

BYD67A

PRV : 300 Volts
Io : 1.2 Amperes

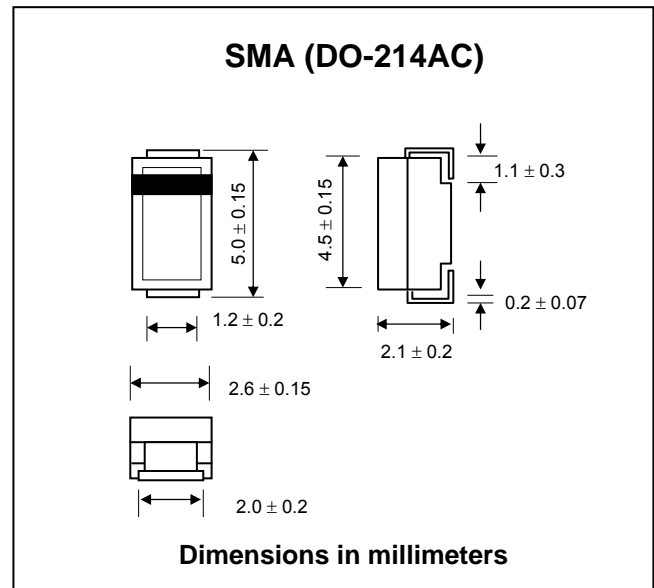
FEATURES :

- * Glass passivated junction chip
- * High maximum operating temperature
- * Low leakage current
- * Excellent stability
- * Smallest surface mount rectifier outline
- * **Pb / RoHS Free**

MECHANICAL DATA :

- * Case : SMA Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Lead : Lead Formed for Surface Mount
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 0.067 gram

RIPPLE BOCKING DIODE



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

| RATING | SYMBOL | VALUE | UNIT |
|--|----------------|--|---------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 300 | V |
| Maximum Continuous Reverse Voltage | V_R | 300 | V |
| Maximum Average Forward Current | $I_{F(AV)}$ | 1.2 ⁽¹⁾ 0.4 ⁽²⁾ | A |
| Maximum Non-Repetitive Peak Forward Surge Current (Note 3) | I_{FSM} | 5.0 | A |
| Maximum Repetitive Peak Forward Current at $T_{tp} = 85\text{ °C}$ | I_{FRM} | 11 | A |
| Maximum Forward Voltage at $I_F = 1.0\text{ A}$, $T_J = 25\text{ °C}$ | V_F | 2.3 | V |
| Maximum Reverse Current at $V_R = V_{RRMmax}$ $T_J = 25\text{ °C}$ $T_J = 165\text{ °C}$ | I_R | 1.0 | μA |
| | $I_{R(H)}$ | 100 | μA |
| Maximum Reverse Recovery Time (Note 4) | T_{rr} | 150 | ns |
| Thermal Resistance from Junction to Tie-Point | $R_{th\ j-tp}$ | 30 | K / W |
| Thermal Resistance from Junction to Ambient (Note 5) | $R_{th\ j-a}$ | 150 | K / W |
| Junction Temperature Range | T_J | - 65 to + 175 | °C |
| Storage Temperature Range | T_{STG} | - 65 to + 175 | °C |

Notes :

- (1) $T_{tp} = 85\text{ °C}$; see Fig. 1; averaged over any 20 ms period; see Fig. 2
- (2) $T_{amb} = 60\text{ °C}$; PCB mounting ; see Fig. 3; averaged over any 20 ms period; see also Fig.2
- (3) $t = 10\text{ms}$ half sine wave; $T_j = T_{jmax}$ prior to surge; $V_R = V_{RRMmax}$
- (4) Reverse Recovery Test Conditions : $I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $I_{rr} = 0.25\text{ A}$.
- (5) Device mounted on an epoxy-glass printed-circuit board, 1.5 mm thick; thickness of Cu-layer $\geq 40\text{ }\mu\text{m}$.

