

5 Amp. Surface Mount Schottky Barrier Rectifiers

<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <p>RoHS COMPLIANCE</p> </div> <div style="text-align: center;"> <p>CASE: SMC/DO-214AB</p> </div> </div> <div style="text-align: center; margin-top: 20px;"> <p style="font-size: small;">XX = Marking code WW = Week code Y = Year code</p> <p style="text-align: center;">Dimensions in mm.</p> </div>	<div style="display: flex; justify-content: space-around; text-align: center;"> <div> <p>Voltage</p> <p>20 V to 150 V</p> </div> <div> <p>Current</p> <p>5.0 A</p> </div> </div> <ul style="list-style-type: none"> For surface mounted application Easy pick and place Metal to silicon rectifier, majority carrier conduction Low power loss, high efficiency High current capability, low VF High surge current capability Plastic material used carriers Underwriters Laboratory Classification 94V-0 Epitaxial construction High temperature soldering: 260 °C / 10 seconds at terminals <p>MECHANICAL DATA</p> <p>Case: JEDEC DO-214AB Molded plastic Terminals: Pure tin plated, lead free Polarity: Indicated by cathode band Packaging: 16 mm tape EIA-STD RS-481. Weight: 0.21 g.</p>
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Maximum Ratings and Electrical Characteristics at 25 °C

		SK 52C	SK 54C	SK 56C	SK 510C	SK 515C
	Marking code	IO	IP	IQ	IR	IS
V_{RRM}	Maximum Recurrent Peak Reverse Voltage (V)	20	40	60	100	150
V_{RMS}	Maximum RMS Voltage (V)	14	28	42	70	105
V_{DC}	Maximum DC Blocking Voltage (V)	20	40	60	100	150
$I_{F(AV)}$	Maximum Average Forward Rectified Current at T_L (See graphic)	5.0 A				
I_{FSM}	8.3 ms. Peak Forward Surge Current (Jedec Method)	120 A				
T_j	Operating Temperature Range	-55°C to +150°C				
T_{stg}	Storage Temperature Range	-55°C to +150°C				

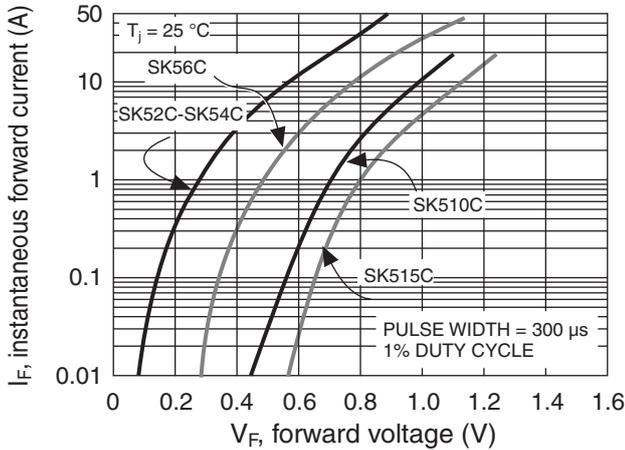
Electrical Characteristics at $T_{amb} = 25\text{ °C}$

V_F	Maximum Instantaneous Forward Voltage $I_F = 5.0\text{ A}$	0.55 V	0.75 V	0.85 V	0.95 V
I_R	Maximum DC Reverse Current (Note 1) $T_a = 25\text{ °C}$ at	0.5 mA			0.3 mA
	Rated DC Blocking Voltage $T_a = 125\text{ °C}$	20 mA	10.0 mA	5.0 mA	
$R_{th(j-l)}$	Typical Thermal Resistance (Note 2)	17 °C/W			
$R_{th(j-a)}$		50 °C/W			

