

# GSDSK32B Series

## Surface Mount Schottky Barrier Rectifiers

### Product Description

Reverse Voltage 20V to 200V  
Forward Current 3.0A

### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- High current capacity
- Built-in strain relief
- Low profile package
- Metal to silicon rectifier. majority carrier conduction
- High surge capacity
- Low power loss, high efficiency
- Halogen-free parts.

### Mechanical Data

- Case : Molded plastic, DO-214AA(SMB)
- Terminals : Solder plated, solderable per MIL-STD-750, method 2026 guaranteed
- Polarity : Color band denotes cathode end

### Packages



SMB

### Ordering Information



Part Number	Package	Quantity Reel
GSDSK3XBF	SMB	3000 PCS

## Marking Information

P/N	Part Marking	Package
GSDSK32BF	SK32	SMB (DO-214AA)
GSDSK33BF	SK33	SMB (DO-214AA)
GSDSK34BF	SK34	SMB (DO-214AA)
GSDSK35BF	SK35	SMB (DO-214AA)
GSDSK36BF	SK36	SMB (DO-214AA)
GSDSK38BF	SK38	SMB (DO-214AA)
GSDSK310BF	SK310	SMB (DO-214AA)
GSDSK315BF	SK315	SMB (DO-214AA)
GSDSK320BF	SK320	SMB (DO-214AA)

## Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60HZ, resistive or inductive load.

For capacitive load, derate current by 20%.

Symbol	Conditions	GSDSK32BF	GSDSK33BF	GSDSK34BF	Unit
$V_{RRM}$	Maximum Repetitive Peak Reverse Voltage	20	30	40	V
$V_{RMS}$	Maximum RMS Voltage	14	21	28	V
$V_{DC}$	Maximum DC Blocking Voltage	20	30	40	V
$V_F$	Maximum Instantaneous $I_F=3.0A$ (Note 1)	0.50	0.55		V
$I_F$	Maximum Average Forward Rectified Current	3.0			A
$I_{FSM}$	Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	80			A
$I_R$	Maximum DC Reverse Current At Rated DC Blocking Voltage	$T_A=25^{\circ}C$	0.5		mA
		$T_A=100^{\circ}C$	20		
$R_{\theta JA}$	Typical Thermal Resistance (Note 2)	55			$^{\circ}C/W$
$R_{\theta JL}$		17			$^{\circ}C/W$
$T_J$	Operating Junction Temperature Range	-55 to +125			$^{\circ}C$
$T_{STG}$	Storage Temperature Range	-55 to +150			$^{\circ}C$

Notes 1 : Pulse test: 300 $\mu$ s pulse width, 1% duty cycle.

Notes 2 : P.C.B. mounted with 0.3 x 0.3" (8.0 x 8.0mm) copper pad areas.

## Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60HZ, resistive or inductive load.

For capacitive load, derate current by 20%.

Symbol	Conditions	GSDSK35BF	GSDSK36BF	GSDSK38BF	Unit
V <sub>RRM</sub>	Maximum Repetitive Peak Reverse Voltage	50	60	80	V
V <sub>RMS</sub>	Maximum RMS Voltage	35	42	56	V
V <sub>DC</sub>	Maximum DC Blocking Voltage	50	60	80	V
V <sub>F</sub>	Maximum Instantaneous I <sub>F</sub> =3.0A (Note 1)	0.75		0.85	V
Symbol	Conditions	GSDSK310BF	GSDSK315BF	GSDSK320BF	Unit
V <sub>RRM</sub>	Maximum Repetitive Peak Reverse Voltage	100	150	200	V
V <sub>RMS</sub>	Maximum RMS Voltage	71	105	140	V
V <sub>DC</sub>	Maximum DC Blocking Voltage	100	150	200	V
V <sub>F</sub>	Maximum Instantaneous I <sub>F</sub> =3.0A (Note 1)	0.85	0.95		V
I <sub>F</sub>	Maximum Average Forward Rectified Current	3.0			A
I <sub>FSM</sub>	Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	80			A
I <sub>R</sub>	Maximum DC Reverse Current At Rated DC Blocking Voltage	T <sub>A</sub> = 25°C	0.5		mA
		T <sub>A</sub> = 100°C	20		
R <sub>θJA</sub>	Typical Thermal Resistance (Note 2)	55			°C/W
R <sub>θJL</sub>		17			°C/W
T <sub>J</sub>	Operating Junction Temperature Range	-55 to +150			°C
T <sub>STG</sub>	Storage Temperature Range	-55 to +150			°C

