

■ Features

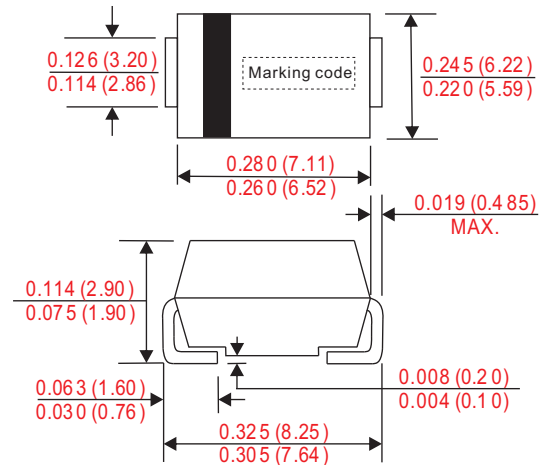
- Low profile surface mounted application in order to optimize board space.
- High current capability.
- Fast switching for high efficiency.
- High surge current capability.
- Glass passivated chip junction.
- Suffix "G" indicates Halogen free parts, ex. FS3AG
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, DO-214AB / SMC
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Weight : 0.007 ounce, 0.226 gram

■ Outline

SMC(DO-214AB)



Dimensions in inches and (millimeters)

■ Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Parameter | Conditions | Symbol | MIN. | TYP. | MAX. | UNIT |
|----------------------------|--|-----------------|------|------|------|------|
| Forward rectified current | 0.375"(9.5mm) lead length at $T_A = 75^\circ\text{C}$ | I_O | | | 3.0 | A |
| Forward surge current | 8.3ms single half sine-wave superimposed on rate load (JEDEC method) | I_{FSM} | | | 100 | A |
| Reverse current | $V_R = V_{RRM}$ $T_A = 25^\circ\text{C}$ | I_R | | | 5.0 | uA |
| | $V_R = V_{RRM}$ $T_A = 125^\circ\text{C}$ | | | | 100 | |
| Thermal resistance | Junction to ambient | $R_{\theta JA}$ | | 20 | | °C/W |
| Diode junction capacitance | f=1MHz and applied 4V DC reverse voltage | C_J | | 60 | | pF |
| Storage temperature | | T_{STG} | -55 | | +150 | °C |

| Symbol | Marking code | Max. repetitive peak reverse voltage V_{RRM} (V) | Max. RMS voltage V_{RMS} (V) | Max. DC blocking voltage V_R (V) | Max. forward voltage @3A, $T_A = 25^\circ\text{C}$ V_F (V) | Max. reverse recovery time(1) T_{rr} (ns) | Operating temperature T_J (°C) |
|--------|--------------|--|--------------------------------|------------------------------------|--|---|----------------------------------|
| FS3A | FS3A | 50 | 35 | 50 | 1.30 | 150 | -55 ~ +150 |
| FS3B | FS3B | 100 | 70 | 100 | | | |
| FS3D | FS3D | 200 | 140 | 200 | | | |
| FS3G | FS3G | 400 | 280 | 400 | | 250 | |
| FS3J | FS3J | 600 | 420 | 600 | | | |
| FS3K | FS3K | 800 | 560 | 800 | | 500 | |
| FS3M | FS3M | 1000 | 700 | 1000 | | | |

