



Continental Device India Pvt. Limited

An IATF 16949, ISO9001 and ISO 14001 Certified Company



SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 150 to 200 Volts

Forward Current - 3.0 Amperes

SK315B - SK320B

DO-214AA

Surface Mount Package

RoHS compliant



DO-214AA (SMB)

FEATURES:

1. The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
2. Metal silicon junction, majority carrier conduction
3. Low power loss, high efficiency
4. High forward surge current capability
5. High temperature soldering guaranteed: 260 °C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Parameter	Symbol	SK315B	SK320B	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	150	200	V
Maximum RMS voltage	V_{RMS}	105	140	V
Maximum DC blocking voltage	V_{DC}	150	200	V
Maximum average forward rectified current at TL (see fig.1)	$I_{(AV)}$	3		A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	70		A
Maximum instantaneous forward voltage at 3.0A	V_F	0.85	0.95	V
Maximum DC reverse current at rated DC blocking voltage	I_R	$T_A=25\text{ }^\circ\text{C}$		mA
		$T_A=100\text{ }^\circ\text{C}$		
Typical junction capacitance (NOTE 1)	C_J	200		pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	68		°C/W
Operating junction temperature range	T_J	-55 to +150		°C
Storage temperature range	T_{STG}	-55 to +150		°C

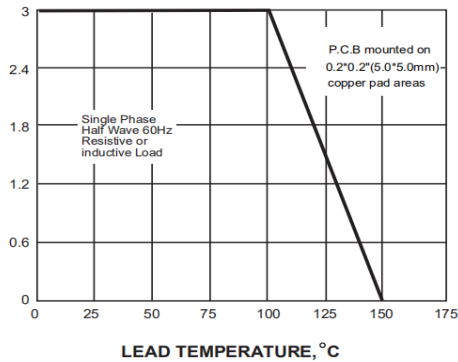
NOTE:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted.
3. For AEC-Q101 compliant products, please use suffix -AQ in the part number while ordering.

CHARACTERISTIC CURVES

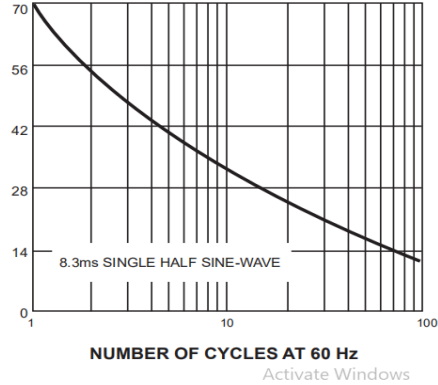
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



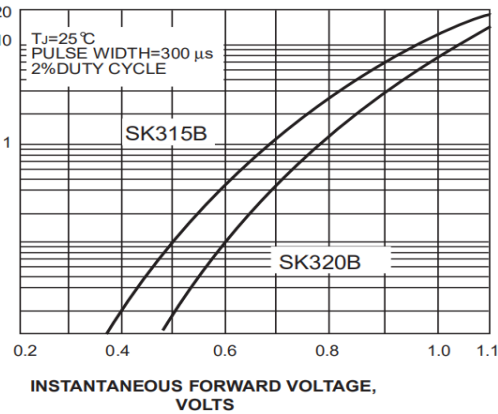
PEAK FORWARD SURGE CURRENT, AMPERES

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



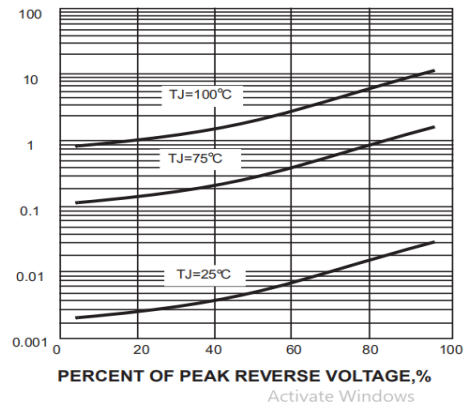
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



