

Surface Mount Schottky Barrier Rectifier

FEATURES

- Low power loss, high efficiency
- Ideal for automated placement
- Guardring for overvoltage protection
- High surge current capability
- Moisture sensitivity level: level 1, per J-STD-020
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition

DO-214AA (SMB)


MECHANICAL DATA

Case: DO-214AA (SMB)

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - halogen-free

Base P/N with prefix "H" on packing code - AEC-Q101 qualified

Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

with prefix "H" on packing code meet JESD 201 class 2 whisker test

Polarity: Indicated by cathode band

Weight: 0.1 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	SK 32B	SK 33B	SK 34B	SK 35B	SK 36B	SK 39B	SK 310B	SK 315B	SK 320B	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	50	60	90	100	150	200	V
Maximum RMS voltage	V _{RMS}	14	21	28	35	42	63	70	105	140	V
Maximum DC blocking voltage	V _{DC}	20	30	40	50	60	90	100	150	200	V
Maximum average forward rectified current	I _{F(AV)}	3									A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	70									A
Maximum instantaneous forward voltage (Note 1) @ 3 A	V _F	0.5			0.75		0.85		0.95		V
Maximum reverse current @ rated VR T _J =25 °C T _J =100°C T _J =125 °C	I _R	0.5					0.1				mA
		10			5		-				
		-			-		2				
Voltage Rate of Change (Rated V _R)	dV/dt	10000									V/μs
Typical thermal resistance	R _{θJL}	23									°C/W
	R _{θJA}	63									
Operating junction temperature range	T _J	- 55 to +125				- 55 to +150					°C
Storage temperature range	T _{STG}	- 55 to +150									°C

Note 1: Pulse test with $PW=300\mu\text{s}$, 1% duty cycle

ORDERING INFORMATION

PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
SK3xxB (Note 1)	Prefix "H"	R5	Suffix "G"	SMB	850 / 7" Plastic reel
		R4		SMB	3,000 / 13" Paper reel
		M4		SMB	3,000 / 13" Plastic reel

Note 1: "xx" defines voltage from 20V (SK32B) to 200V (SK320B)

EXAMPLE

PREFERRED P/N	PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
SK36B R5	SK36B		R5		
SK36B R5G	SK36B		R5	G	Green compound
SK36BHR5	SK36B	H	R5		AEC-Q101 qualified

