



THE DATASHEET OF SK54



SK52 thru SK56

Surface Mount Schottky Rectifier
 Reverse Voltage 20V-60V Forward Current 5A

Features

- Low forward voltage drop
- High junction temperature
- Moisture sensitivity: level 1, per J-STD-020
- Plastic package has underwriters laboratory flammability classification 94V-0
- Add suffix 'E' for halogen-free
- Halogen-free according to IEC 61249-2-21 definition



DO-214AB (SMC)



Applications

For use in low voltage, high frequency inverters, free wheeling and polarity protection applications.

Maximum Ratings (T_A = 25°C unless otherwise noted)

Parameter	Symbol	SK52	SK53	SK54	SK55	SK56	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	20	30	40	50	60	V
Maximum RMS Voltage	V _{RMS}	14	21	28	35	42	V
Maximum DC Blocking Voltage	V _{DC}	20	30	40	50	60	V
Maximum Average Forward Rectified Current	I _{F(AV)}	5.0					A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	I _{FSM}	120					A
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55 to +150					°C

Electrical Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Test Conditions	Symbol	SK52	SK53	SK54	SK55	SK56	Unit
Maximum Instantaneous Forward Voltage	I _F =5A	V _F	0.55			0.67		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A =25°C	I _R	0.20			0.15		mA
	T _A =125°C		15					
Typical Junction Capacitance	4.0 V, 1 MHz	C _J	96					pF

Thermal Characteristics

Parameter	Symbol	Value	Unit
Typical Thermal Resistance ⁽¹⁾	R _{θJA}	62	°C/W
	R _{θJC}	22	
	R _{θJL}	15	

Note1: Thermal resistance from junction to lead, mounted on PCB with 8.0×8.0mm copper pads.

Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

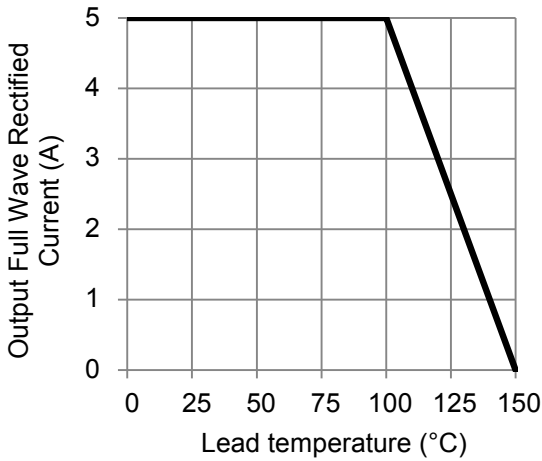


Figure 1. Forward Current Derating Curve

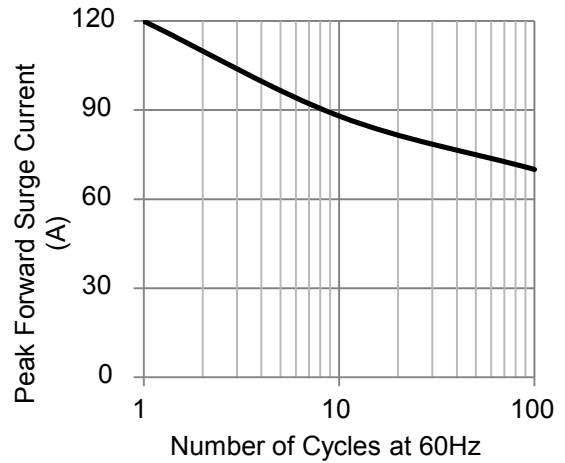


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

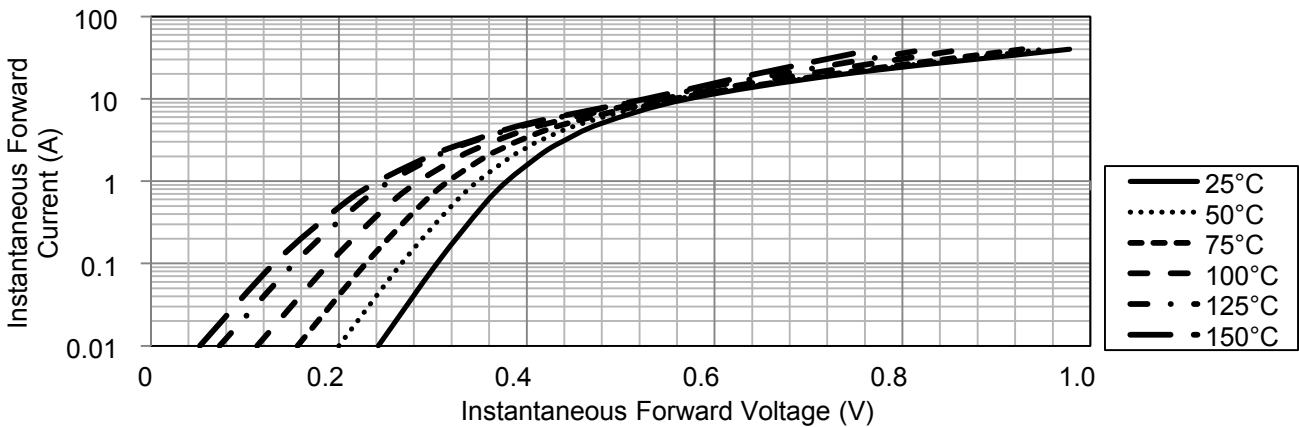


Figure 3. Typical Instantaneous Forward Characteristics (SK52 thru SK54)

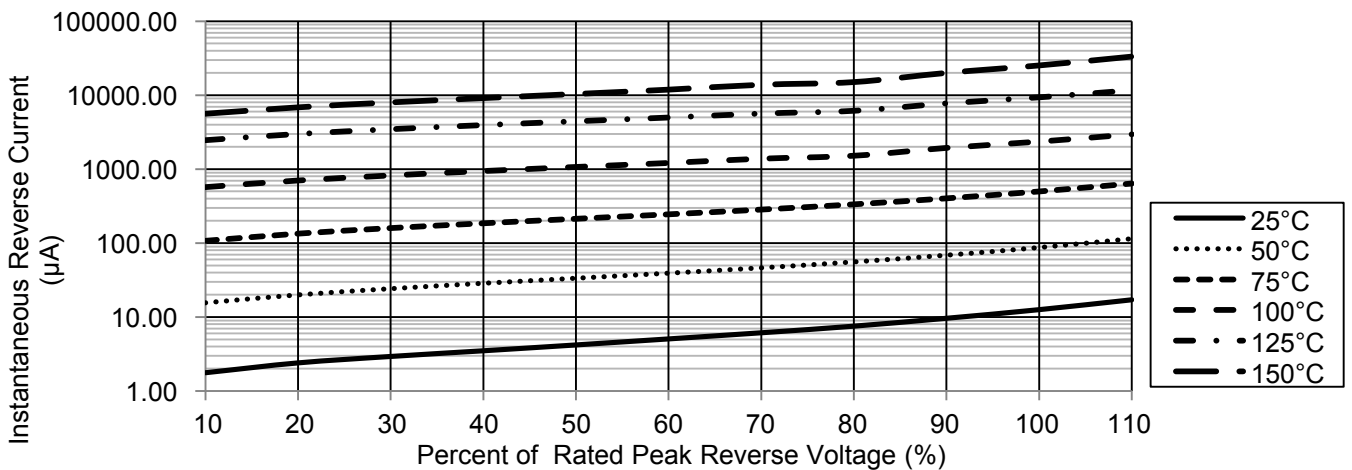


Figure 4. Typical Reverse Characteristics (SK52 thru SK54)

Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

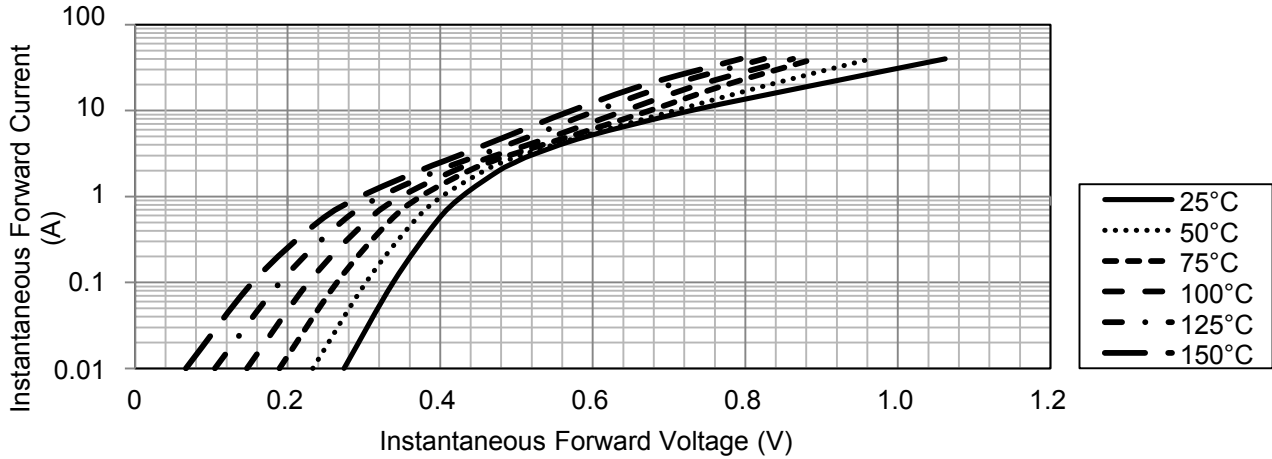


Figure 5. Typical Instantaneous Forward Characteristics (SK55 thru SK56)

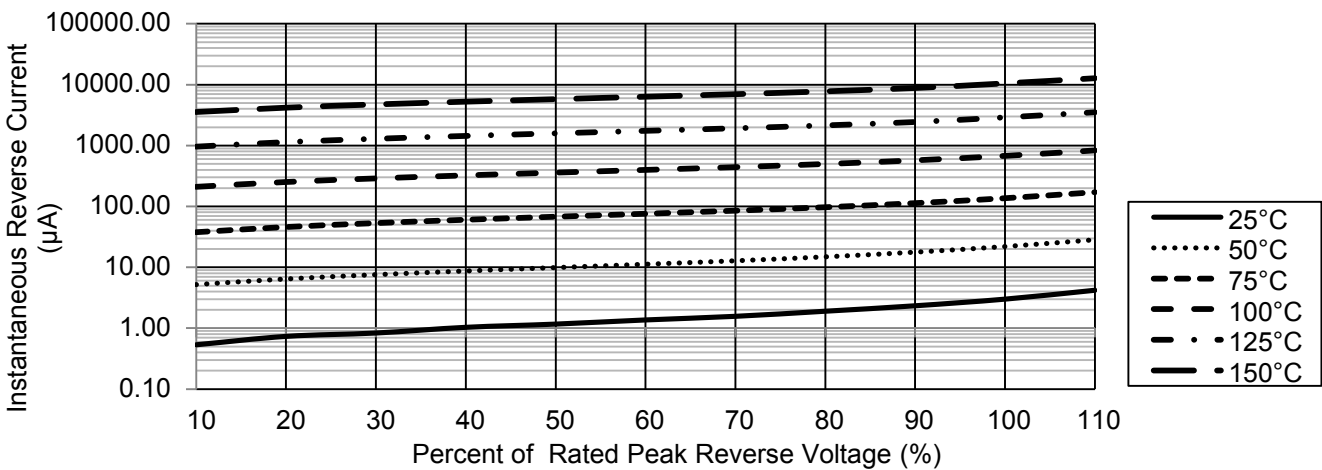


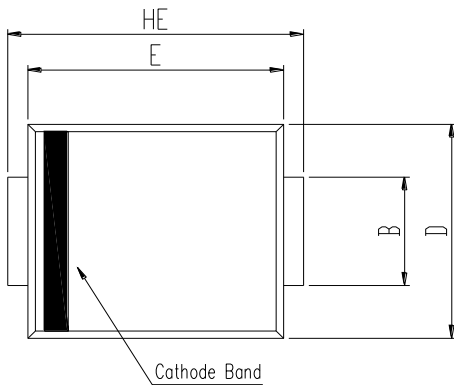
Figure 6. Typical Reverse Characteristics (SK55 thru SK56)

