

1A Surface Mount Trench Schottky Barrier Rectifiers

■ Features

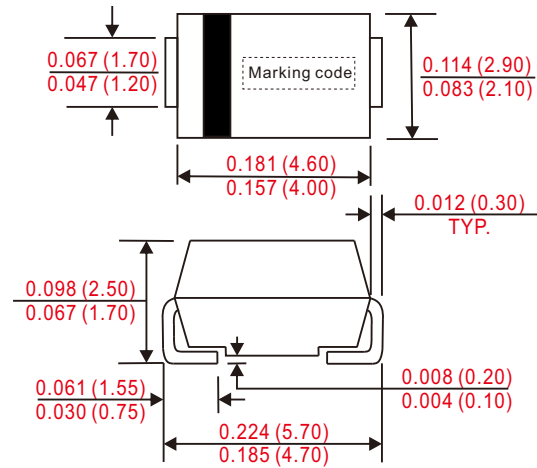
- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Suffix "G" indicates Halogen-free part, ex. C14AG.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case : Molded plastic, DO-214AC / SMA
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Weight : 0.002 ounce, 0.055 gram

■ Outline

SMA(DO-214AC)



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 | See Fig.1 | I_o | | | 1.0 | A |
| Forward surge current | 8.3ms single half sine-wave superimposed on rate load (JEDEC method) | I_{FSM} | | | 30 | A |
| Reverse current | $V_R = V_{RRM}$ $T_A = 25^\circ\text{C}$ | I_R | | | 0.2 | mA |
| | $V_R = V_{RRM}$ $T_A = 100^\circ\text{C}$ | | | | 20 | |
| Diode junction capacitance | f=1MHz and applied 4V DC reverse voltage | C_j | | 120 | | pF |
| Thermal resistance | Junction to ambient | $R_{\theta JA}$ | | 88 | | °C/W |
| 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 @1A, $T_A = 25^\circ\text{C}$ V_F (V) | Operating temperature T_J (°C) |
|--------|--------------|--|--------------------------------|------------------------------------|--|----------------------------------|
| C14A | C14 | 40 | 28 | 40 | 0.40 | -55 ~ +150 |

■ Rating and characteristic curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

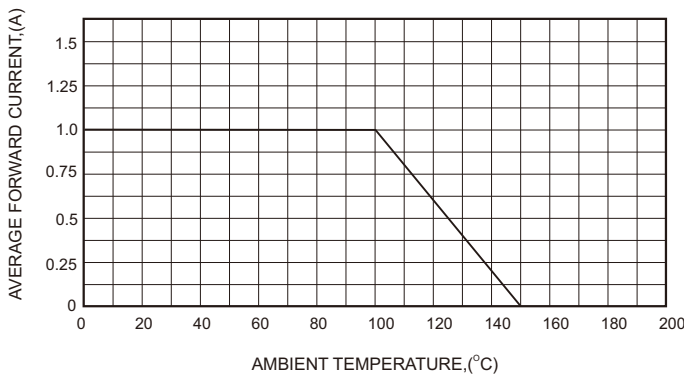


FIG.2-TYPICAL FORWARD CHARACTERISTICS

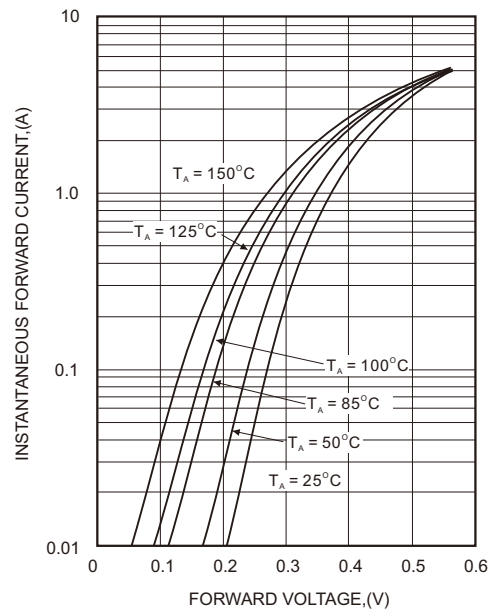


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

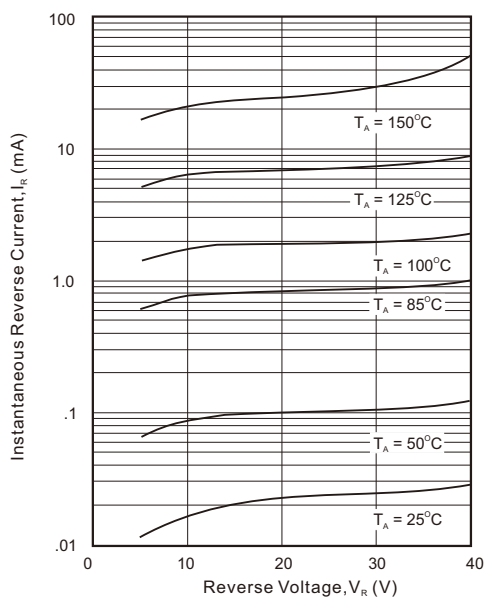
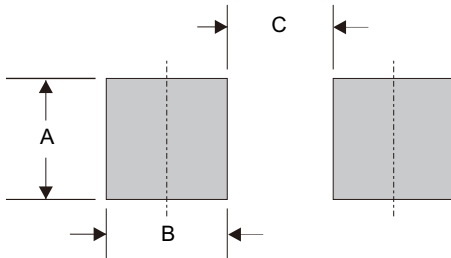


Fig. 4 - Total Capacitance VS. Reverse Voltage



■ SMA foot print



| A | B | C |
|--------------|--------------|--------------|
| 0.068 (1.70) | 0.104 (2.60) | 0.060 (1.50) |

Dimensions in inches and (millimeters)

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