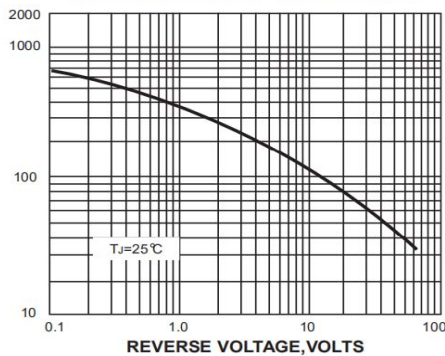
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



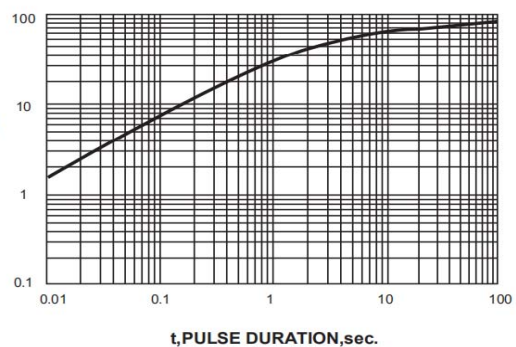
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



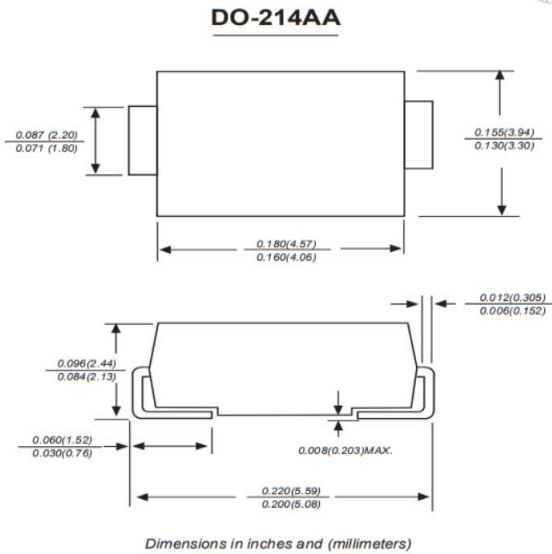


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Package Details



MECHANICAL DATA

Case: JEDEC DO-214AA molded plastic body

Terminals: leads solderable per MIL-STD-750,

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.003 ounce, 0.093 grams



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Recommended Product Storage Environment for Discrete Semiconductor Devices

This storage environment assumes that the Diodes and transistors are packed properly inside the original packing supplied by CDIL.

- Temperature 5 °C to 30 °C
- Humidity between 40 to 70 %RH
- Air should be clean.
- Avoid harmful gas or dust.
- Avoid outdoor exposure or storage in areas subject to rain or water spraying .
- Avoid storage in areas subject to corrosive gas or dust. Product shall not be stored in areas exposed to direct sunlight.
- Avoid rapid change of temperature.
- Avoid condensation.
- Mechanical stress such as vibration and impact shall be avoided.
- The product shall not be placed directly on the floor.
- The product shall be stored on a plane area. They should not be turned upside down. They should not be placed against the wall.

Shelf Life of CDIL Products

The shelf life of products is the period from product manufacture to shipment to customers. The product can be unconditionally shipped within this period. The period is defined as 2 years.

If products are stored longer than the shelf life of 2 years the products shall be subjected to quality check as per CDIL quality procedure.

The products are further warranted for another one year after the date of shipment subject to the above conditions in CDIL original packing.

Floor Life of CDIL Products and MSL Level

When the products are opened from the original packing, the floor life will start.

For this, the following JEDEC table may be referred:

JEDEC MSL Level		
Level	Time	Condition
1	Unlimited	≤30 °C / 85% RH
2	1 Year	≤30 °C / 60% RH
2a	4 Weeks	≤30 °C / 60% RH
3	168 Hours	≤30 °C / 60% RH
4	72 Hours	≤30 °C / 60% RH
5	48 Hours	≤30 °C / 60% RH
5a	24 Hours	≤30 °C / 60% RH
6	Time on Label(TOL)	≤30 °C / 60% RH



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Customer Notes

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

CDIL strives for continuous improvement and reserves the right to change the specifications of its products without prior notice.



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