Notes 1 : Pulse test: 300µs pulse width, 1% duty cycle.

Notes 2 : P.C.B. mounted with 0.3 x 0.3" (8.0 x 8.0mm) copper pad areas.

## Typical Characteristics

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

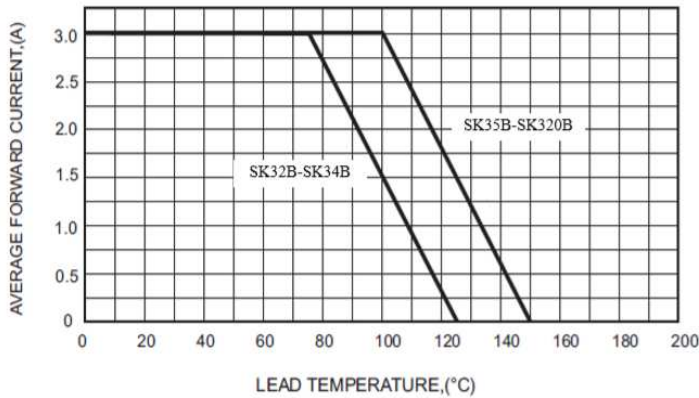


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

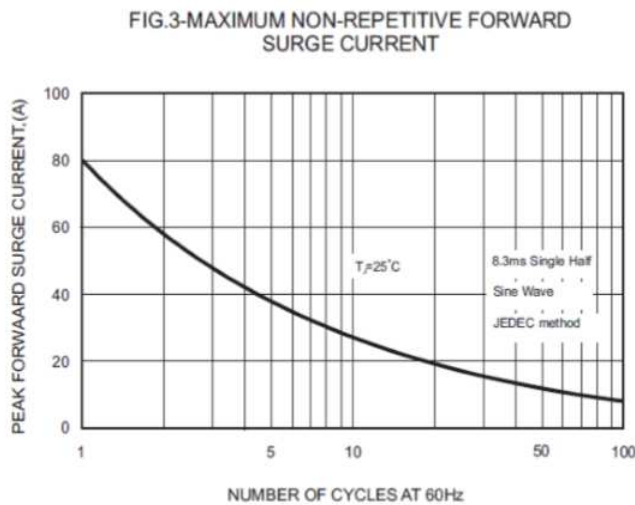


FIG.4-TYPICAL JUNCTION CAPACITANCE

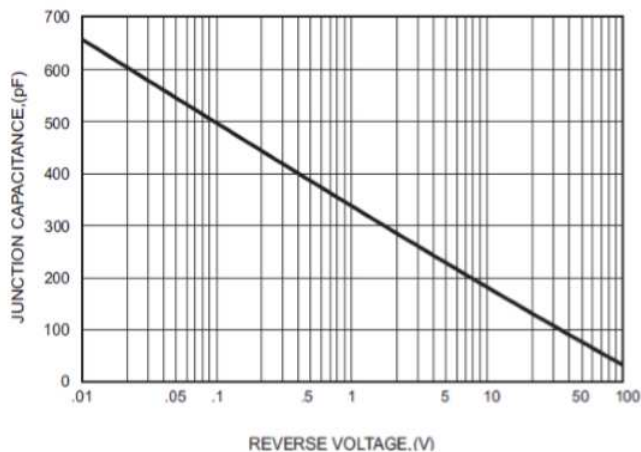


FIG.2-TYPICAL FORWARD CHARACTERISTICS

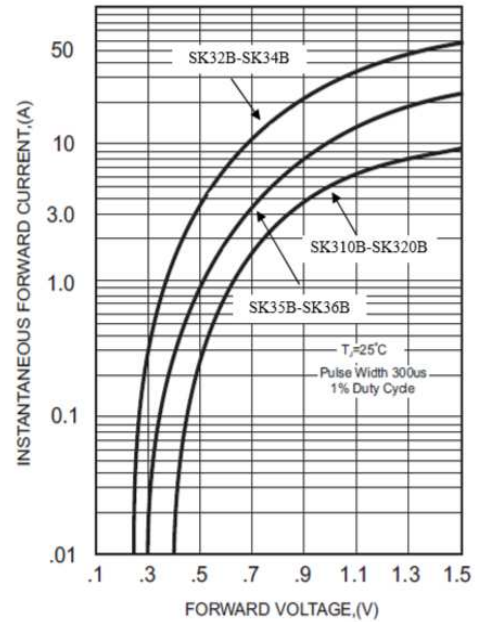
