

# FM820 THRU FM860

Silicon epitaxial planer type

## Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0 Utilizing Flame Retardant Epoxy Molding Compound.
- For surface mounted applications.
- Exceeds environmental standards of ML-S-19500 / 228
- Low leakage current

## Mechanical data

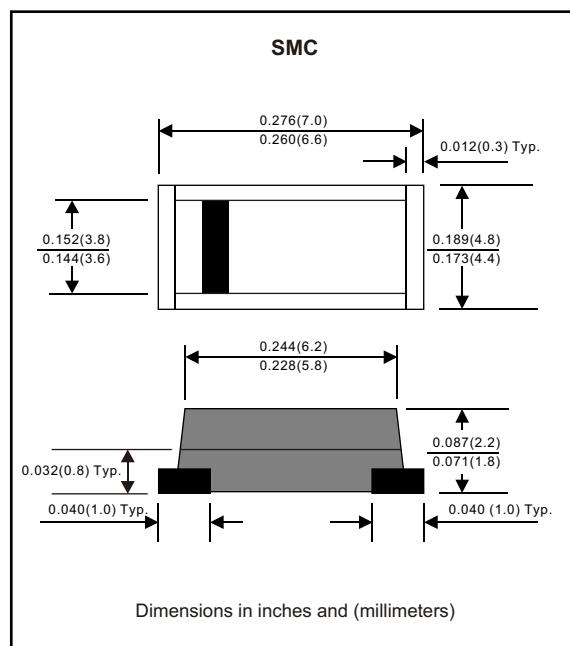
Case : Molded plastic, JEDEC DO-214AB

Terminals : Solder plated, solderable per ML-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  | See Fig.1                                                             | $I_O$     |      |      | 8.0  | A                             |
| Forward surge current      | 8.3ms single half sine-wave superimposed on rate load (JEDEC methode) | $I_{FSM}$ |      |      | 150  | A                             |
| Reverse current            | $V_R = V_{RRM} \quad T_A = 25^{\circ}\text{C}$                        | $I_R$     |      |      | 5.0  | mA                            |
|                            | $V_R = V_{RRM} \quad T_A = 100^{\circ}\text{C}$                       |           |      |      | 50   | mA                            |
| Thermal resistance         | Junction to ambient                                                   | $R_{JA}$  |      | 55   |      | $^{\circ}\text{C} / \text{W}$ |
| Diode junction capacitance | $f=1\text{MHz}$ and applied 4vDC reverse voltage                      | $C_J$     |      | 700  |      | pF                            |
| Storage temperature        |                                                                       | $T_{STG}$ | -55  |      | +150 | $^{\circ}\text{C}$            |

| SYMBOLS | MARKING CODE | $V_{RRM}^{*1}$<br>(V) | $V_{RMS}^{*2}$<br>(V) | $V_R^{*3}$<br>(V) | $V_F^{*4}$<br>(V) | Operating temperature<br>(°C) |
|---------|--------------|-----------------------|-----------------------|-------------------|-------------------|-------------------------------|
| FM820   | SK82         | 20                    | 14                    | 20                | 0.65              | -55 to +125                   |
| FM830   | SK83         | 30                    | 21                    | 30                |                   |                               |
| FM840   | SK84         | 40                    | 28                    | 40                |                   |                               |
| FM850   | SK85         | 50                    | 35                    | 50                | 0.70              |                               |
| FM860   | SK86         | 60                    | 42                    | 60                |                   |                               |

