



ACE0104SK84HX.0104SK86HX.0104SK810HX

8.0A Schottky Barrier Rectifiers

Features

- Low Forward Voltage
- Epitaxial Construction with Oxide Passivation
- Guard Ring for Transient and ESD protection
- Surge Overload Rating to 150A Peak
- Low Power Loss
- Fast Switching
- Ideally Suited for Use in High Frequency SMPS, Inverters and As Free Wheeling Diodes

Mechanical Data

- Case: SMC/DO-210AB, Molded Plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Weight: 0.21 grams (approx.)

Maximum Ratings & Electrical Characteristics

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

Parameter	Symbol	ACE0104SK84HX	ACE0104SK86HX	ACE0104SK810HX	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	40	60	100	Volts
Working Peak Reverse Voltage	V_{RWM}	40	60	100	Volts
DC Blocking Voltage	V_R	40	60	100	Volts
RMS voltage	$V_{R(RMS)}$	28	42	70	Volts
Average Rectified Output Current	I_O	8.0	8.0	8.0	Amps
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	150	150	150	Amps



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Parameter	Symbol	ACE0104SK84HX	ACE0104SK86HX	ACE0104SK810HX	Unit
Forward Voltage @ $I_F = 8.0A$	V_{FM}	0.55	0.75	0.85	Volts
Peak Reverse Current At Rated DC Blocking Voltage	I_{RM}	0.5	0.5	0.5	mA
@ $T_J = 25\text{ }^\circ\text{C}$					
@ $T_J = 100\text{ }^\circ\text{C}$		50	50	50	
Typical Junction Capacitance	C_J	450	350	350	pF
Thermal Resistance, Junction to Ambient	R_{qJA}	50	50	50	$^\circ\text{C/W}$
Thermal Resistance, Junction to Lead	R_{qJC}	14	14	14	
Operating Temperature Range	T_J	-55~125	-55~150	-55~150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55~150	-55~150	-55~150	$^\circ\text{C}$

Notes:

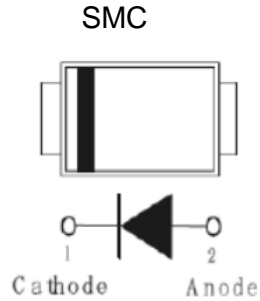
1. Mounted on FR-4 PCB with 14 X 14mm copper pads.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.



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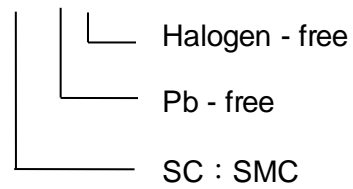
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Packaging Type



Ordering Information

ACE0104SK84HX.0104SK86HX.0104SK810HX XX + H





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Rating & Characteristic Curves

