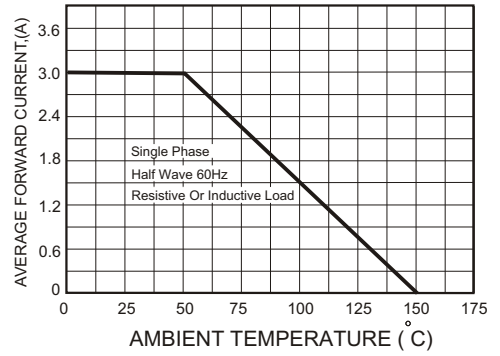
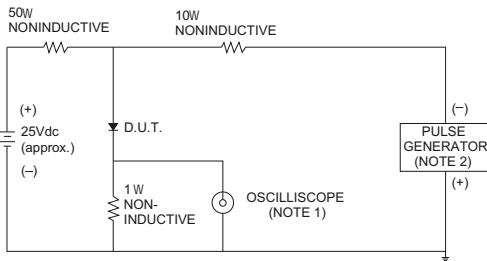


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

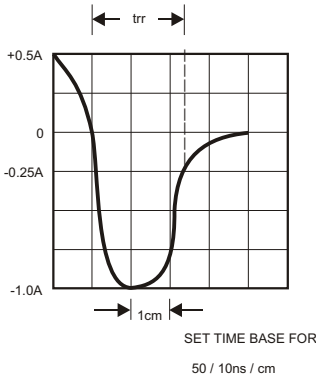


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

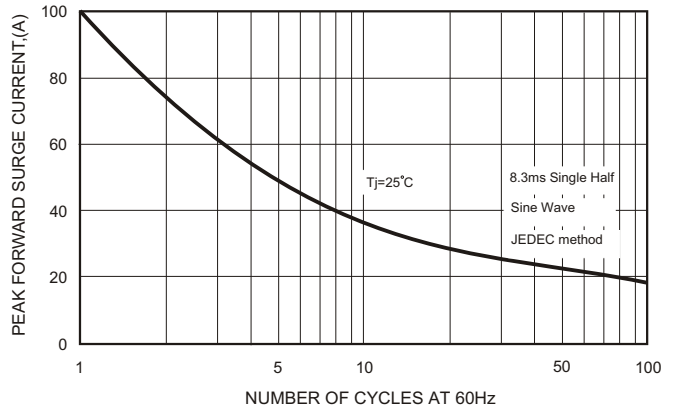


FIG.5-TYPICAL JUNCTION CAPACITANCE

