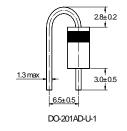
## **SR320 THRU SR3200**

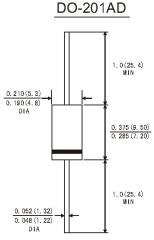
#### **SCHOTTKY BARRIER RECTIFIERS**

Reverse Voltage - 20 to 200 V Forward Current - 3 A

#### **Features**

- Plastic package has UL flammability classification 94V-0
- · Metal silicon junction, majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- · High current capability, low forward voltage drop
- High surge capability





Dimensions in inches and (millimeters)

#### **Mechanical Data**

• Case: Molded plastic body, DO-201AD

 Terminals: Plated axial leads, solderable per MIL-STD-750, method 2026

• Polarity: color band denotes cathode end

• Mounting Position: Any

### **Absolute Maximum Ratings and Characteristics**

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

	Symbols	SR320	SR330	SR340	SR350	SR360	SR380	SR3100	SR3150	SR3200	Units
age	$V_{RRM}$	20	30	40	50	60	80	100	150	200	V
	$V_{RMS}$	14	21	28	35	42	56	70	105	140	V
	$V_{DC}$	20	30	40	50	60	80	100	150	200	V
rrent	I <sub>F(AV)</sub>	3							Α		
ngle Half- nd (JEDEC	I <sub>FSM</sub>	80							А		
Maximum Forward Voltage at 3 A DC		0.55		0.	.7	0.85		0.9	0.95	V	
Γ <sub>A</sub> = 25 °C	l <sub>o</sub>	0.5								mA	
Γ <sub>A</sub> = 100 °C	'K	20			10						] ''''
	Сл	250			160					pF	
	$R_{\theta JA}$		40						°C/W		
	Tj	- 55 to + 125			- 55 to + 150						°C
	$T_{stg}$	- 55 to + 150							°C		
	rrent  igle Half- d (JEDEC	age $V_{RRM}$ $V_{RMS}$ $V_{DC}$ rrent $I_{F(AV)}$ agle Half- d (JEDEC $I_{FSM}$ $V_{F}$ $V_{A} = 25 ^{\circ}\text{C}$ $V_{A} = 100 ^{\circ}\text{C}$ $V_{B}$ $V_{C}$	age $V_{RRM}$ 20 $V_{RMS}$ 14 $V_{DC}$ 20  rrent $I_{F(AV)}$ agle Half- d (JEDEC $I_{FSM}$ $V_{F}$ $V_{A} = 25 ^{\circ}\text{C}$ $V_{A} = 100 ^{\circ}\text{C}$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Age V <sub>RRM</sub> 20 30 40  V <sub>RMS</sub> 14 21 28  V <sub>DC</sub> 20 30 40  Frent I <sub>F(AV)</sub> Igle Half- d (JEDEC I <sub>FSM</sub> V <sub>F</sub> 0.55  T <sub>A</sub> = 25 °C T <sub>A</sub> = 100 °C  C <sub>J</sub> 250  R <sub>0JA</sub> T <sub>j</sub> - 55 to + 125	Age V <sub>RMM</sub> 20 30 40 50  V <sub>RMS</sub> 14 21 28 35  V <sub>DC</sub> 20 30 40 50  Frent I <sub>F(AV)</sub> I <sub>GLAV</sub> I <sub>FSM</sub> V <sub>F</sub> 0.55 0.  T <sub>A</sub> = 25 °C  T <sub>A</sub> = 100 °C  C <sub>J</sub> 250  R <sub>0JA</sub> T <sub>j</sub> - 55 to + 125	Age V <sub>RRM</sub> 20 30 40 50 60  V <sub>RMS</sub> 14 21 28 35 42  V <sub>DC</sub> 20 30 40 50 60  Frent I <sub>F(AV)</sub> 3  Aggle Half- Aggle Half- Aggle Half- Aggle Graph Color	Age V <sub>RMS</sub> 20 30 40 50 60 80 V <sub>RMS</sub> 14 21 28 35 42 56 V <sub>DC</sub> 20 30 40 50 60 80 Roter 14 V <sub>DC</sub> 20 30 40 50 60 80 Roter 15 V <sub>E</sub> 20 30 40 50 60 80 Roter 16 V <sub>E</sub> 20 30 80 Roter 16 V <sub>E</sub> 20 30 80 Roter 16 V <sub>E</sub> 20 30 10 Roter 16 Roter 17 V <sub>E</sub> 250 Roter 17 V	Age V <sub>RMM</sub> 20 30 40 50 60 80 100  V <sub>RMS</sub> 14 21 28 35 42 56 70  V <sub>DC</sub> 20 30 40 50 60 80 100  Frent I <sub>F(AV)</sub> 3  Aggle Half- Aggle Half- Aggle Half- C C <sub>J</sub> 250 0.5  T <sub>A</sub> = 25 °C T <sub>A</sub> = 100 °C  T <sub>A</sub> = 100 °C  T <sub>B</sub> 3  Aggle Half- C C <sub>J</sub> 250 10  T <sub>B</sub> 40  T <sub>B</sub> 40  T <sub>B</sub> -55 to + 125 -55 to + 150	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Age V <sub>RMS</sub> 20 30 40 50 60 80 100 150 200 V <sub>RMS</sub> 14 21 28 35 42 56 70 105 140 V <sub>DC</sub> 20 30 40 50 60 80 100 150 200 rrent I <sub>F(AV)</sub> 3  Age Half-  d (JEDEC I <sub>FSM</sub> 80  V <sub>F</sub> 0.55 0.7 0.85 0.9 0.95  V <sub>A</sub> = 25 °C V <sub>A</sub> 20 250 10 160  R <sub>0JA</sub> 40  T <sub>j</sub> -55 to + 125 -55 to + 150

<sup>1)</sup> Measured at 1 MHz and applied reverse voltage of 4 V DC.



## SEMTECH ELECTRONICS LTD.











<sup>&</sup>lt;sup>2)</sup> Thermal resistance from junction to lead vertical P.C.B mounted, 0.5" (12.7 mm) lead length.

FIG.1-FORWARD CURRENT DERATING CURVE

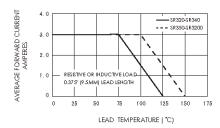
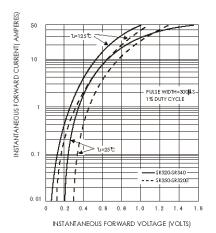
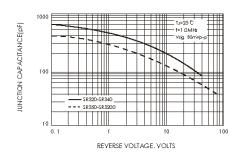


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



### FIG.5-TYPICAL JUNCTION CAPACITANCE



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

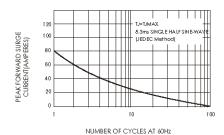


FIG.4-TYPICAL REVERSE CHARACTERISTICS

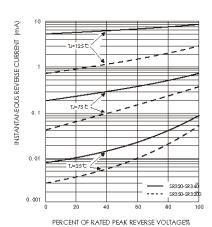
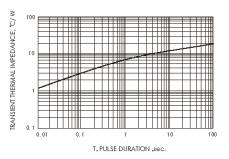


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE



## SEMTECH ELECTRONICS LTD.









