



New Product

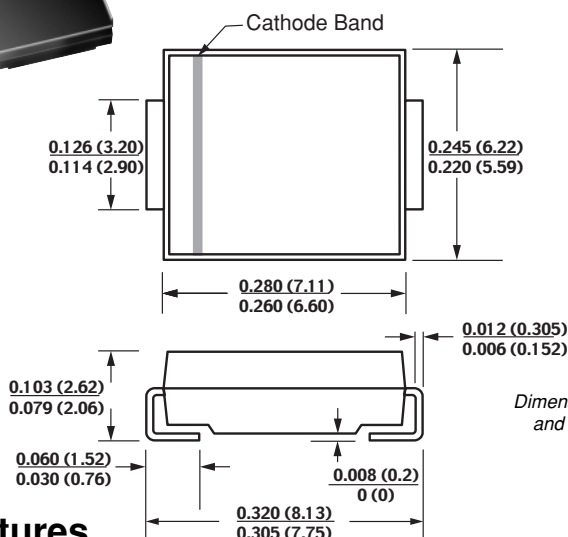
SSC53L and SSC54

Vishay Semiconductors  
formerly General Semiconductor

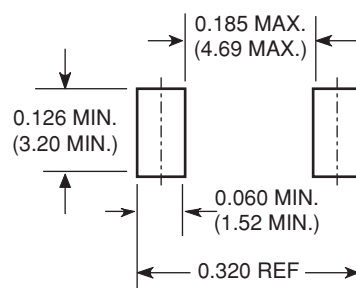
## High-Current Density Surface Mount Schottky Rectifier



DO-214AB (SMC)

Reverse Voltage 30 & 40V  
Forward Current 5.0ADimensions in inches  
and (millimeters)

### Mounting Pad Layout



### Features

- Low power loss, high efficiency
- Low profile surface mount package
- Built-in strain relief
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- Guardring for overvoltage protection
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0

### Mechanical Data

**Case:** JEDEC DO-214AB molded plastic body**Terminals:** Solder plated, solderable per MIL-STD750, Method 2026

High temperature soldering guaranteed: 250°C/10 seconds at terminals

**Polarity:** Color band denotes cathode end**Weight:** 0.007 oz., 0.25 g

### Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

Parameter	Symbol	SSC53L	SSC54	Unit
Device marking code		53L	S54	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	30	40	V
Maximum RMS voltage	V <sub>RMS</sub>	21	28	V
Maximum DC blocking voltage	V <sub>DC</sub>	30	40	V
Maximum average forward rectified current at T <sub>L</sub> (See Fig. 1)	I <sub>F(AV)</sub>	5.0		A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	175		A
Typical thermal resistance <sup>(2)</sup>	R <sub>θJA</sub> R <sub>θJL</sub>	60 20		°C/W
Voltage rate of change (rated V <sub>R</sub> )	dv/dt	10,000		V/μs
Operating junction temperature range	T <sub>J</sub>	-65 to +150		°C
Storage temperature range	T <sub>STG</sub>	-65 to +150		°C

### Electrical Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

Parameter	Symbol	Typ.	Max.	Typ.	Max.	Unit
Maximum instantaneous Forward voltage at 5.0A <sup>(1)</sup>	V <sub>F</sub>	0.42	0.45	0.45	0.49	V
		0.33	0.38	0.36	0.42	
Maximum DC reverse current at rated DC blocking voltage <sup>(1)</sup>	I <sub>R</sub>	—	0.7	—	0.5	mA
		45	65	40	60	

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

(2) Aluminum substrate mounted

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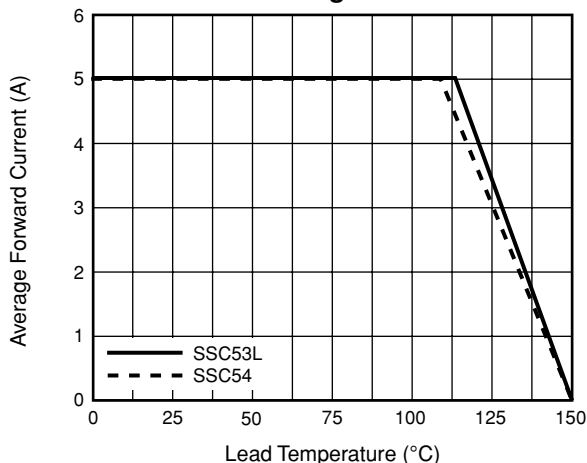
# SSC53L and SSC54

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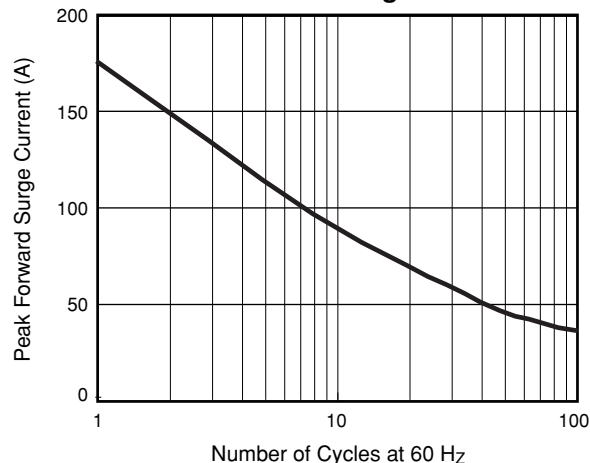


## Ratings and Characteristic Curves (T<sub>A</sub> = 25°C unless otherwise noted)

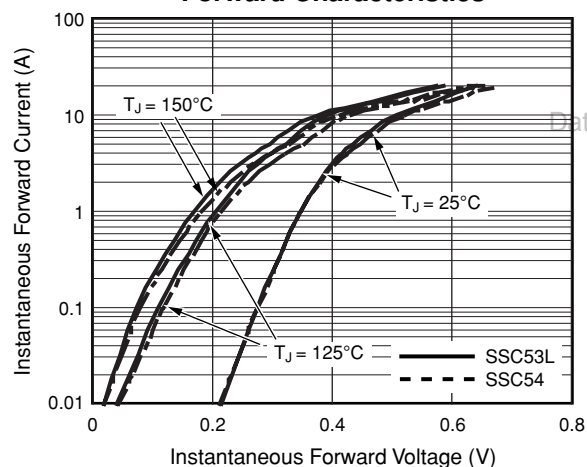
**Fig. 1 – Forward Current Derating Curve**



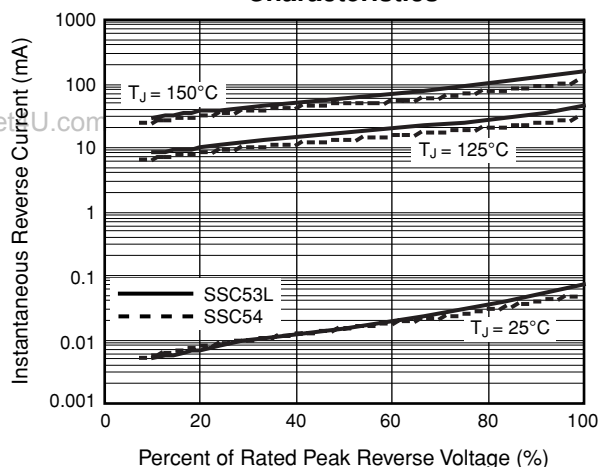
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**



**Fig. 3 – Typical Instantaneous Forward Characteristics**



**Fig. 4 – Typical Reverse Characteristics**



**Fig. 5 – Typical Junction Capacitance**

