

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-214AB (SMC)

MECHANICAL DATA

Case: DO-214AB (SMC)

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: 0.21 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)										
PARAMETER	SYMBOL	SK 82C	SK 83C	SK 84C	SK 85C	SK 86C	SK 810C	Unit		
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	100	V		
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	70	V		
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	100	V		
Maximum average forward rectified current	$I_{F(AV)}$	8						A		
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	150						A		
Maximum instantaneous forward voltage (Note 1) $I_F = 8 \text{ A}$	V_F	0.55		0.75		0.90	V			
Maximum reverse current @ rated VR $T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$	I_R	0.5				mA				
		15		10						
Voltage rate of change (Rated V_R)	dV/dt	10000						$\text{V}/\mu\text{s}$		
Typical thermal resistance	$R_{\theta JA}$	20						$^\circ\text{C}/\text{W}$		
Operating junction temperature range	T_J	-55 to +125		-55 to +150		$^\circ\text{C}$				
Storage temperature range	T_{STG}	- 55 to +150						$^\circ\text{C}$		

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
SK8xxC (Note 1)	Prefix "H"	R7	Suffix "G"	SMC	850 / 7" Plastic reel
		R6		SMC	3,000 / 13" Paper reel
		M6		SMC	3,000 / 13" Plastic reel

Note 1: "xx" defines voltage from 20V (SK82C) to 100V (SK810C)

EXAMPLE

PREFERRED P/N	PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
SK86C R7	SK86C		R7		
SK86C R7G	SK86C		R7	G	Green compound
SK86CHR7	SK86C	H	R7		AEC-Q101 qualified

