## SMC(DO-214AB)

## Features

- ROHS compliant
- Glass passivated chip
- High forward surge capability
- Meet MSL level 1, per J-STD-020 LF maximum peak of 250 °C
- Solder dip 260 °C / 40S
- Component in accordance to ROHS 2002/95/EC and WEEE 2002/96/WC
- UL recognition, file number E342874

## Primary characteristics

| | |
|---|---|
| $I_{F(AV)}$ | 3A |
| $V_{RRM}$ | 50V to 1000V |
| $I_{FSM}$ | 100A |
| $I_{RM}$ | 10uA |
| $V_{FM}$ at $I_F$=3A | 1.3V |
| $T_J$ max. | 150 °C |

## Applications

Ideal for ac-to-dc bridge full wave rectification suck as SMPS, home applianes, office equipment, indusrial automation applicatios

## Mechanical data

- SMC(DO-214AB)
- Epoxy meets UL 94 V-0 flammability rating
- Terminals: Tin plated leads.
- Polarity: As marked.
- Mounting Torque:10cm-kg(8.8 inches-lbs)max.
- Recommended Torque:5.7 cm-kg(5 inches-lbs)

## Maximum rating (Ta=25°C unless otherwise noted)

| Parameter | | Sym | SMC(DO-214AB) | | | | | | | Unit |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | GR3A | GR3B | GR3D | GR3G | GR3J | GR3K | GR3M | |
| Max. repetitive peak reverse voltage | | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Max. RMS reverse voltage | | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Max. DC blocking voltage | | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Max. average forward current | | $I_{F(AV)}$ | 3 | | | | | | | A |
| Non-repetitive peak forward surge current 8.3ms single half-sine-wave | | $I_{FSM}$ | 100 | | | | | | | A |
| Max. instantaneous forward voltage drop per diode | | $V_{FM}$ | 1.3 (3A) | | | | | | | V |
| Max. instantaneous reverse current | Ta=25 °C | $I_{RM}$ | 10 | | | | | | | μA |
| at rated DC blocking voltage | Ta=125 °C | | 250 | | | | | | | |
| Operating junction temperature | | $T_J$ | -55 ~ +150 | | | | | | | °C |
| Storage temperature | | $T_{STG}$ | -55 ~ +150 | | | | | | | °C |
| Maximum reverse recovery time (Note 1) | | trr | 150 | | | | 250 | 500 | | nS |
| Typical thermal resistance (Note 2) | | $R_{\Theta J-A}$ | 50 | | | | | | | °C/W |
| | | $R_{\Theta J-L}$ | 15 | | | | | | | |
| Typical junction capacitance (Note 3) | | $C_J$ | 75 | | | | | | | pF |

**Notes**: 1 Reverse Recovery Test Conditions: $I_F$ =0.5A, $I_R$ =1.0A, $I_{RR}$=0.25

2 Thermal Resistance from Junction to Ambient and from Junction to Lead Mounted on P.C.B. with 0.3" x 0.3" ( 8.0 x 8.0 mm ) Copper Pad Areas

3 Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C

| Ordering information (Example) | | | | |
|---|---|---|---|---|
| PREFERRED | UNIT WEIGHT (g) | PREFERRED PACKAGE CODE | BASE QUANTITY | DELIVERY MODE |
| GR3M | | | | |

