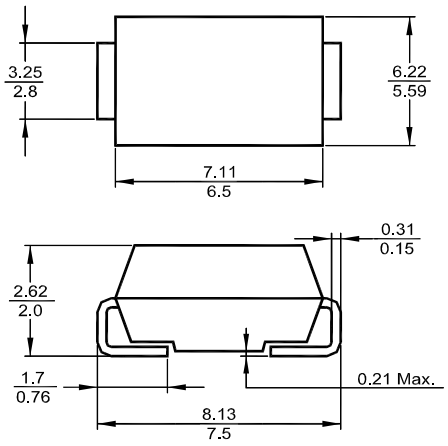
SSL54C

Surface Mount Schottky Barrier Rectifier
Reverse Voltage - 40 V
Forward Current - 5 A

SMC (DO-214AB)



Dimensions in millimeters

Features
- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

Marking: SSL54C

Maximum Ratings and Electrical Characteristics
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	Symbols	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	40	V
Maximum RMS voltage	V_{RMS}	28	V
Maximum DC blocking voltage	V_{DC}	40	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5	A
Peak Forward Surge Current 8.3 ms Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	175	A
Typical Thermal Resistance from junction to ambient [1)]	$R_{\theta JA}$	60	°C/W
Typical junction capacitance [2)]	C_J	500	pF
Junction Temperature Range	T_j	- 65 to + 150	°C
Storage Temperature Range	T_{stg}	- 65 to + 150	°C

Electrical Characteristics

Parameter		Symbol	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage at 5 A[1)]	T_J = 25 °C T_J = 125°C	V_F	0.45 0.36	0.49 0.42	V
Maximum DC Reverse Current at Rated DC Blocking Voltage[1)]	T_J = 25 °C T_J = 125°C	I_R	- 40	0.5 60	mA

[1)] P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

[2)] Measured at 1MHz and applied reverse voltage of 4.0 V D.C.

Fig.1 Forward Current Derating Curve

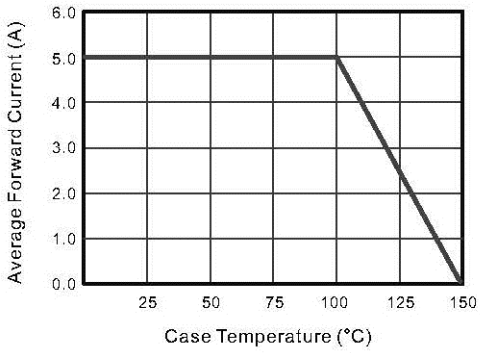


Fig.2 Typical Reverse Characteristics

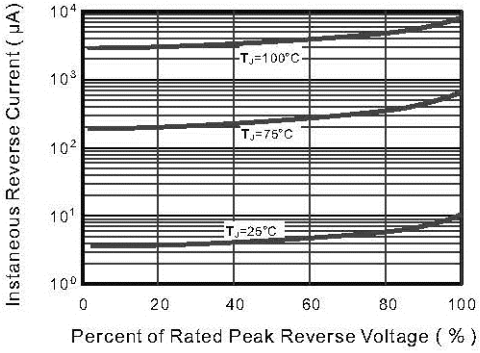


Fig.3 Typical Forward Characteristic

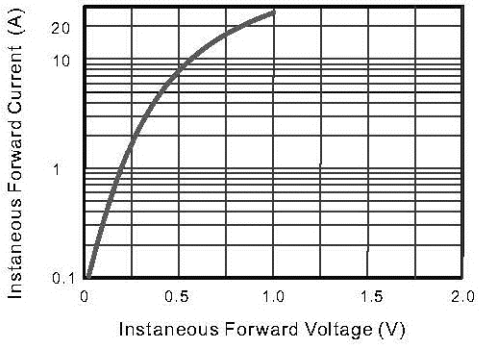


Fig.4 Typical Junction Capacitance

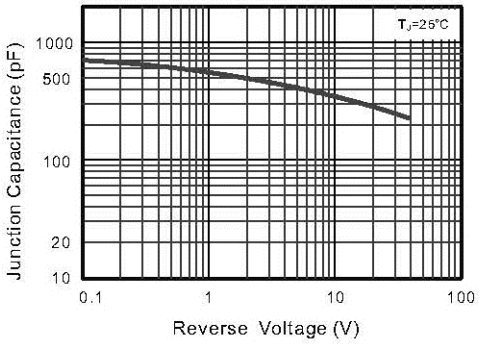


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

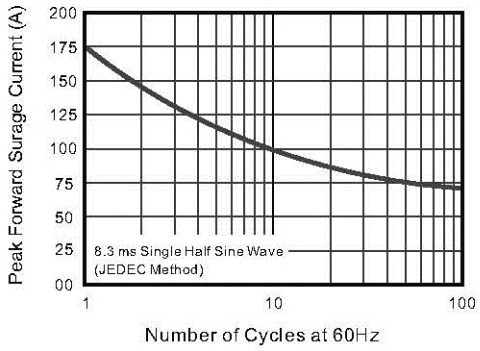


Fig.6- Typical Transient Thermal Impedance