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

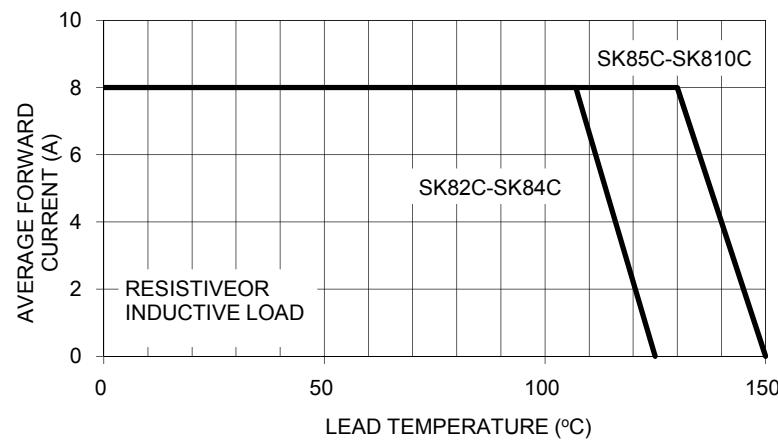
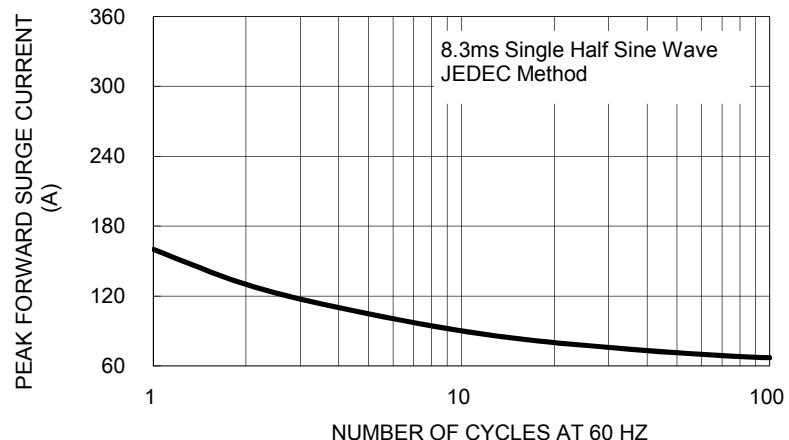
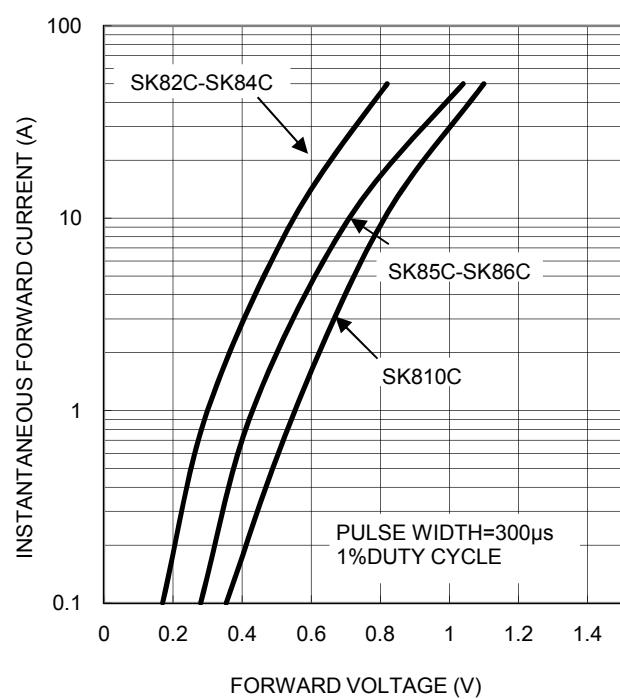
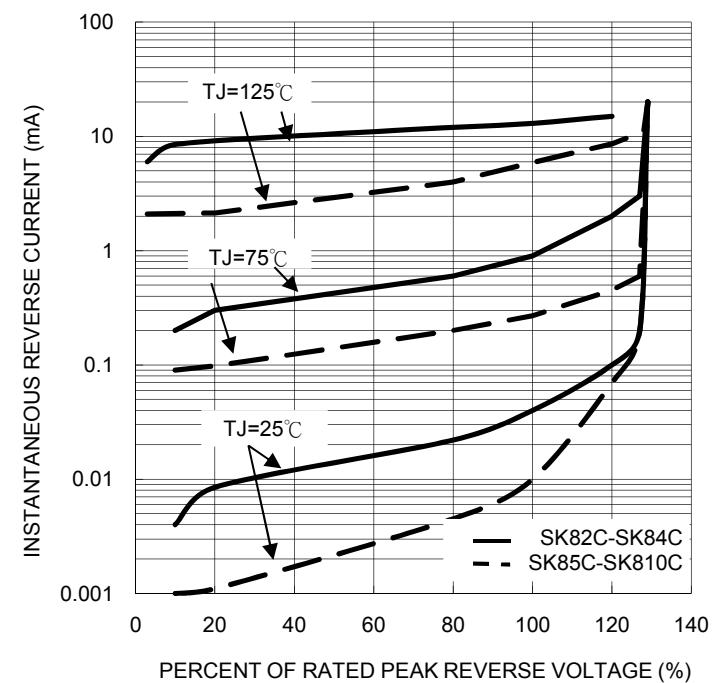
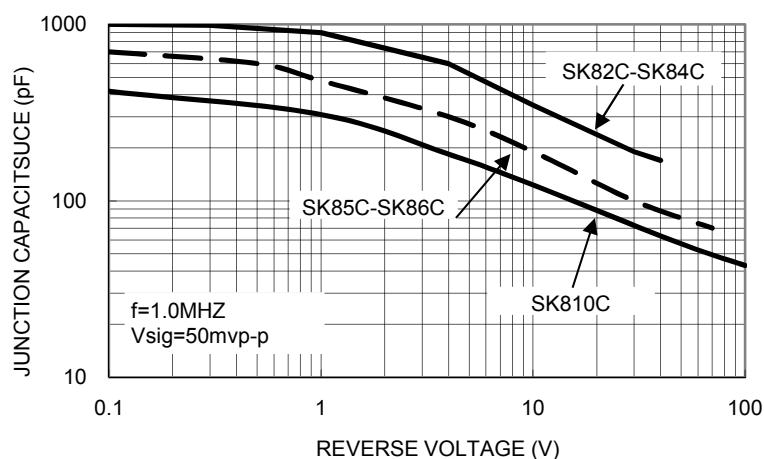
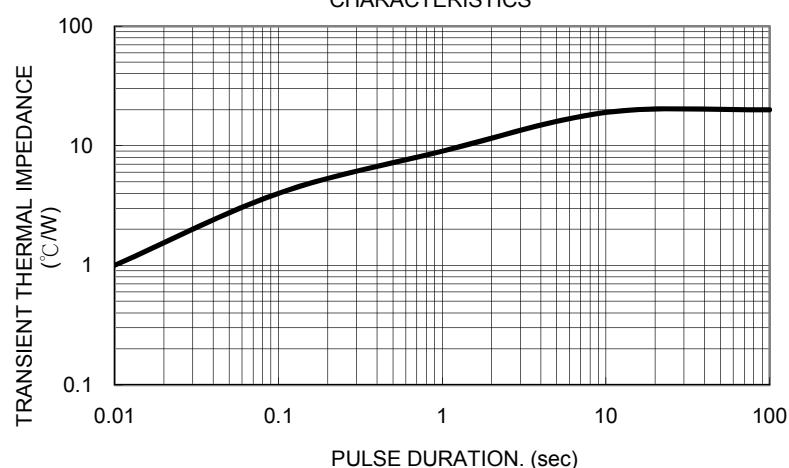
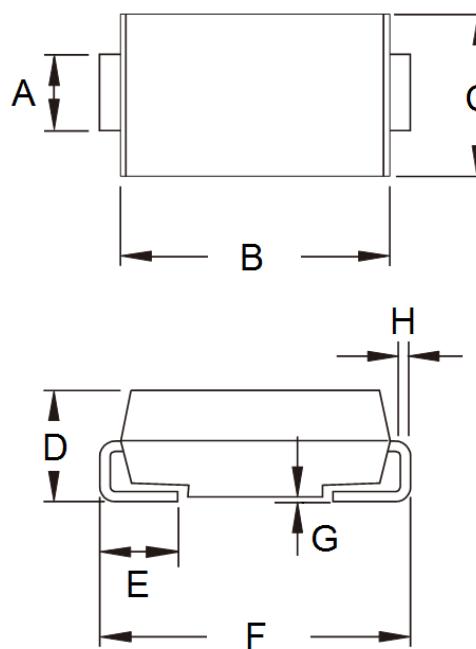
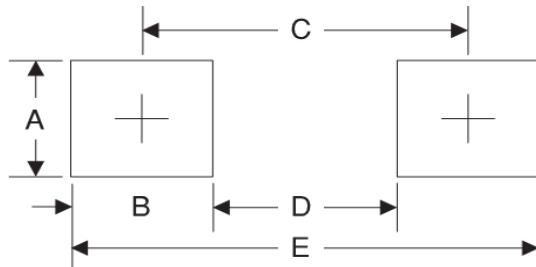
**FIG.1- MAXIMUM FORWARD CURRENT
DERATING CURVE**

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

FIG. 3- TYPICAL FORWARD CHARACTERISTICS

FIG. 4- TYPICAL REVERSE CHARACTERISTICS


FIG. 5- TYPICAL JUNCTION CAPACITANCE

FIG. 6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

PACKAGE OUTLINE DIMENSIONS


DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.90	3.20	0.114	0.126
B	6.60	7.11	0.260	0.280
C	5.59	6.22	0.220	0.245
D	2.00	2.62	0.079	0.103
E	1.00	1.60	0.039	0.063
F	7.75	8.13	0.305	0.320
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	3.3	0.130
B	2.5	0.098
C	6.8	0.268
D	4.4	0.173
E	9.4	0.370

MARKING DIAGRAM


P/N = Specific Device Code
 G = Green Compound
 YW = Date Code
 F = Factory Code

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