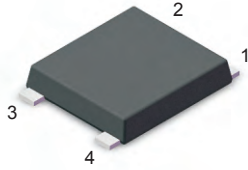


## Ultrasoft Recovery Bridge



MSB Package

### PINNING

PIN	DESCRIPTION
1	Input Pin ( ~ )
2	Input Pin ( ~ )
3	Output Anode ( + )
4	Output Cathode ( - )

### Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

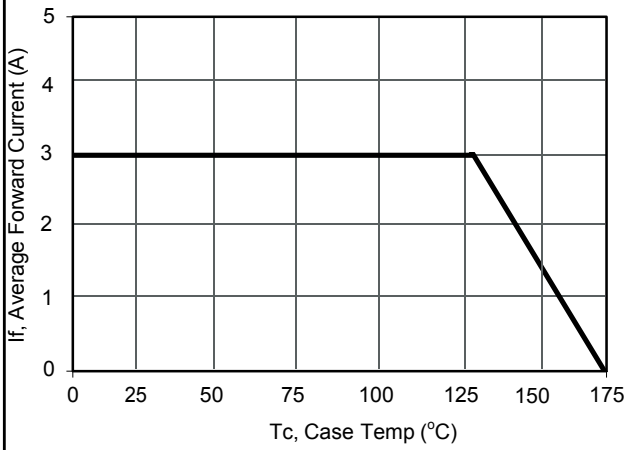
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	XBS30J	XBS30K	XBS30M	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	600	800	1000	V
Average Rectified Output Current	$I_o$	3.0			A
Reverse Recovery Time. IF=0.5A, IR=1A, IRR=0.25A	$T_{rr}$	10			us
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	140			A
$I^2 t$ rating for fusing ( 1ms < t < 10ms)	$I^2 t$	98			A <sup>2</sup> S
Maximum Forward Voltage at 1.5 A	$V_F$	1.0			V
Maximum DC Reverse Current @ $T_A=25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125\text{ }^\circ\text{C}$	$I_R$	5 100			$\mu\text{A}$
Typical Junction Capacitance ( Note1 )	$C_j$	40			pF
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +175			$^\circ\text{C}$
Typical thermal resistance (Note 2)	$R_{thJc}$ $R_{thJa}$	6 12			$^\circ\text{C/W}$

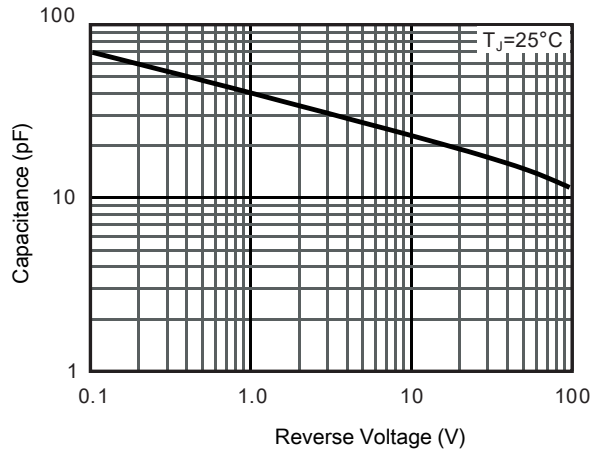
Note: 1. Measured at 1MHz and applied reverse voltage of 4 V D.C.

2. Thermal resistance from Junction to case, lead and ambient in accordance with JESD-51.  
Unit mounted on 15mm\*12mm\*1.6mm AL pad attach 195mm\*195mm\*10mm steel plate

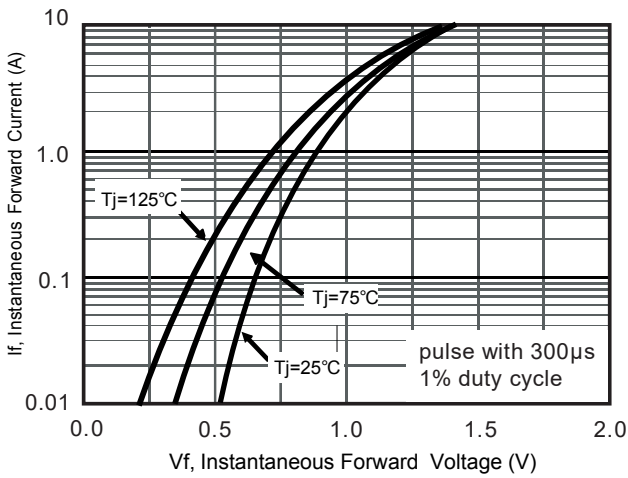
## RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)



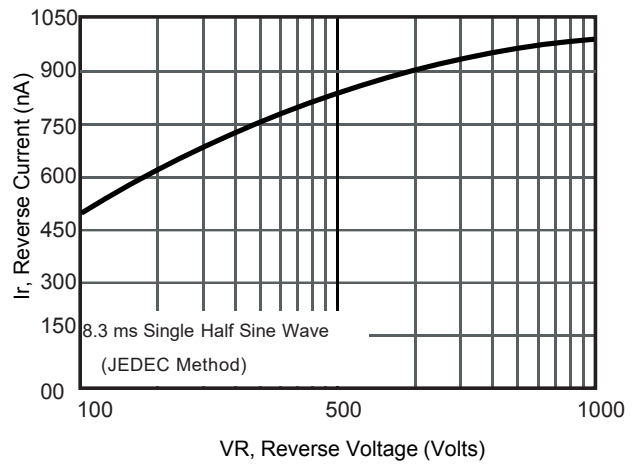
Current Derating, Case



Typical Junction Capacitance



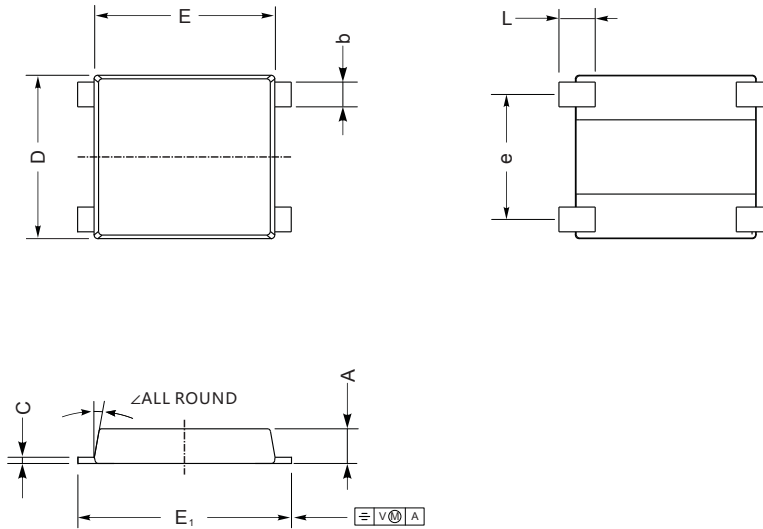
Typical Forward Voltage



Typical Reverse Current

**PACKAGE OUTLINE DIMENSIONS**

**MSB**



**MSB mechanical data**

UNIT		A	C	D	E	E <sub>1</sub>	L	e	b	∠
mm	max	1.5	0.29	7.0	7.6	8.9	1.6	5.3	1.15	10°
	min	1.3	0.17	6.2	7.1	8.4	1.0	4.9	0.95	
mil	max	59	12	276	299	350	55	209	45	
	min	51	7	244	280	331	31.5	193	37	