Note : 1. $I_F = 0.5A$, $I_R = 1.0A$, $I_{RR} = 0.25A$

■ Rating and characteristic curves

Fig. 1 - Forward Current Derating Curve

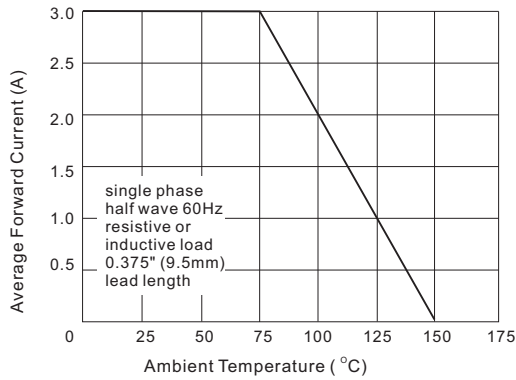


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

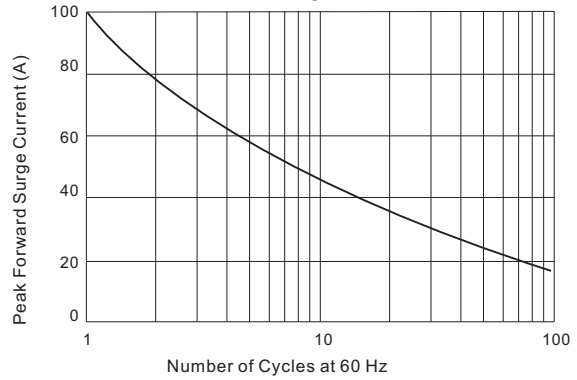


Fig. 3 - Typical Instantaneous Forward Characteristics

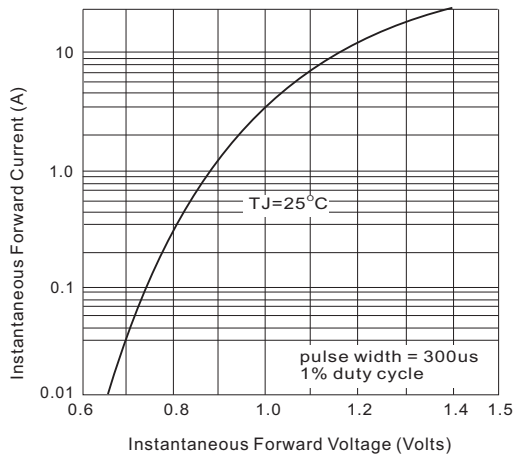


Fig. 4 - Typical Reverse Characteristics

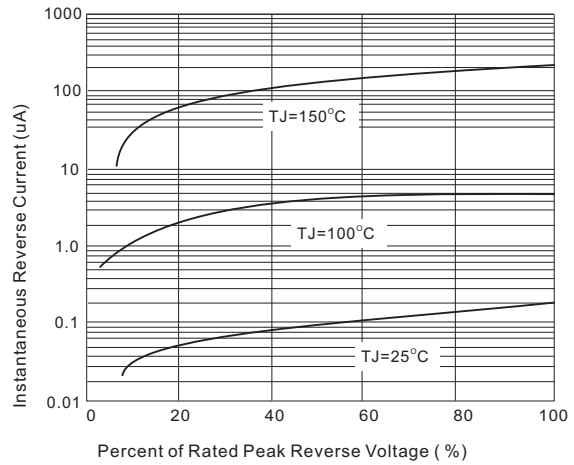
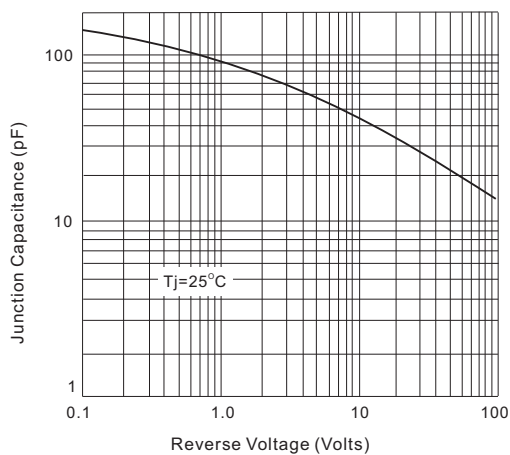
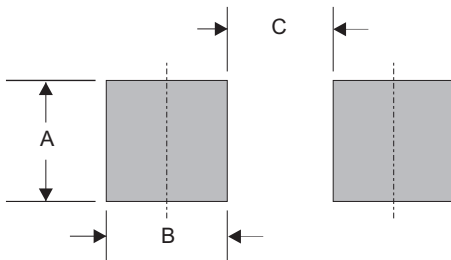


Fig. 5 - Typical Junction Capacitance



■ SMC foot print



| A | B | C |
|--------------|--------------|--------------|
| 0.132 (3.30) | 0.098 (2.50) | 0.176 (4.40) |

Dimensions in inches and (millimeters)

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