

Surface Mount General Purpose Silicon Rectifiers

Reverse Voltage - 50 to 1000 V

Forward Current - 6 A

FEATURES

- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Glass Passivated Chip Junction
- ◆ Easy to pick and place
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

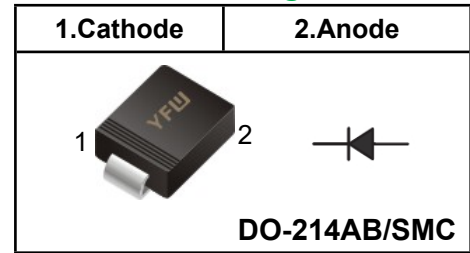
- ◆ Case: DO-214AB/SMC
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 0.22g / 0.0077oz

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Pinning



Marking Code

| | |
|-------------|----------------|
| S6AC | YFW S6A |
| S6BC | YFW S6B |
| S6DC | YFW S6D |
| S6GC | YFW S6G |
| S6JC | YFW S6J |
| S6KC | YFW S6K |
| S6MC | YFW S6M |

| Parameter | Symbols | S6AC | S6BC | S6DC | S6GC | S6JC | S6KC | S6MC | Units |
|---|---------------------------------|------------|------|------|------|------|------|------|--------------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current at $T_c = 115\text{ }^\circ\text{C}$ | $I_{F(AV)}$ | 6 | | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load | I_{FSM} | 150 | | | | | | | A |
| Maximum Instantaneous Forward Voltage at 6A | V_F | 1.1 | | | | | | | V |
| Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125\text{ }^\circ\text{C}$ | I_R | 5 100 | | | | | | | μA |
| Typical Junction Capacitance ⁽¹⁾ | C_j | 100 | | | | | | | pF |
| Typical Thermal Resistance ⁽²⁾ | $R_{\theta JA} / R_{\theta JC}$ | 35/13 | | | | | | | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range | T_j, T_{stg} | -55 ~ +150 | | | | | | | $^\circ\text{C}$ |

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Fig.1 Forward Current Derating Curve

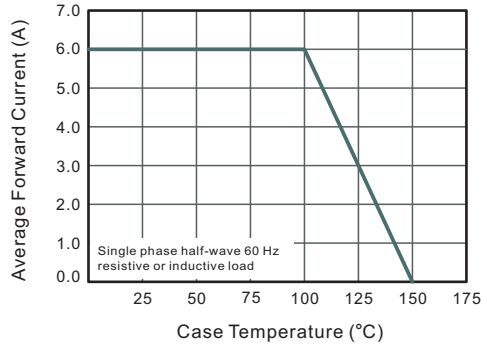


Fig.2 Typical Reverse Characteristics

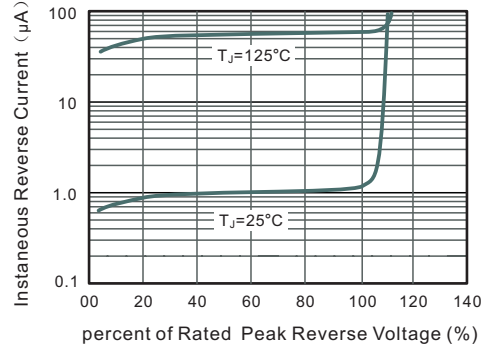


Fig.3 Typical Forward Characteristic

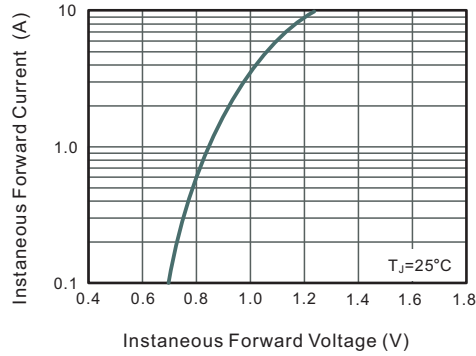


Fig.4 Typical Junction Capacitance

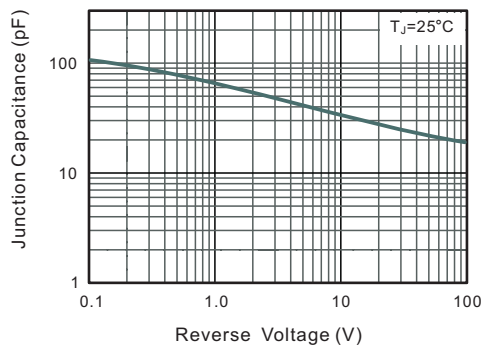
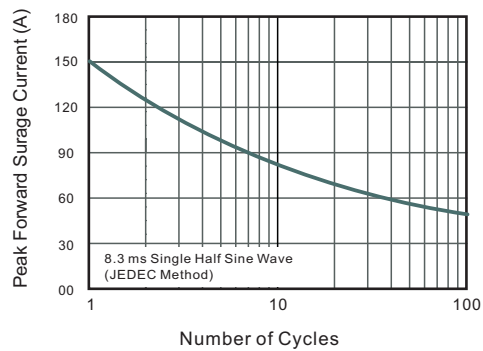


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



Marking Diagram



Ordering information

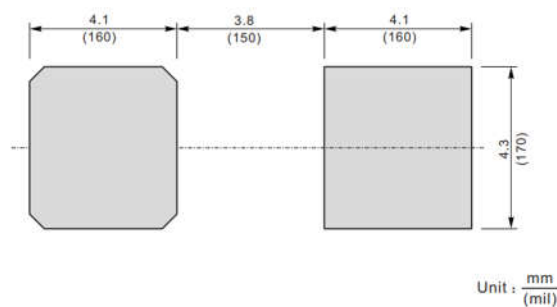
| Package | Packing Description | Packing Quantity |
|--------------|---------------------|------------------------------|
| DO-214AB SMC | Tape/Reel, 13" reel | 3000PCS/Reel 30000PCS/Carton |

Package Dimensions

DO-214AB SMC

| Dim. | Millimeter(mm) | | mil | |
|----------------|----------------|------|------|------|
| | Min. | Max. | Min. | Max. |
| A | 2.00 | 2.62 | 79 | 103 |
| E | 6.5 | 7.0 | 256 | 276 |
| D | 5.6 | 6.2 | 220 | 244 |
| E ₁ | 7.6 | 8.0 | 299 | 315 |
| A ₁ | 0.05 | 0.21 | 2.0 | 8.3 |
| C | 0.15 | 0.31 | 5.9 | 12 |
| L | 0.9 | 1.6 | 35 | 63 |
| b | 2.75 | 3.25 | 108 | 128 |

The recommended mounting pad size



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