



**TAYCHIPST**

SUPER BARRIER RECTIFIER

SBR2A40SA

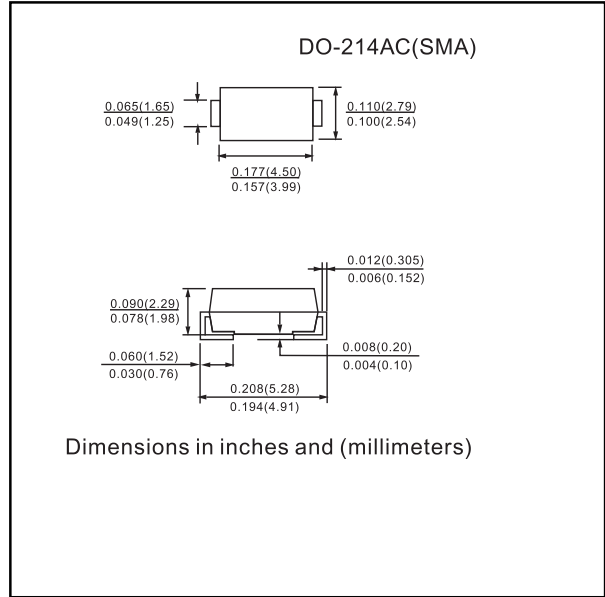
2.0A

**Features**

- Low Leakage Current
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- 150°C Operating Junction Temperature
- **Lead Free Finish, RoHS Compliant (Note 1)**
- **Green Molding Compound (No Halogen and Antimony) (Note 3)**

**Mechanical Data**

- Case: SMA
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Lead Free Plating (Mate Tin Finish.) Solderable per MIL-STD-202, Method 208
- Polarity Indicator: Cathode Band
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.064 grams (approximate)



**Maximum Ratings** @T<sub>A</sub> = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitance load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V <sub>R</sub> RM	40	V
Working Peak Reverse Voltage	V <sub>R</sub> WM		
DC Blocking Voltage	V <sub>R</sub> M		
Average Rectified Output Current (See Figure 1)	I <sub>O</sub>	2	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	25	A

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Ambient (Note 4)	R <sub>θJA</sub>	110	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C

**Electrical Characteristics** @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V <sub>F</sub>	-	-	0.55 0.50	V	I <sub>F</sub> = 2.0A, T <sub>J</sub> = 25°C I <sub>F</sub> = 1.0A, T <sub>J</sub> = 25°C
Leakage Current (Note 2)	I <sub>R</sub>	-	-	500 100	µA mA	V <sub>R</sub> = 40V, T <sub>J</sub> = 25°C V <sub>R</sub> = 40V, T <sub>J</sub> = 125°C

- Notes:
1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied. Please visit our website at [http://www.diodes.com/products/lead\\_free.html](http://www.diodes.com/products/lead_free.html).
  2. Short duration pulse test used to minimize self-heating effect.
  3. No purposefully added lead. Halogen and Antimony Free.
  4. Device mounted on Polyimide substrate, with 1" x 1", 2 oz. Copper, double-sided PCB board.



