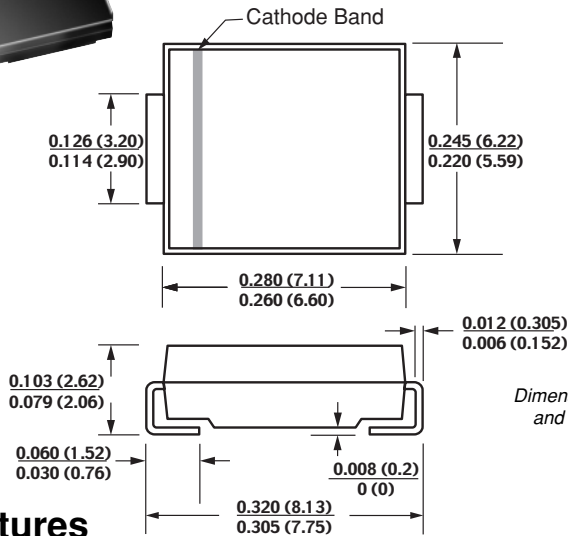


High-Current Density Surface Mount Schottky Rectifier

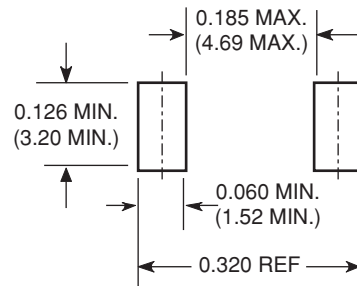


DO-214AB (SMC)

Reverse Voltage 30 & 40V
Forward Current 5.0A



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_A = 25°C unless otherwise noted)

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

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

Parameter	Symbol	Typ.	Max.	Typ.	Max.	Unit
Maximum instantaneous Forward voltage at 5.0A ⁽¹⁾	V _F	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 ⁽¹⁾	I _R	—	0.7	—	0.5	mA
		45	65	40	60	

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

(2) Aluminum substrate mounted

SSC53L and SSC54



Vishay Semiconductors
formerly General Semiconductor

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

Fig. 1 – Forward Current Derating Curve

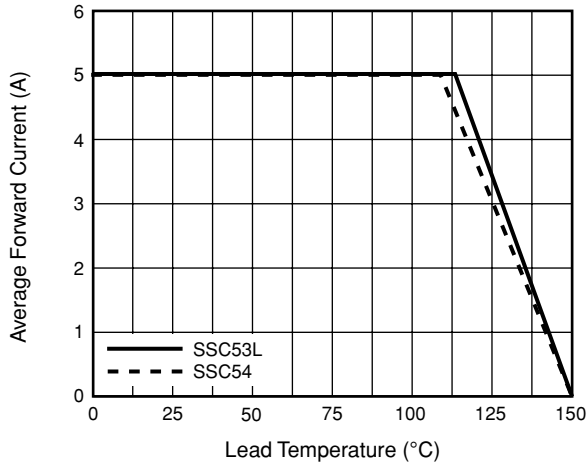


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

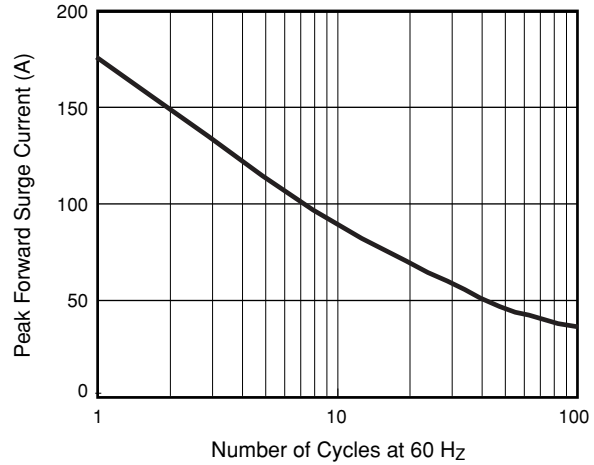


Fig. 3 – Typical Instantaneous Forward Characteristics

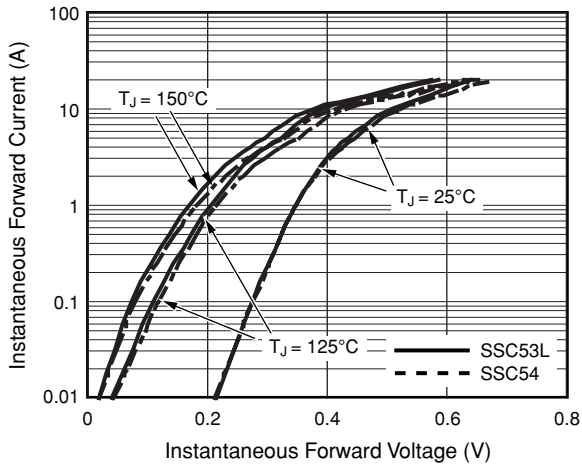


Fig. 4 – Typical Reverse Characteristics

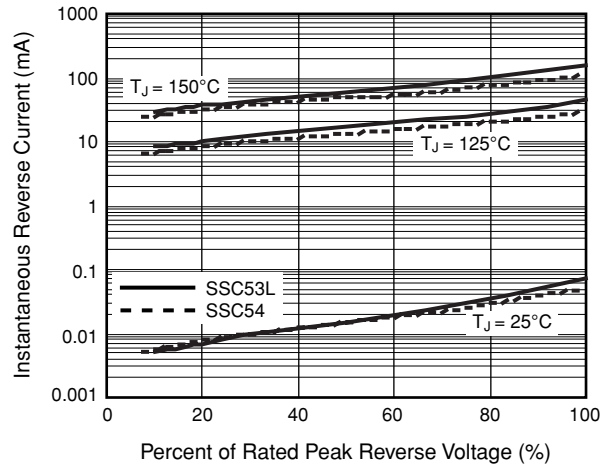


Fig. 5 – Typical Junction Capacitance