\*1 Repetitive peak reverse voltage

\*2 RMS voltage

\*3 Continuous reverse voltage

\*4 Maximum forward voltage

## RATING AND CHARACTERISTIC CURVES (FM820 THRU FM860)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

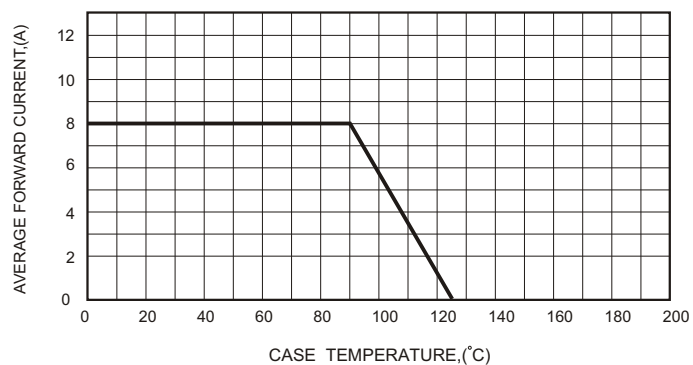


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

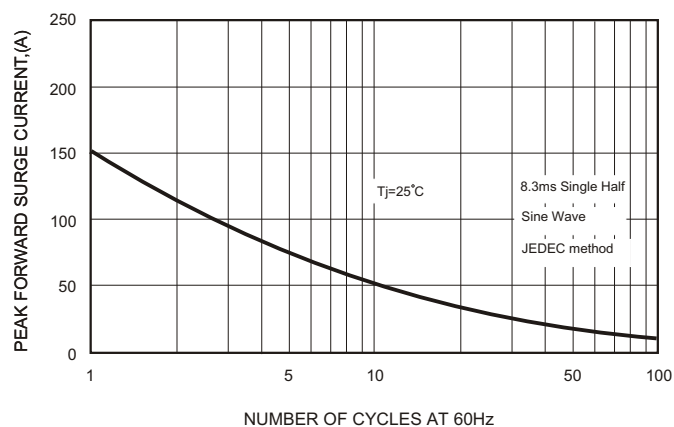


FIG.4-TYPICAL JUNCTION CAPACITANCE

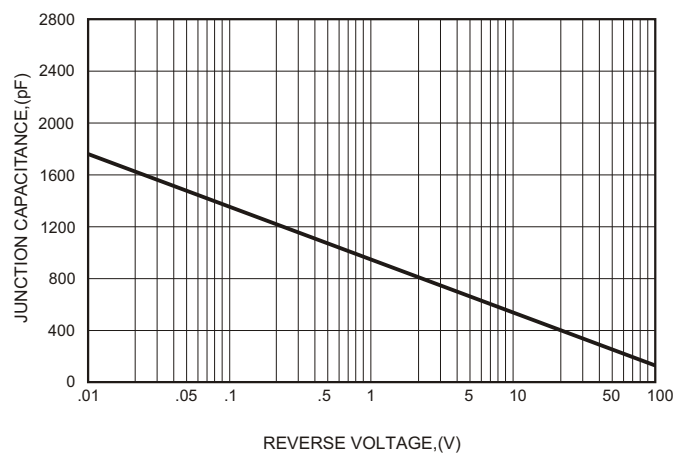


FIG.2-TYPICAL FORWARD CHARACTERISTICS

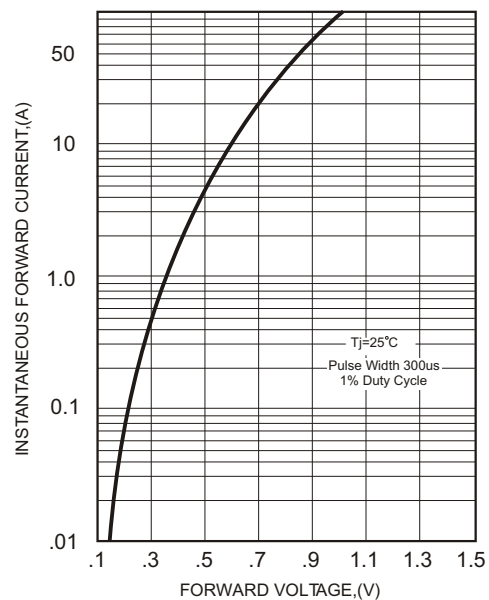


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