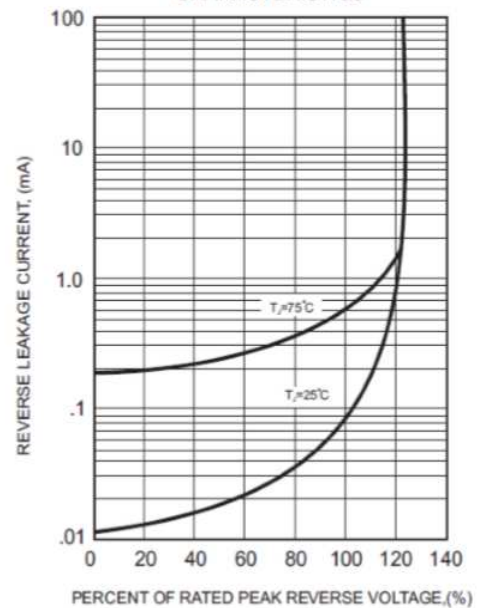
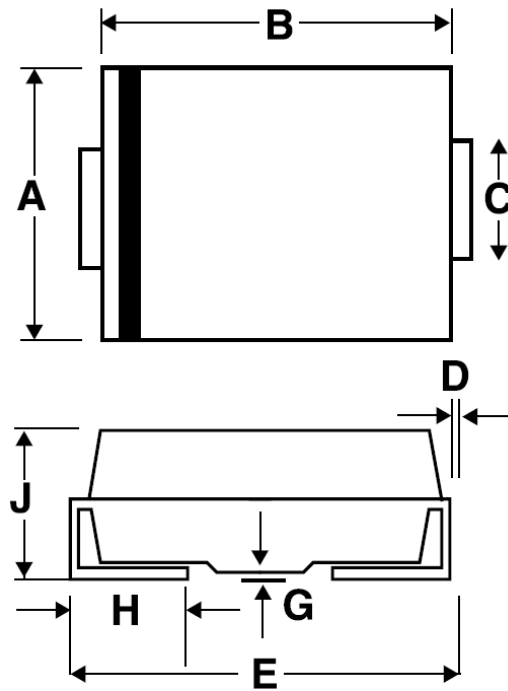


FIG.5 - TYPICAL REVERSE CHARACTERISTICS



## Package Dimension

### SMB (DO-214AA)







### Dimensions



Symbol	Millimeters		Inches	
	Min	Max	Min	Max
<b>A</b>	3.26	3.94	0.128	0.155
<b>B</b>	4.02	4.85	0.158	0.191
<b>C</b>	1.91	2.20	0.075	0.087
<b>D</b>	0.152	0.305	0.006	0.012
<b>E</b>	5.08	5.59	0.200	0.220
<b>G</b>	0.000	0.203	0.000	0.008
<b>H</b>	0.76	1.52	0.030	0.060
<b>J</b>	2.11	2.44	0.083	0.096

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