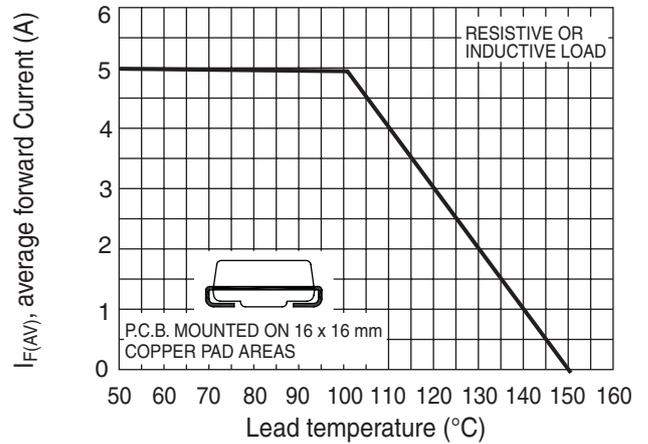
NOTES: 1. Pulse Test With PW = 300 μsec, 1% Duty Cycle
2. Measured on P.C. Board with 16mm x16mm Copper Pad Areas

Rating And Characteristic Curves

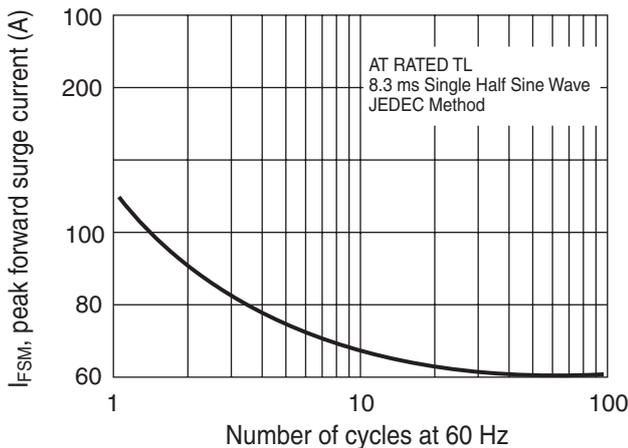
TYPICAL FORWARD CHARACTERISTIC



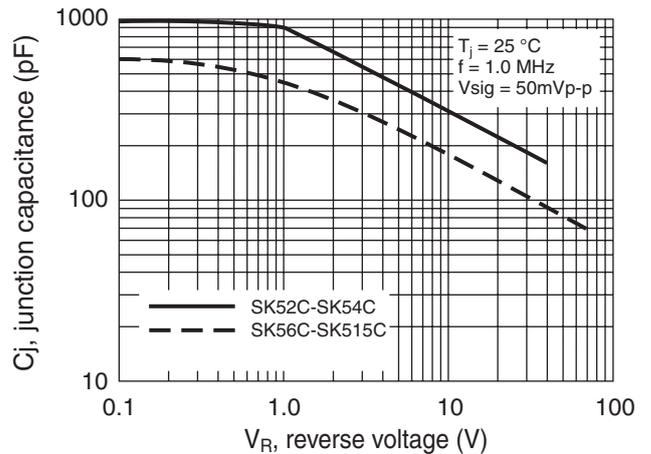
MAXIMUM FORWARD CURRENT DERATING CURVE



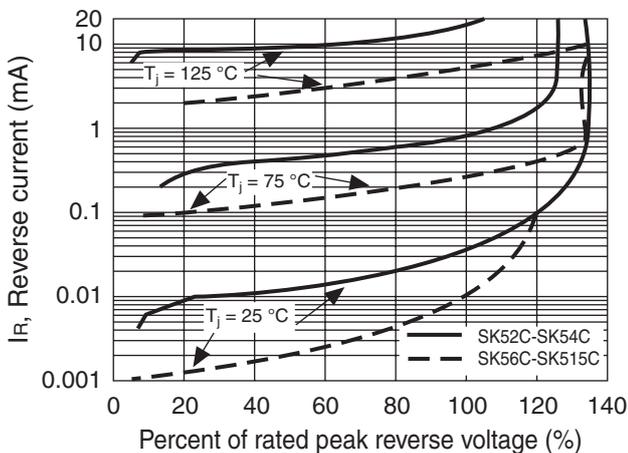
MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



TYPICAL JUNCTION CAPACITANCE



TYPICAL REVERSE CHARACTERISTIC



TYPICAL TRANSIENT THERMAL CHARACTERISTIC

