

## Power Schottky Rectifier

**I<sub>FAV</sub> = 1 A**  
**V<sub>RRM</sub> = 100 V**  
**V<sub>F</sub> = 0.6 V**

V <sub>RSM</sub> V	V <sub>RRM</sub> V	Type on product	Marking on product
100	100	DSS 1-100AA	X1KA



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	38	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...+175	°C	
T <sub>VJM</sub>		175	°C	
T <sub>stg</sub>		-55...+150	°C	
Weight	typical	0.1	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>	0.02 1	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	0.75 0.85 0.60 0.71	V V V V
R <sub>thJL</sub>	thermal resistance junction to lead mounted on 1 inch square PCB	30	K/W
R <sub>thJA</sub>	thermal resistance junction - ambient	70	K/W
C <sub>T</sub>	typ. junction capacitance	60	pF

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

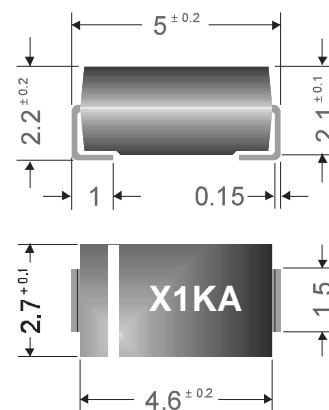
### Applications

- 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.

© 2003 IXYS All rights reserved