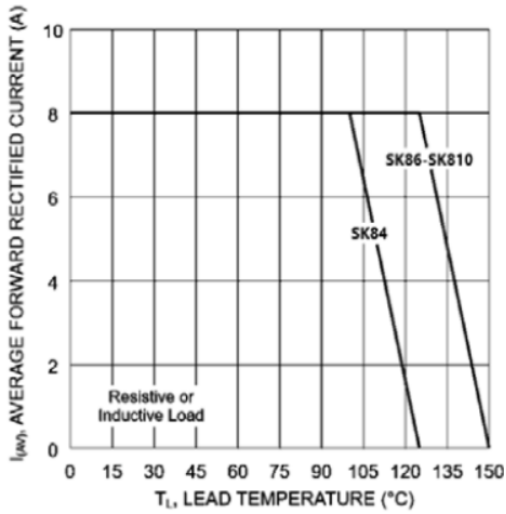


Fig. 1 Forward Current Derating Curve

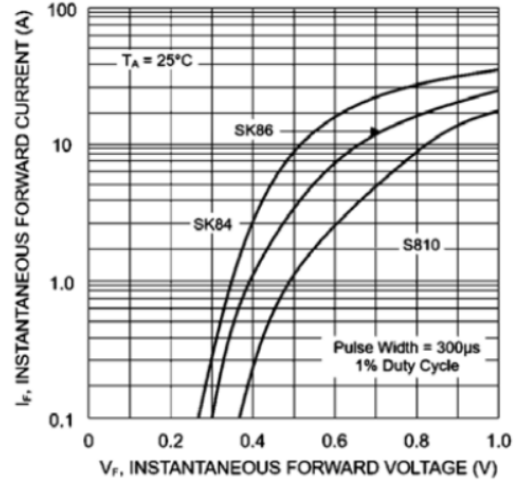


Fig. 2 Typical Forward Characteristics

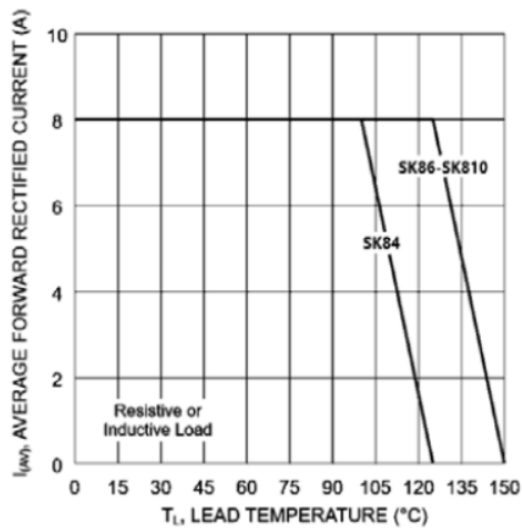


Fig. 3 Forward Surge Current Derating Curve

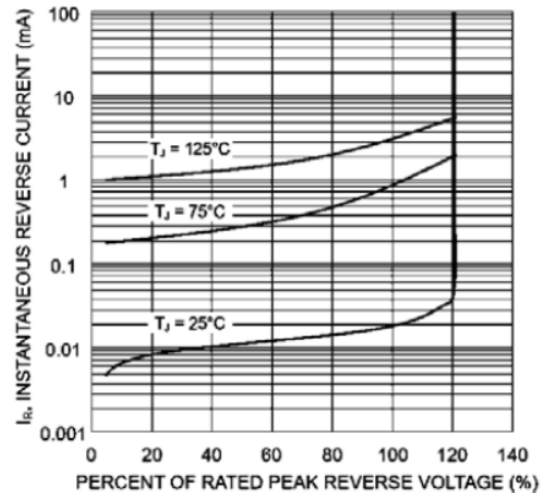


Fig. 4 Typical Reverse Characteristics

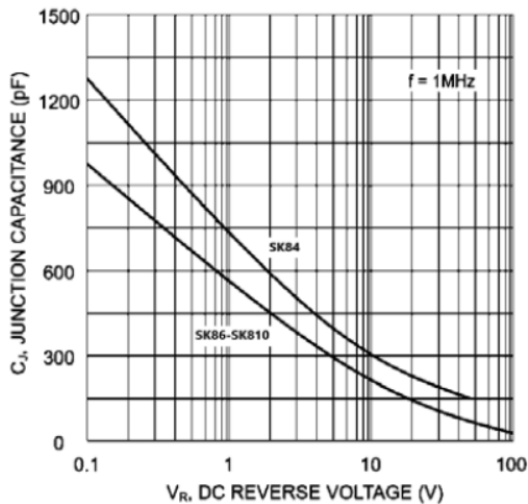


Fig. 5 Typical Junction Capacitance

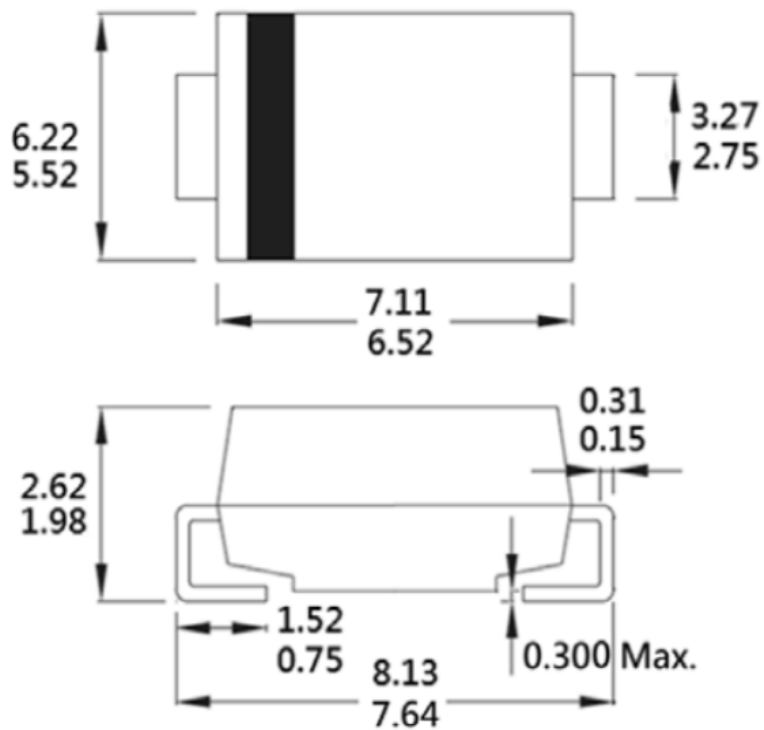


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Packing Information

SMC



Unit: millimeters



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Notes

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As sued herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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