SK52 thru SK56

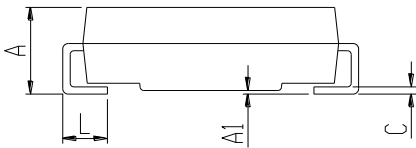
Surface Mount Schottky Rectifier
 Reverse Voltage 20V-60V Forward Current 5A

Package Outline Dimensions (SMC)

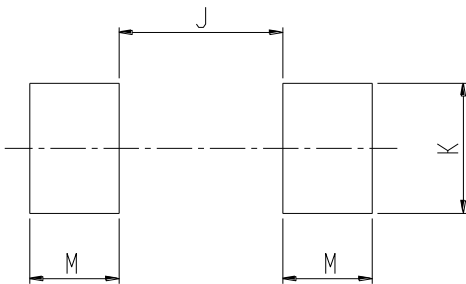
DO-214AB (SMC)



SMC (DO-214AB)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.00	2.62	0.079	0.103
A1	0.00	0.20	0.000	0.008
B	2.92	3.07	0.115	0.121
C	0.15	0.31	0.006	0.012
D	5.59	6.22	0.220	0.245
E	6.60	7.11	0.260	0.280
HE	7.75	8.13	0.305	0.320
L	0.76	1.52	0.030	0.060

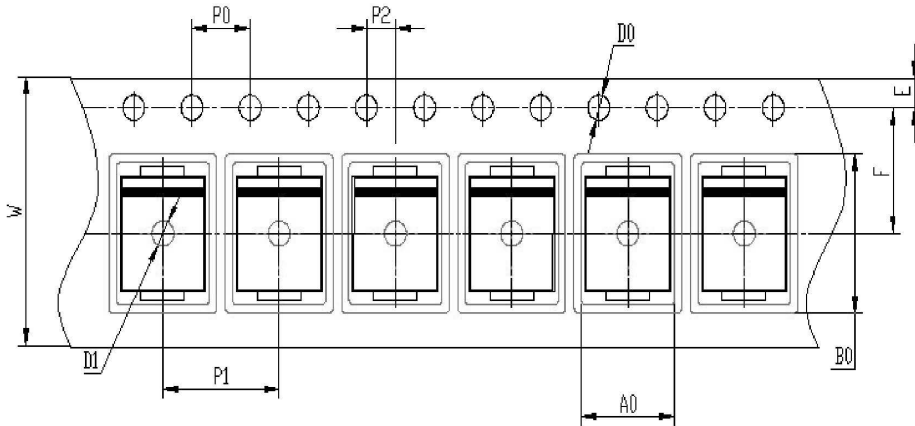


Recommended Pad Layout



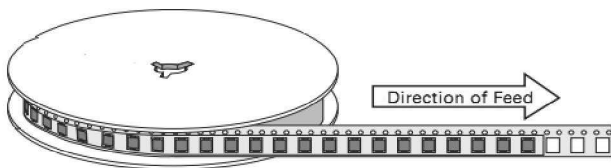
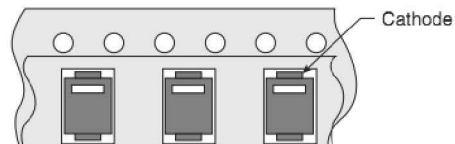
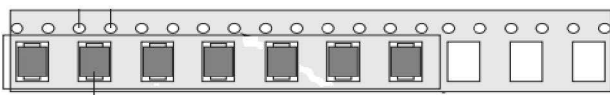
SMC Recommended Pad Layout (Reference ONLY)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	-	4.60	-	0.181
K	3.20	-	0.126	-
M	2.00	-	0.079	-

SMC Carrier Tape




Symbol	SMC(mm)
W	16±0.2
E	1.75±0.1
F	7.5±0.05
D0	1.5±0.1
D1	1.50 +0.1/-0
P0	4.0±0.1
P1	8.0±0.1
P2	2.0±0.05
A0	6.22±0.1
B0	8.31±0.1

SMC Taping Orientation









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