

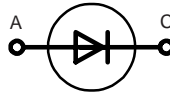
Power Schottky Rectifier

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

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

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

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/ μs
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

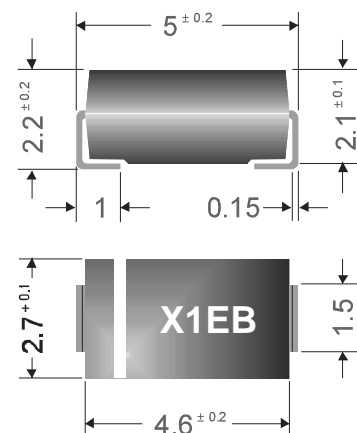
- High reliability circuit operation
- Low voltage peaks for reduced protection circuits
- Low noise switching
- Low losses

Symbol	Conditions	Characteristic Values	
		typ.	max.
I_R	$T_{VJ} = 25^\circ\text{C}$; $V_R = V_{RRM}$ $T_{VJ} = 125^\circ\text{C}$; $V_R = V_{RRM}$	0.1 5	mA mA
V_F ①	$I_F = 1 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$ $I_F = 2 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$ $I_F = 1 \text{ A}$; $T_{VJ} = 125^\circ\text{C}$ $I_F = 2 \text{ A}$; $T_{VJ} = 125^\circ\text{C}$	0.42 0.50 0.34 0.42	V V V 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 μs , 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.