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

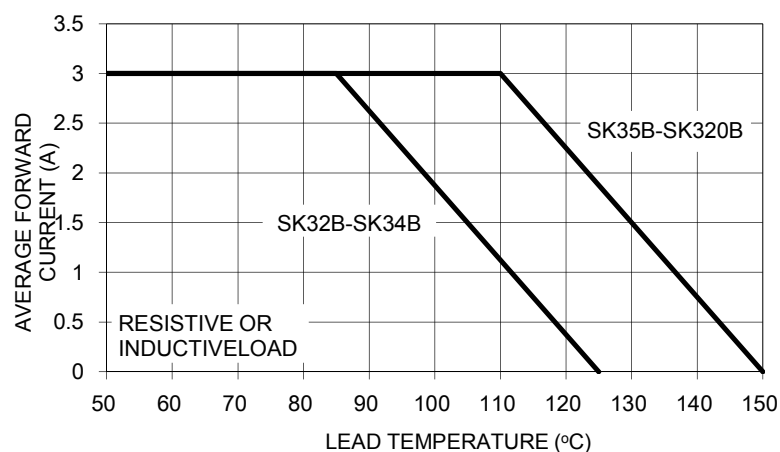


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

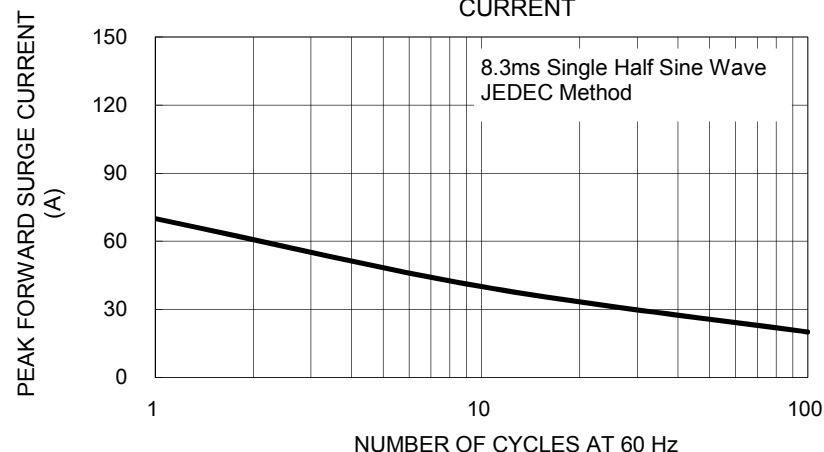


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

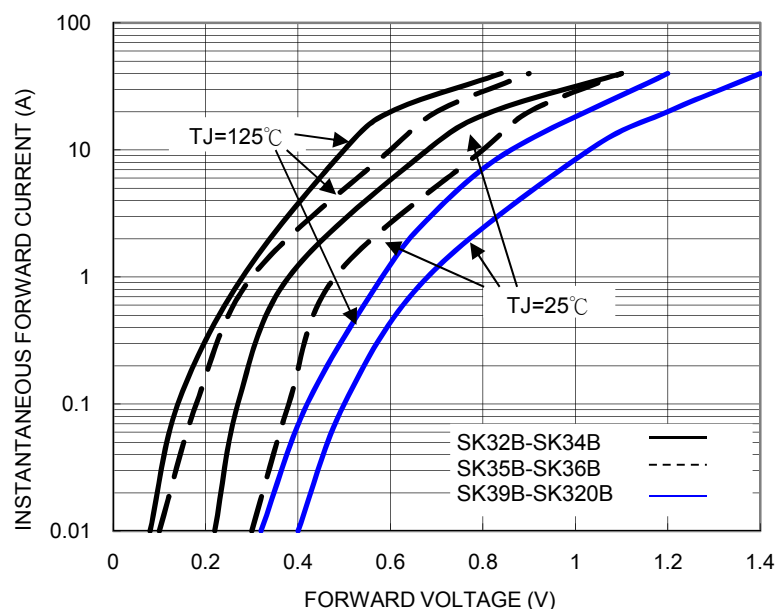


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

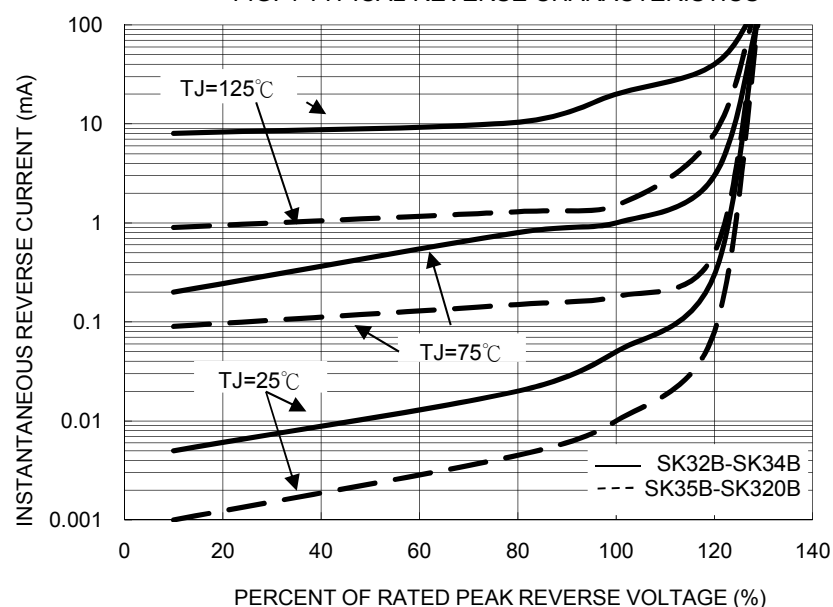


FIG. 5 TYPICAL JUNCTION CAPACITANCE

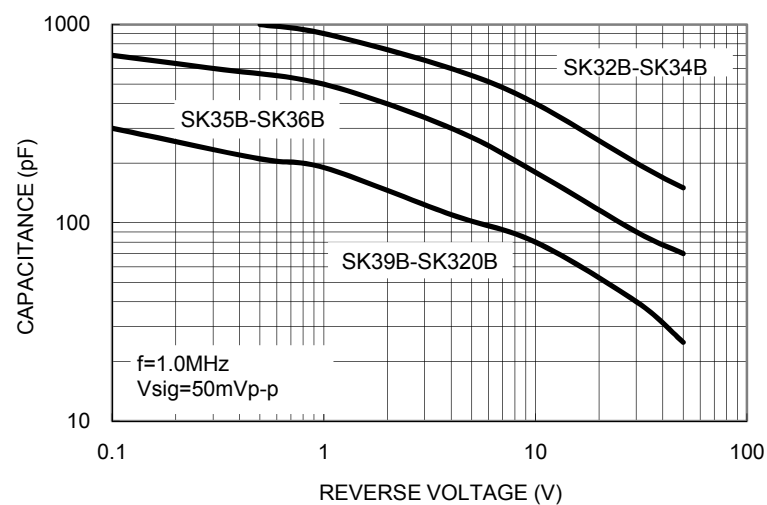
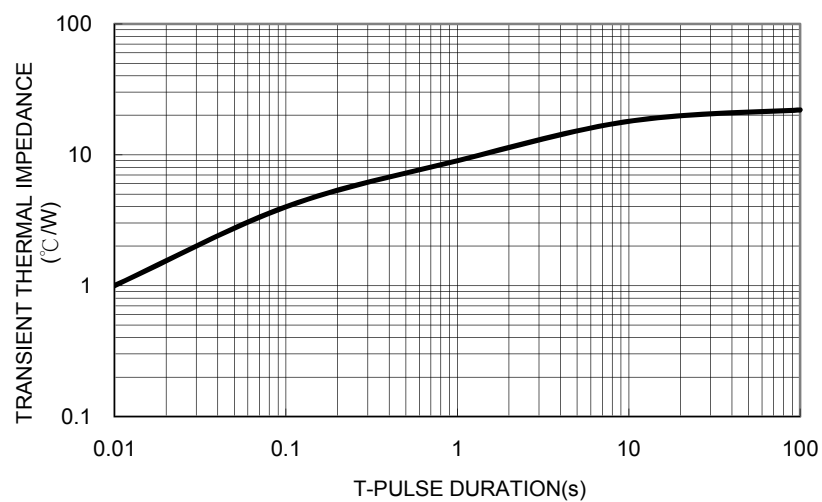
