



RoHS

Features

- Metal-Semiconductor junction with guarding ring
- For surface mounted applications
- Epitaxial construction
- Low power loss
- High efficiency
- Surge Overload Rating to 100A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application

This device employs the Schottky Barrier principle in a large area metal-to-silicon power diode. State-of-the-art geometry features epitaxial construction with oxide passivation and metal overlay contact. Ideally suited for low voltage, high frequency rectification, or as free wheeling and polarity protection diodes in surface mount applications.

Mechanical Data

- JEDEC DO-214AB(SMCJ) package
- Moisture sensitivity: Level 1 per J-STD-020A
- Polarity: color band denotes cathode
- Plastic Material - UL Flammability Classification 94V-0

Maximum Ratings and Electrical Characteristics @ TA = 25 °C unless otherwise specified Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.								
Characteristic	Symbol	SD320	SD330	SD340	SD350	SD360	Units	
Peak Repetitive Reverse Voltage	V _{RRM}	20	30	40	50	60	V	
RMS Reverse Voltage	V _{R(RMS)}	14	21	28	35	42	V	
Maximum DC Blocking Voltage	V _{DC}	20	30	40	50	60	V	
Average Rectified Output Current @ T _T = 100 °C	I _O	3.0						A
Non-Repetitive Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	100						A
Forward Voltage (Note 3)	V _{FM}	0.50			0.70		V	
Peak Reverse Current @TA = 25 °C at Rated DC Blocking Voltage (Note 3) @TA = 100 °C	I _{RM}	0.5 20					mA	
Typical Capacitance (Note 2)	C _T	250					pF	
Typical Thermal Resistance, Junction to Terminal (Note 1)	R _{μJT}	10					°C/W	
Typical Thermal Resistance, Junction to Ambient	R _{μJA}	50					°C/W	
Operating Temperature Range	T _j	-55 to +150					°C	
Storage Temperature Range	T _{STG}	-55 to +150					°C	

Notes: 1. Thermal Resistance: Junction to terminal, unit mounted on PC board with 5.0 mm² 0.013 mm thick) copper pad as heat sink.