## Typical characteristics

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

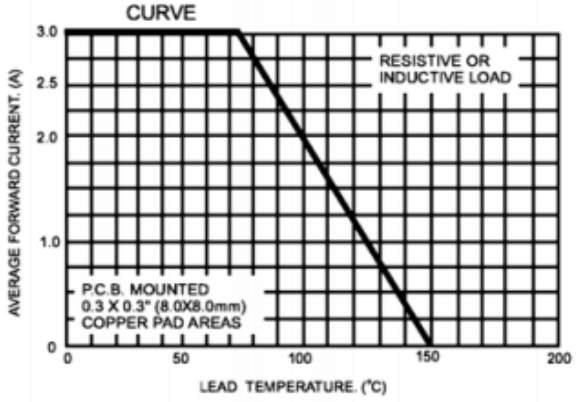



FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

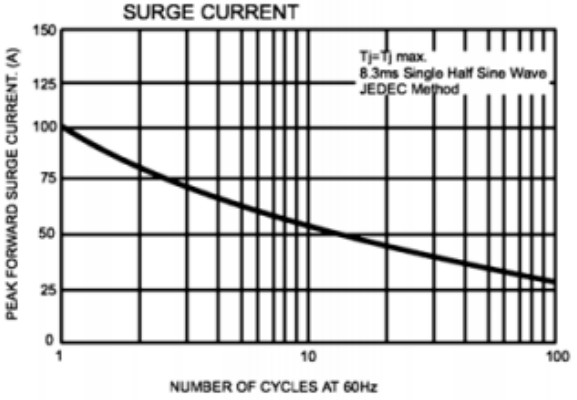



FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

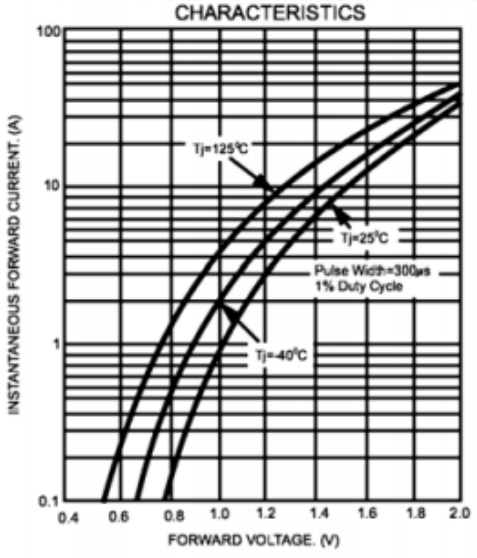
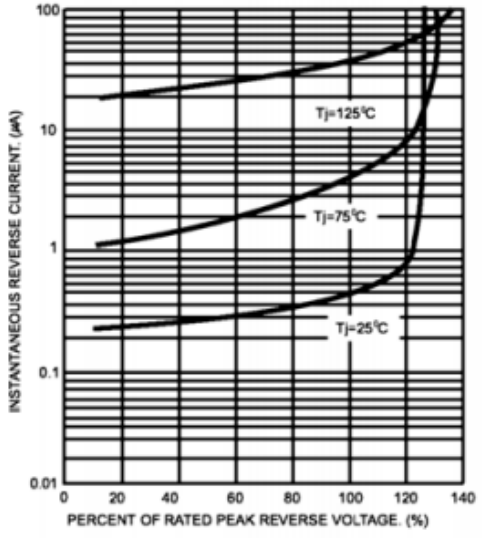
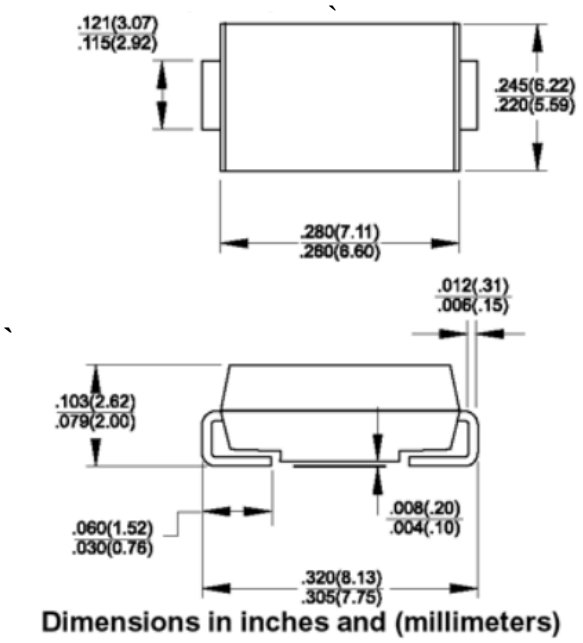



FIG.4- TYPICAL REVERSE CHARACTERISTICS



## Package outline dimensions




Dimensions in inches and (millimeters)

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