

**TAYCHIPST**

High-Current Density Surface Mount Schottky Rectifier

SSB43L THRU SSB44**30V-40V 4.0A****FEATURES**

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- Very low forward voltage drop
- High surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

MECHANICAL DATA**Case:** DO-214AA (SMB)

Epoxy meets UL 94V-0 flammability rating

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD22-B102

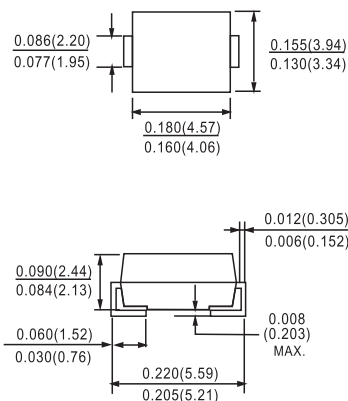
E3 suffix for consumer grade, meets JESD 201 class

1A whisker test, HE3 suffix for high reliability grade

(AEC Q101 qualified), meets JESD 201 class 2 whisker test

Polarity: Color band denotes the cathode end

DO-214AA(SMB)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**MAXIMUM RATINGS** ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	SSB43L	SSB44	UNIT
Device marking code		43L	S44	
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
Max. average forward rectified current at T_L (Fig. 1)	$I_{F(AV)}$	4.0		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	100		A
Voltage rate of change (rated V_R)	dV/dt	10 000		V/ μ s
Operating junction temperature range	T_J	- 65 to + 150		$^{\circ}\text{C}$
Storage temperature range	T_{STG}	- 65 to + 150		C

ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	SSB43L		SSB44		UNIT
			TYP.	MAX.	TYP.	MAX.	
Maximum instantaneous forward voltage ⁽¹⁾	4.0 A $T_J = 25\text{ }^{\circ}\text{C}$ $T_J = 125\text{ }^{\circ}\text{C}$	V_F	0.43 0.33	0.45 0.38	0.45 0.37	0.49 0.42	V
Maximum reverse current at rated V_R ⁽²⁾	$T_J = 25\text{ }^{\circ}\text{C}$ $T_J = 125\text{ }^{\circ}\text{C}$	I_R	- 35	0.6 45	- 25	0.4 40	mA

THERMAL CHARACTERISTICS ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	SSB43L	SSB44	UNIT
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$ $R_{\theta JL}$	70 23		$^{\circ}\text{C/W}$

Notes:(1) Pulse test: 300 μ s pulse width, 1 % duty cycle(2) Pulse test: Pulse width $\leq$ 40 ms

RATINGS AND CHARACTERISTIC CURVES

SSB43L THRU SSB44

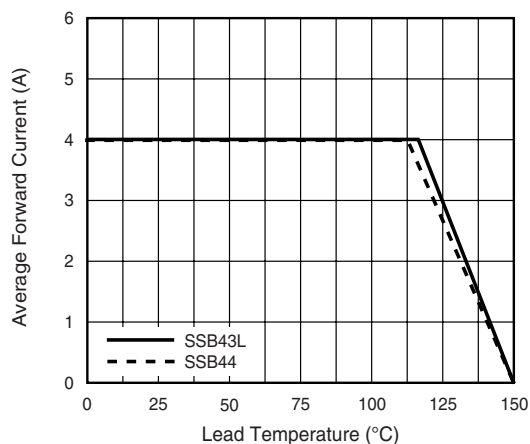


Figure 1. Forward Current Derating Curve

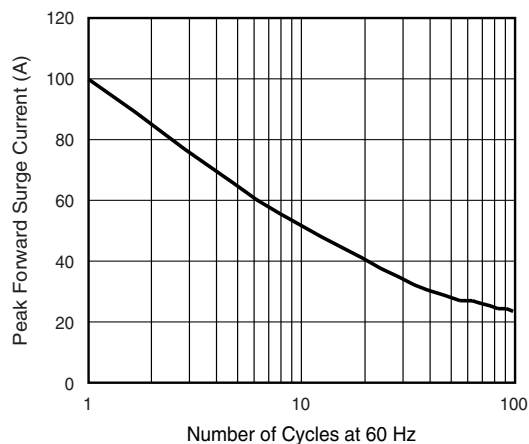


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

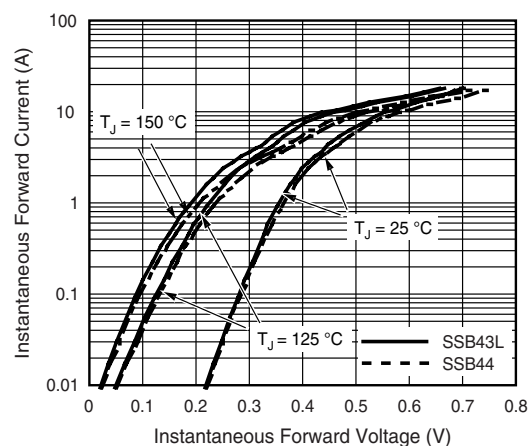


Figure 3. Typical Instantaneous Forward Characteristics

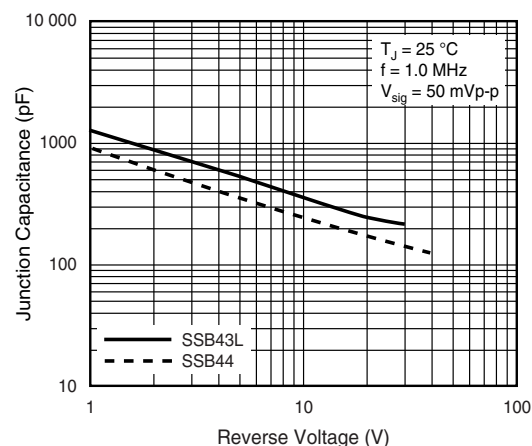


Figure 5. Typical Junction Capacitance

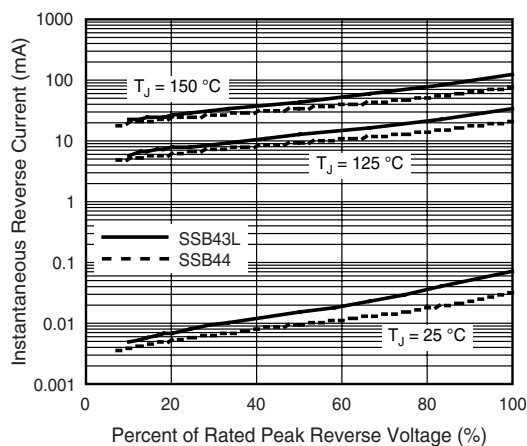


Figure 4. Typical Reverse Characteristics