2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

3. Short duration test pulse used to minimize self-heating effect.

Typical Characteristics

Figure 1: Typical Forward Characteristics

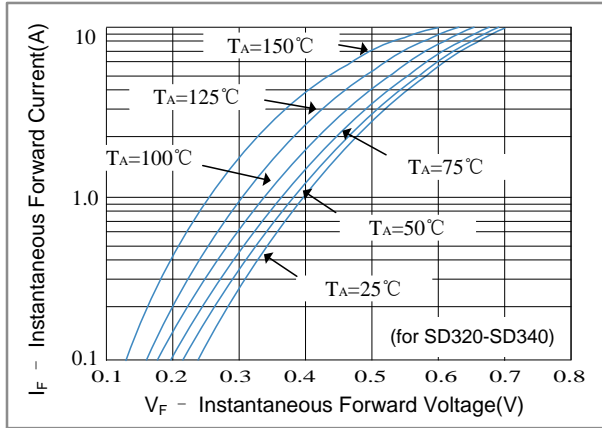


Figure 2: Typical Forward Characteristics

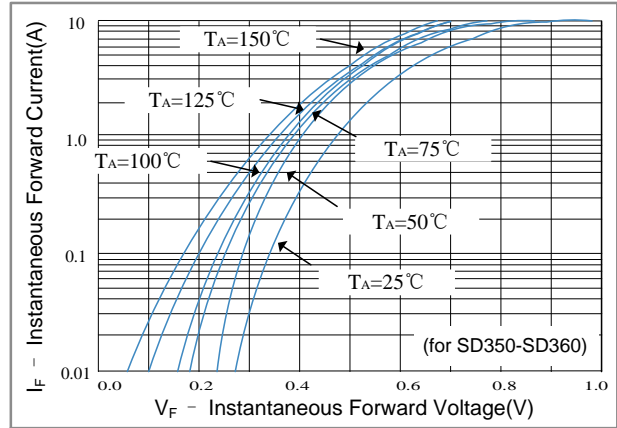


Figure 3: Forward Current Derating Curve

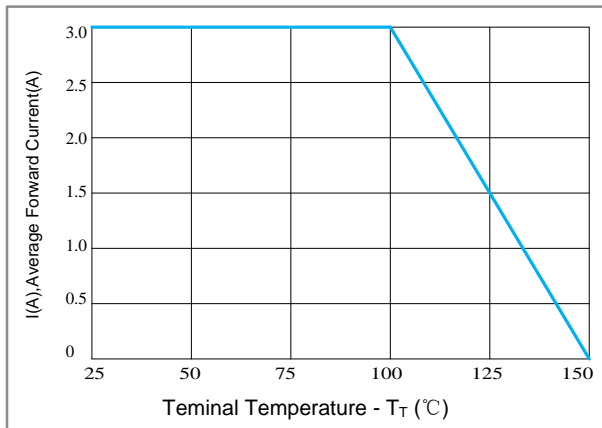


Figure 4: Max Non-Repetitive Peak Fwd Surge Current

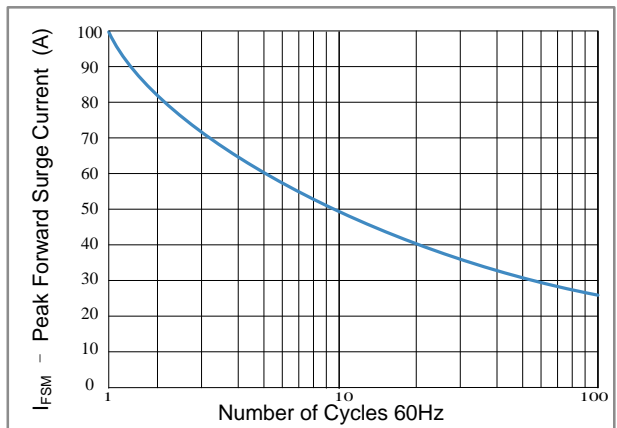


Figure 5: Typical Reverse Characteristics

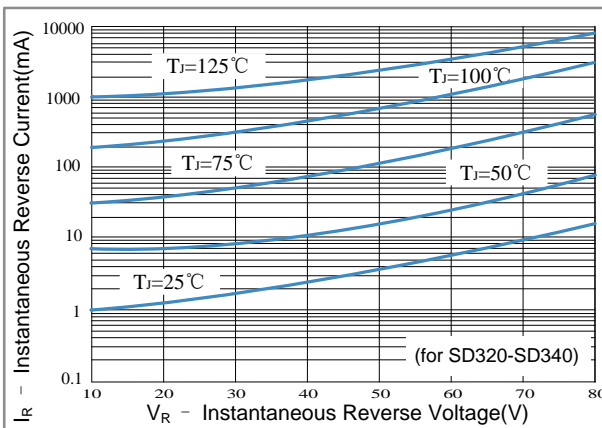
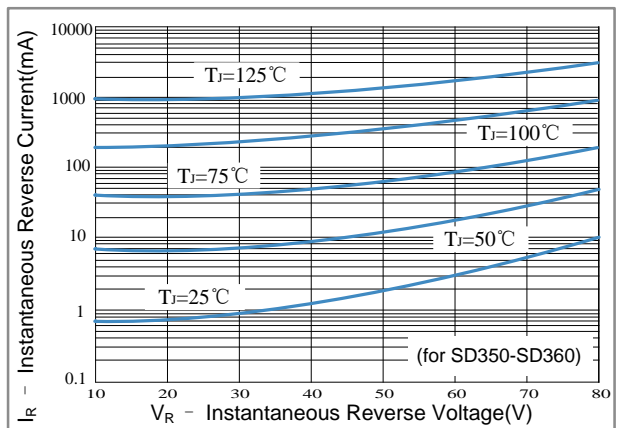
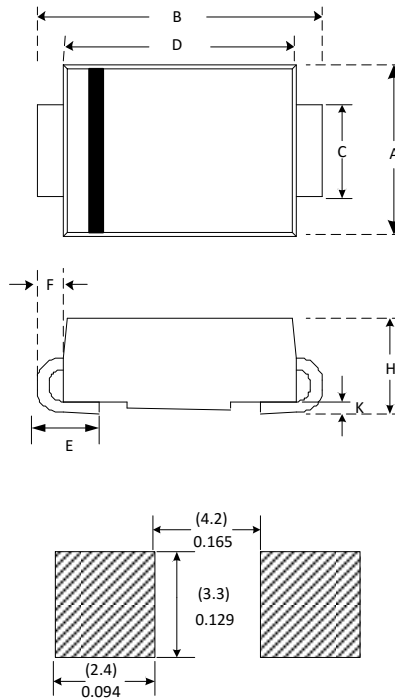


Figure 6: Typical Reverse Characteristics



Outline Drawing – SMCJ(DO-214AB)



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.220	0.245	5.590	6.220
B	0.305	0.320	7.750	8.130
C	0.114	0.126	2.900	3.200
D	0.260	0.280	6.600	7.110
E	0.030	0.060	0.760	1.520
F	0.006	0.012	0.152	0.305
H	0.079	0.103	2.060	2.620

Packing Information

Package Type	Packing Option	Packing Quantity	Industry Standard
DO-214AB	Tape&Reel-12mm/13"tape	3000 PCS	EIA STD-481

Marking information

Order code	SD320	SD330	SD340	SD350	SD360
Marking	SK32	SK33	SK34	SK35	SK36