RATING AND CHARACTERISTIC CURVES (BYD67A)

FIG.1 - MAXIMUM PERMISSIBLE AVERAGE FORWARD CURRENT AS A FUNCTION OF TIE-POINT TEMPERATURE

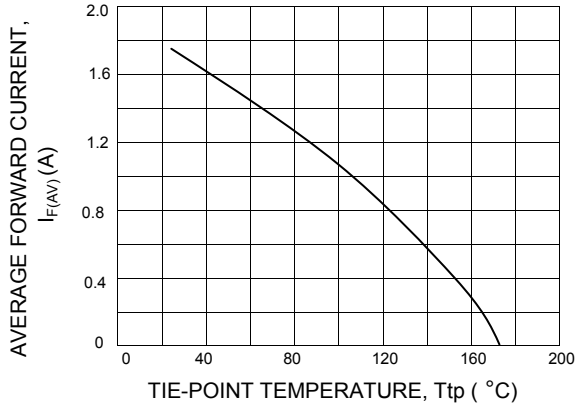


FIG.2 - MAXIMUM STEADY STATE POWER DISSIPATION AS A FUNCTION OF AVERAGE FORWARD CURRENT

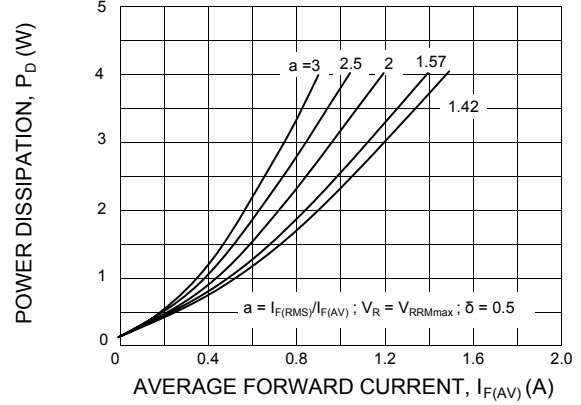


FIG.2 - MAXIMUM PERMISSIBLE AVERAGE FORWARD CURRENT AS A FUNCTION OF AMBIENT TEMPERATURE

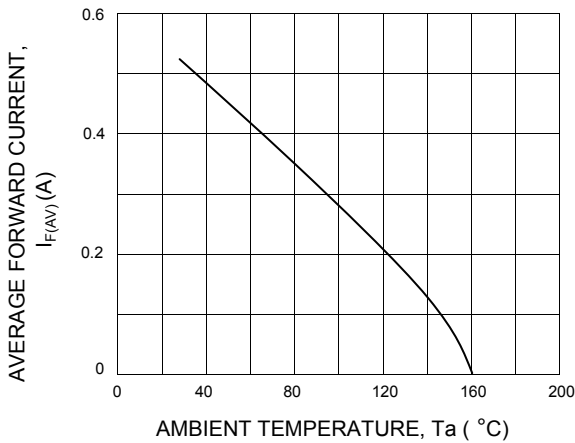


FIG.4 - FORWARD CURRENT AS FUNCTION OF FORWARD VOLTAGE

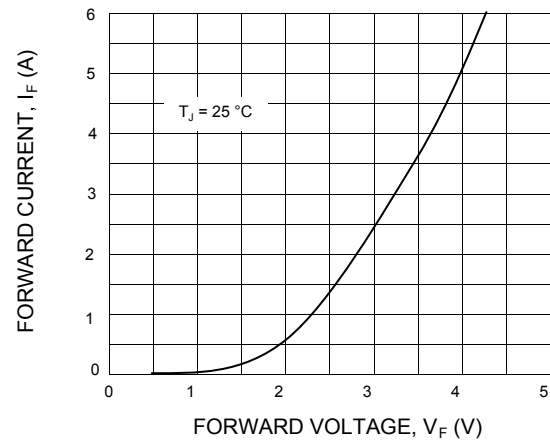


FIG.5 - REVERSE CURRENT AS FUNCTION OF JUNCTION TEMPERATURE; MAXIMUM VALUES

