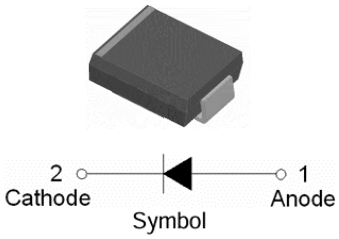
SK52 thru SK520 SMC

FEATURES

- Low profile package
- Ideal for automated placement
- Ultrafast reverse recovery time
- Low power losses, high efficiency
- Low forward voltage drop
- High surge capability
- High temperature soldering：260℃/10 seconds at terminals
- Component in accordance to RoHS 2002/95/1 and WEEE 2002/96/EC



Mechanical Date

- Case: JEDEC DO-214AB molded plastic
- Terminals: Solder plated, solderable per JESD22-B102D
- Polarity: Laser band denotes cathode end

Major Ratings and Characteristics

$I_{F(AV)}$	5.0A
V_{RRM}	20 V to 200 V
I_{FSM}	150A
V_F	0.50V, 0.55V, 0.70V, 0.85V，0.95V
$T_{j\ max.}$	150 °C

Maximum Ratings & Thermal Characteristics

(TA = 25 °C unless otherwise noted)

Items	Symbol	SK52	SK53	SK54	SK55	SK56	SK58	SK510	SK515	SK520	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	V
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	70	105	140	V
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	150	200	V
Maximum average forward rectified current	$I_{F(AV)}$	5.0									A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150									A
Voltage rate of change (rated VR)	dv/dt	10000									V/μs
Thermal resistance from junction to lead (1)	$R_{\theta JL}$	20									°C/W
Operating junction and storage temperature range	T_J，T_{STG}	-55 TO +150									°C

Note 1: Mounted on P.C.B. with 0.55” x 0.55” (14.0 x 14.0mm) copper pad areas.

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

Items	Test conditions		Symbol	SK52	SK53～54	SK55～56	SK58～510	SK515～520	UNIT
Instantaneous forward voltage	IF=5.0A(2)		V_F	0.50	0.55	0.70	0.85	0.95	V
Reverse current	$V_R=V_{DC}$	T_j=25℃	I_R	0.5					mA
		T_j=100℃		10.0					

Note 2: Pulse test:300μs pulse width,1% duty cycle.

