

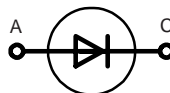
# Power Schottky Rectifier

$$I_{FAV} = 1 \text{ A}$$

$$V_{RRM} = 40 \text{ V}$$

$$V_F = 0.34 \text{ V}$$

$V_{RSM}$	$V_{RRM}$	Type	Marking
V	V		on product
40	40	DSS 1-40BA	X1EB



SMA (DO-214 AC)



Symbol	Conditions	Maximum Ratings	
$I_{FAV}$	$T_L = 125^\circ\text{C}$ ; rectangular, $d = 0.5$	1	A
$I_{FAVM}$	rectangular, $d = 0.5$	2	A
$I_{FSM}$	$T_{VJ} = 45^\circ\text{C}$ ; $t_p = 10 \text{ ms}$ (50 Hz), sine	45	A
$E_{AS}$	$I_{AS} = \text{tbd A}$ ; $L = 100 \mu\text{H}$ ; $T_{VJ} = 25^\circ\text{C}$ ; non repetitive	tbd	mJ
$I_{AR}$	$V_A = 1.5 \cdot V_{RRM}$ typ.; $f = 10 \text{ kHz}$ ; repetitive	tbd	A
$(dv/dt)_{cr}$		10000	V/ $\mu\text{s}$
$T_{VJ}^*$		-55...+150	$^\circ\text{C}$
$T_{VJM}$		150	$^\circ\text{C}$
$T_{stg}$		-55...+150	$^\circ\text{C}$
Weight	typical	0.07	g
Package unit	tape & reel	7500	pcs

## Features

- International standard package
- Very low  $V_F$
- Extremely low switching losses
- Low  $I_{RM}$
- Epoxy meets UL 94V-0

## Applications

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

## Advantages

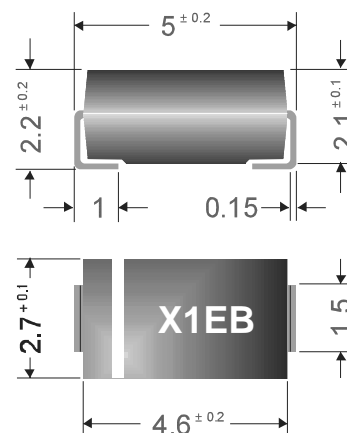
- High reliability circuit operation
- Low voltage peaks for reduced protection circuits
- Low noise switching
- Low losses

Symbol	Conditions	Characteristic Values	
		typ.	max.
$I_R$	$T_{VJ} = 25^\circ\text{C}$ ; $V_R = V_{RRM}$	0.1	mA
	$T_{VJ} = 125^\circ\text{C}$ ; $V_R = V_{RRM}$	5	mA
$V_F$ ①	$I_F = 1 \text{ A}$ ; $T_{VJ} = 25^\circ\text{C}$	0.42	V
	$I_F = 2 \text{ A}$ ; $T_{VJ} = 25^\circ\text{C}$	0.50	V
	$I_F = 1 \text{ A}$ ; $T_{VJ} = 125^\circ\text{C}$	0.34	V
	$I_F = 2 \text{ A}$ ; $T_{VJ} = 125^\circ\text{C}$	0.42	V
$R_{thJL}$	thermal resistance junction to lead mounted on 1 inch square PCB	30	K/W
$R_{thJA}$	thermal resistance junction - ambient	70	K/W
$C_T$	junction capacitance	115	pF

$$* \frac{dP_{tot}}{dT_J} < \frac{1}{R_{th(J-A)}} \quad \text{thermal runaway condition for a diode on its own heatsink}$$

Pulse test: ① Pulse Width = 400  $\mu\text{s}$ , Duty Cycle < 2.0 %  
Data according to IEC 60747 and per diode unless otherwise specified

## Dimensions in mm



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