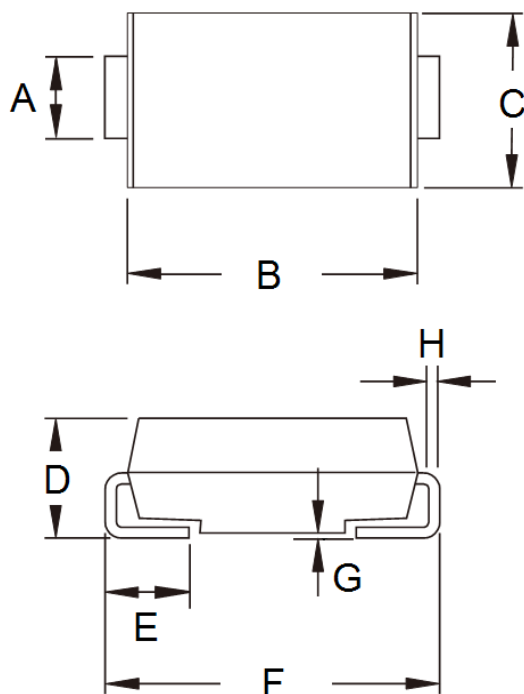


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE

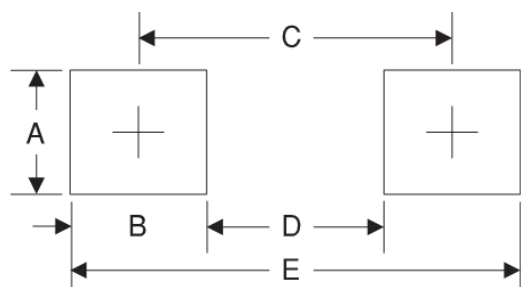


PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.95	2.10	0.077	0.083
B	4.25	4.75	0.167	0.187
C	3.48	3.73	0.137	0.147
D	1.99	2.61	0.078	0.103
E	0.90	1.41	0.035	0.056
F	5.10	5.30	0.201	0.209
G	0.10	0.20	0.004	0.008
H	0.15	0.31	0.006	0.012

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	2.3	0.091
B	2.5	0.098
C	4.3	0.169
D	1.8	0.071
E	6.8	0.268

MARKING DIAGRAM