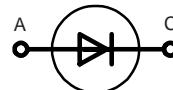


# Power Schottky Rectifier

**I<sub>FAV</sub> = 1 A**  
**V<sub>RRM</sub> = 40 V**  
**V<sub>F</sub> = 0.34 V**

V <sub>RSM</sub>	V <sub>RRM</sub>	Type	Marking
V	V	on product	
40	40	DSS 1-40BA	X1EB



SMA (DO-214 AC)



Symbol	Conditions	Maximum Ratings	
I <sub>FAV</sub>	T <sub>L</sub> = 125°C; rectangular, d = 0.5	1	A
I <sub>FAVM</sub>	rectangular, d = 0.5	2	A
I <sub>FSM</sub>	T <sub>VJ</sub> = 45°C; t <sub>p</sub> = 10 ms (50 Hz), sine	45	A
E <sub>AS</sub>	I <sub>AS</sub> = tbd A; L = 100 µH; T <sub>VJ</sub> = 25°C; non repetitive	tbd	mJ
I <sub>AR</sub>	V <sub>A</sub> = 1.5 • V <sub>RRM</sub> typ.; f=10 kHz; repetitive	tbd	A
(dv/dt) <sub>cr</sub>		10000	V/µs
T <sub>VJ</sub> *		-55...+150	°C
T <sub>VJM</sub>		150	°C
T <sub>stg</sub>		-55...+150	°C
Weight	typical	0.07	g
Package unit	tape & reel	7500	pcs

Symbol	Conditions	Characteristic Values	
		typ.	max.
I <sub>R</sub>	T <sub>VJ</sub> = 25°C; V <sub>R</sub> = V <sub>RRM</sub> T <sub>VJ</sub> = 125°C; V <sub>R</sub> = V <sub>RRM</sub>	0.1 5	mA mA
V <sub>F</sub> ①	I <sub>F</sub> = 1 A; T <sub>VJ</sub> = 25°C I <sub>F</sub> = 2 A; T <sub>VJ</sub> = 25°C I <sub>F</sub> = 1 A; T <sub>VJ</sub> = 125°C I <sub>F</sub> = 2 A; T <sub>VJ</sub> = 125°C	0.42 0.50 0.34 0.42	V V V V
R <sub>th,JL</sub>	thermal resistance junction to lead mounted on 1 inch square PCB	30	K/W
R <sub>th,JA</sub>	thermal resistance junction - ambient	70	K/W
C <sub>T</sub>	junction capacitance	115	pF

$$\frac{\ast \text{ } dP_{\text{tot}}}{dT_J} < \frac{1}{R_{\text{th(J-A)}}}$$

thermal runaway condition for a diode on its own heatsink

Pulse test: ① Pulse Width = 400 µs, Duty Cycle < 2.0 %  
Data according to IEC 60747 and per diode unless otherwise specified

## Features

- International standard package
- Very low V<sub>F</sub>
- Extremely low switching losses
- Low I<sub>RM</sub>
- Epoxy meets UL 94V-0

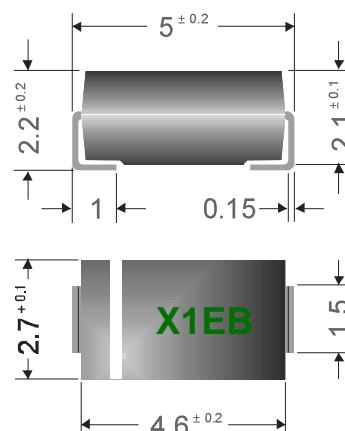
## Applications

- Rectifiers in switch mode power supplies (SMPS)
- Free wheeling diode in low voltage converters
- Decoupling diode

## Advantages

- High reliability circuit operation
- Low voltage peaks for reduced protection circuits
- Low noise switching
- Low losses

## Dimensions in mm



IXYS reserves the right to change limits, Conditions and dimensions.