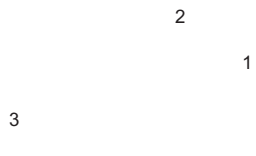
XBS30M

Ultrasoft Recovery Bridge



MSB Package

PINNING

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

Features

- Ultrasoft recovery
- low I_{RRM}
- low VF
- High V_{RRM}
- Special frame design for heat dissipation

Benefits

- Reduced EMI
- Reduced power loss and switching transistor
- Reduced snubbing

Maximum Ratings and Electrical characteristics

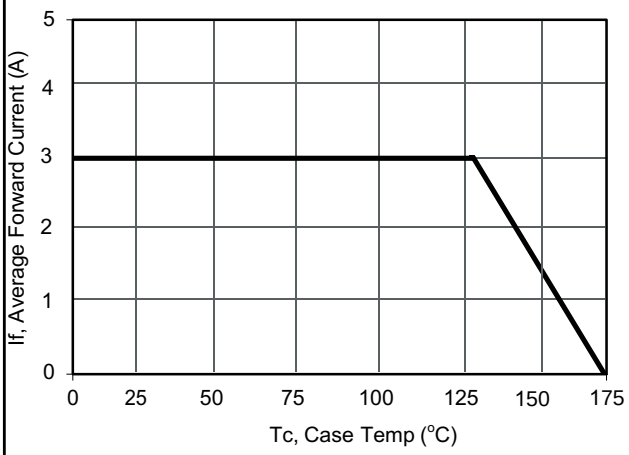
Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

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	Trr	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^2t	98			A^2S
Maximum Forward Voltage at 1.5 A	V_F	1.0			V
Maximum DC Reverse Current @T_A=25 °C at Rated DC Blocking Voltage @T_A=125 °C	I_R	5 100			μA
Typical Junction Capacitance (Note1)	C_j	40			pF
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +175			°C
Typical thermal resistance (Note 2)	$RthJ_C$ $RthJ_A$	6 12			°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)



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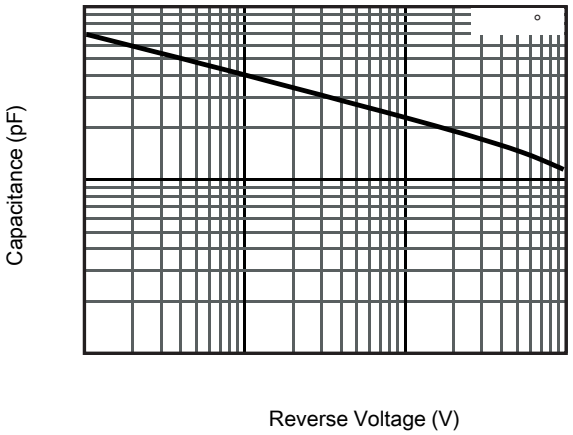

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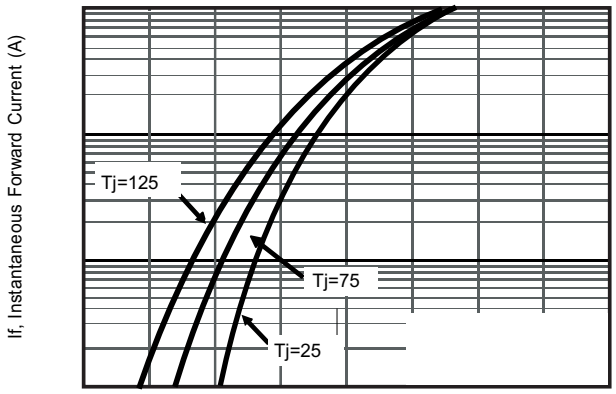

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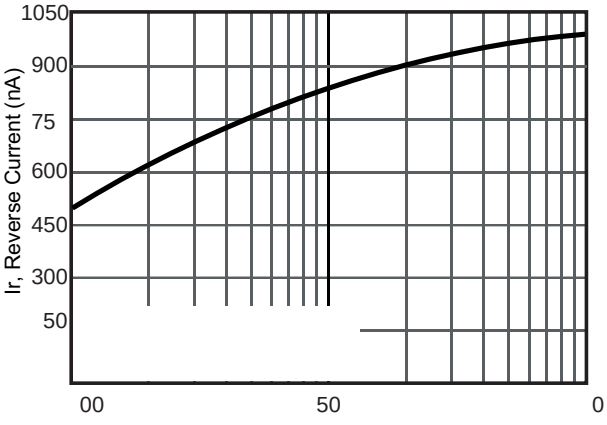

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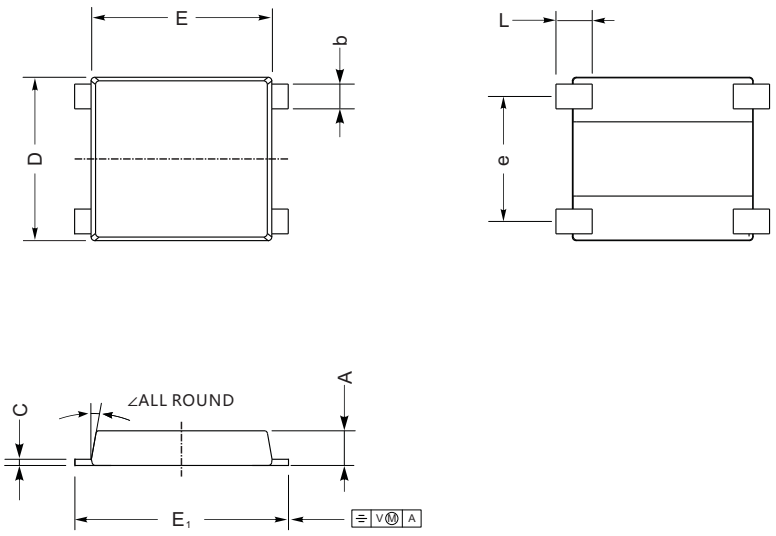
PACKAGE OUTLINE DIMENSIONS

MSB



MSB mechanical data

UNIT		A	C	D	E	E_1	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	