

SB53-C THRU SB54-C

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

VOLTAGE:30 TO 40V

CURRENT: 5.0A



FEATURE

Plastic package has Underwriters Laboratory Flammability Classification 94V-0
For surface mounted applications
Low profile package
Built-in strain relief
Low power loss, high efficiency
High current capability, low forward voltage drop
High surge capability
For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
Guarding for over voltage protection

MECHANICAL DATA

Case: JEDEC DO-214AB molded plastic body

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

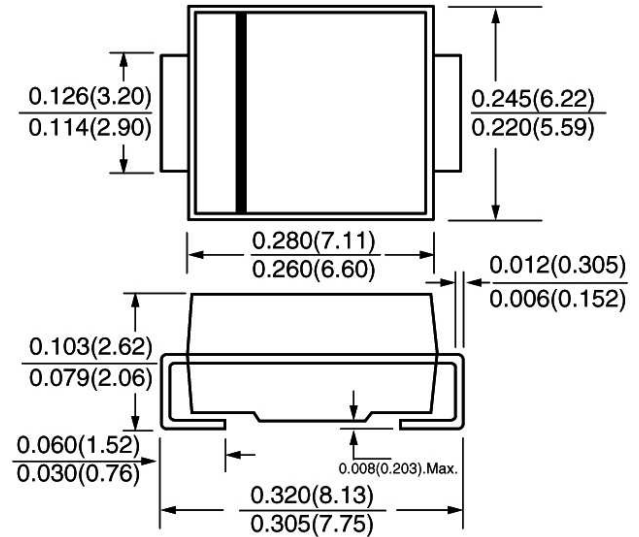
High temperature soldering guaranteed:

250°C /10 seconds at terminals

Polarity: Color band denotes cathode end

Weight: 0.007 ounce, 0.25gram

SMC/DO--214AB



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated,
for capacitive load, derate current by 20%)

	SYMBOL	SB53-C	SB54-C	units
Device marking code		SB53	SB54	
Maximum Recurrent Peak Reverse Voltage	Vrrm	30	40	V
Maximum RMS Voltage	Vrms	21	28	V
Maximum DC blocking Voltage	Vdc	30	40	V
Maximum Average Forward Rectified Current 3/8"lead length at T _L (See Fig.1)	If(av)	5.0		A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	Ifsm	175.0		A
Maximum Forward Voltage at rated Forward current at 5.0A T _J =25°C (Note 1)	Vf	0.50		V
Maximum DC Reverse Current T _J =25°C at rated DC blocking voltage T _J =125°C	I _r	0.7	0.5	mA
		65	60	
Typical Thermal Resistance (Note 2)	R(ja)	60.0		°C /W
	R(jl)	20.0		
Storage and Operating Temperature Range	Tstg	-50 to +150		°C

NOTES:

(1) Pulse test: 300μs pulse width, 1% duty cycle

(2) Aluminum substrate mounted

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Fig. 1 – Forward Current Derating Curve

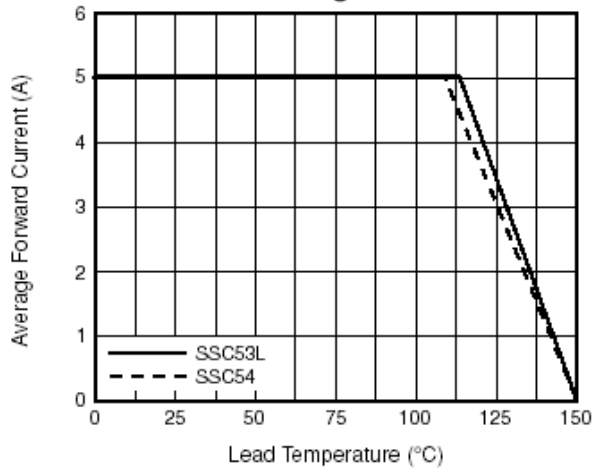


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

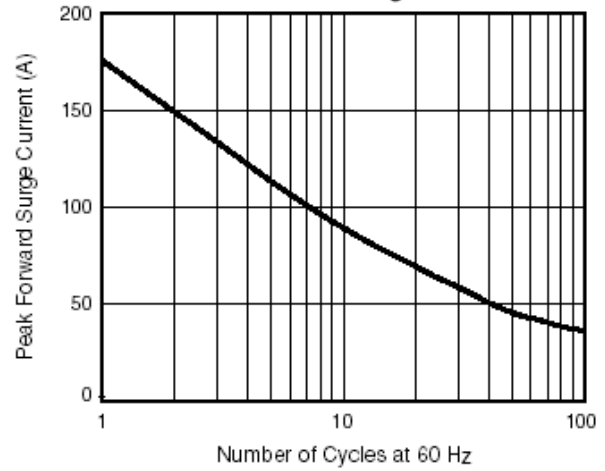


Fig. 3 – Typical Instantaneous Forward Characteristics

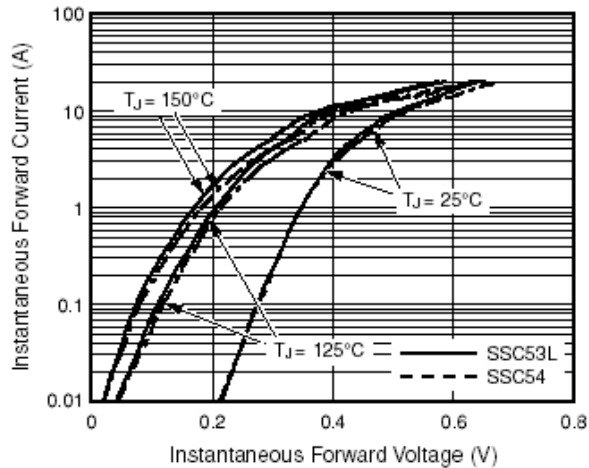


Fig. 4 – Typical Reverse Characteristics

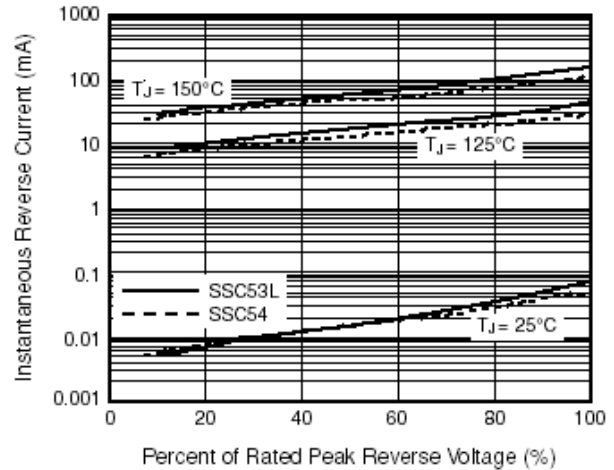


Fig. 5 – Typical Junction Capacitance