Typical Characteristics

Fig.1 Forward current derating curve

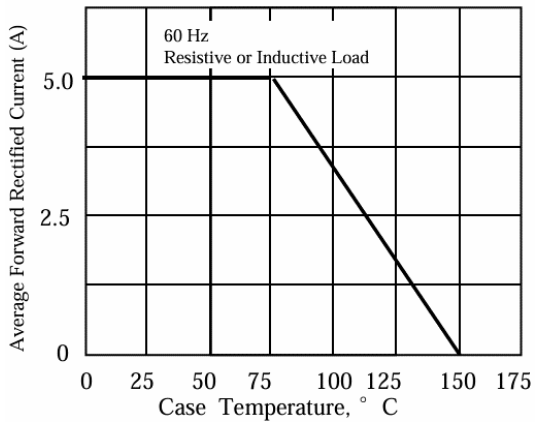


Fig.2 Maximum non-repetitive peak forward surge current

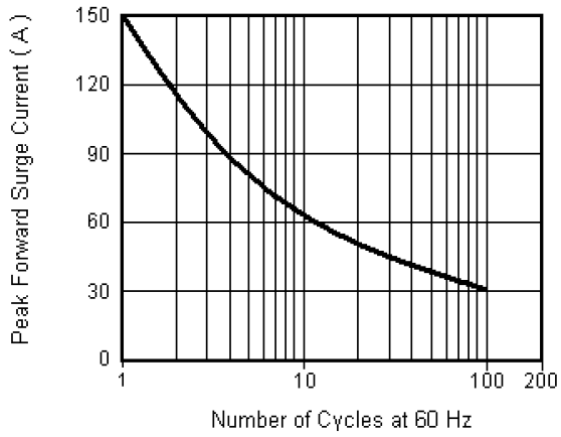


Fig.3 Typical instantaneous forward characteristics

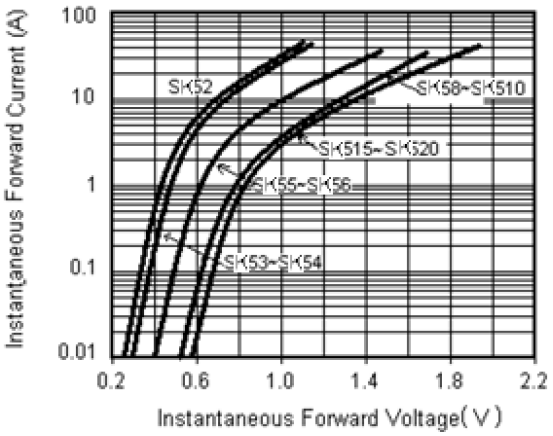
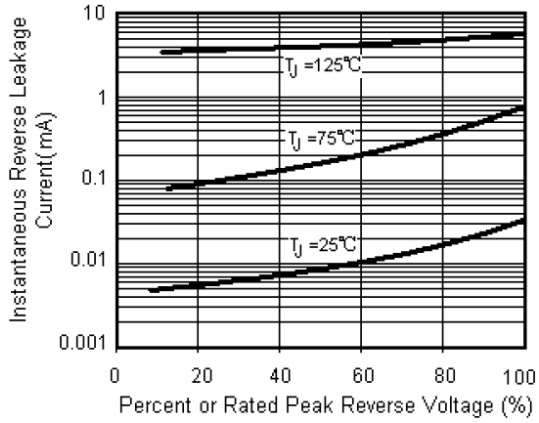
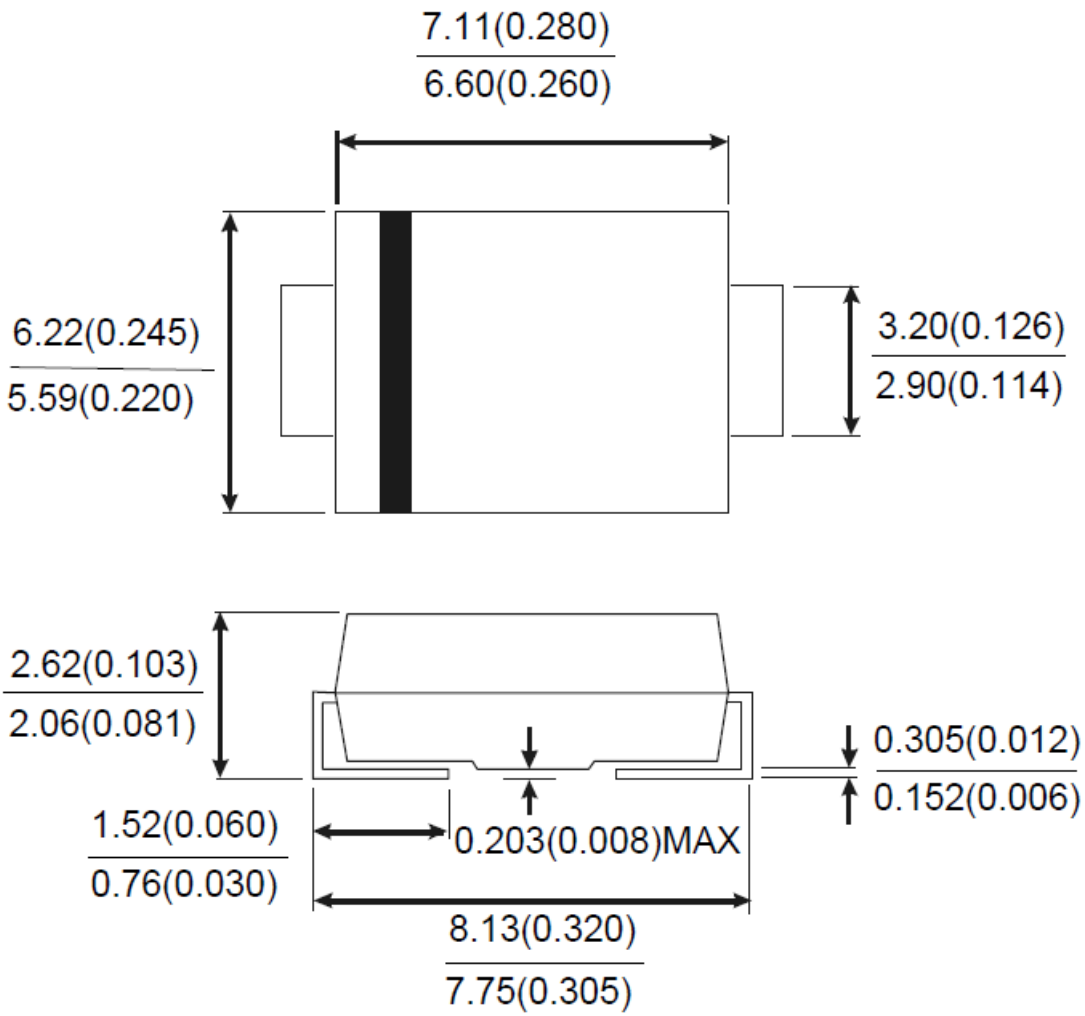


Fig.4 Typical reverse leakage characteristics



Package Outline (SMC DO-214AB)



Disclaimer

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.