**TAYCHIPST**

SUPER BARRIER RECTIFIER

SBR2A40SA

2.0A

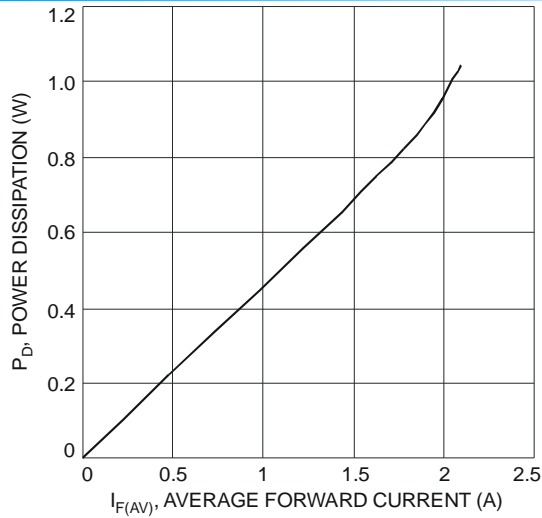


Fig. 1 Forward Power Dissipation

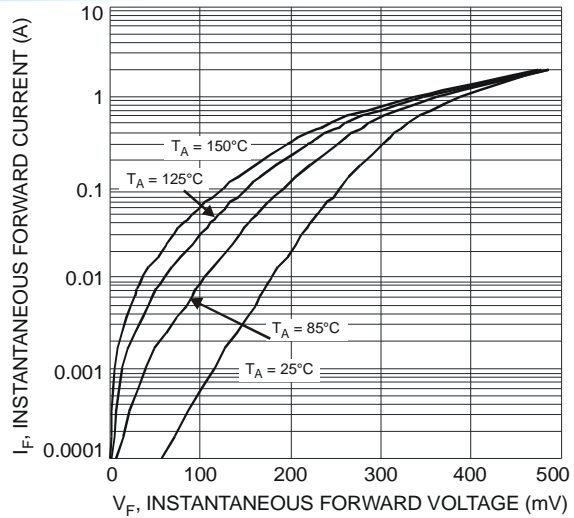


Fig. 2 Typical Forward Characteristics

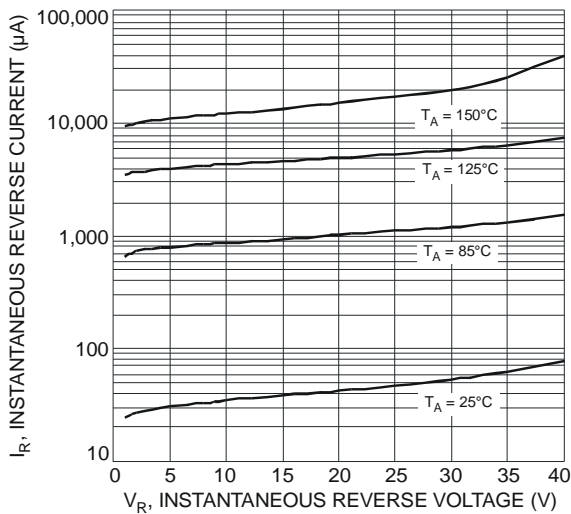


Fig. 3 Typical Reverse Characteristics

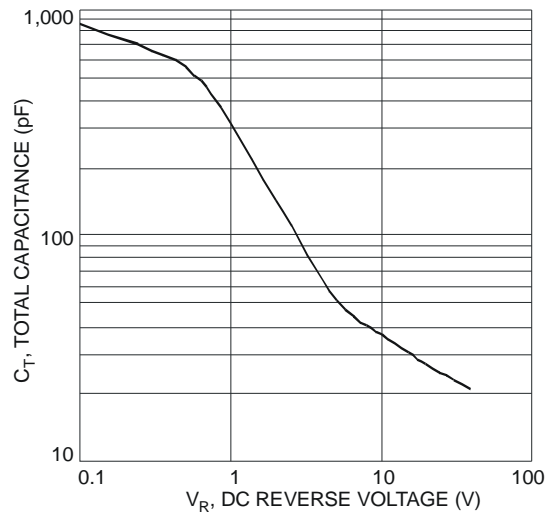


Fig. 4 Total Capacitance vs. Reverse Voltage

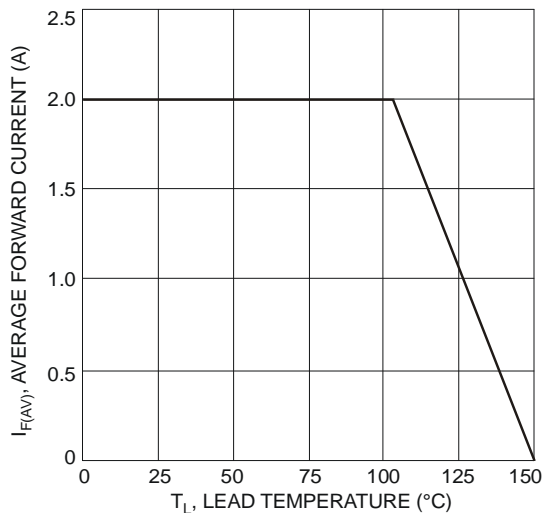


Fig. 5 Forward Current Derating Curve

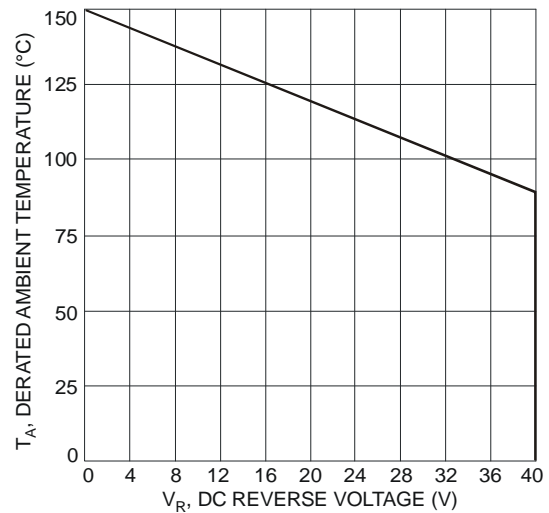


Fig. 6 Operating Temperature Derating