

Schottky Surface Mount Bridge Rectifier



MBS

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 %.

Features

- Low profile package
- Ideal for automated placement
- Ultrafast reverse recovery time
- Low power losses, high efficiency
- Low forward voltage drop
- High surge capability

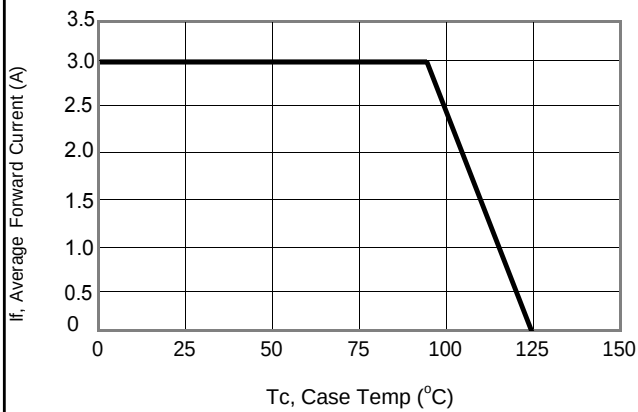
Mechanical Data

- **Case:** MBS Molded plastic body over Schottky barrier chips
- **Terminals:** Solder plated, solderable per JESD22-B102
- **Polarity:** Polarity symbols marked on body

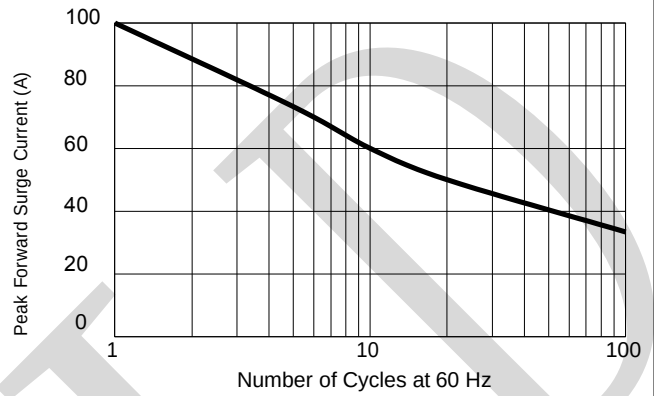
Items	Symbol	KMB310S	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum RMS voltage	V_{RMS}	70	V
Maximum DC blocking voltage	V_{DC}	100	V
Maximum average forward output rectified current at $T_A=30^{\circ}C$	$I_{F(AV)}$	3.0	A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50	A
Thermal resistance from junction to ambient per leg ⁽¹⁾	$R_{\theta JA}$	85	$^{\circ}C/W$
Thermal resistance from junction to lead per leg ⁽¹⁾	$R_{\theta JL}$	20	$^{\circ}C/W$
Maximum Forward Voltage per leg at 3.0 A	V_F	0.85	V
Maximum DC Reverse Current $T_j=25^{\circ}C$ at Rated DC Blocking Voltage $T_j=100^{\circ}C$	I_R	0.2 10	mA
Operating junction temperature range	T_J	-55 to +125	$^{\circ}C$
Storage temperature range	T_{STG}	-55 to +125	$^{\circ}C$

Note 1: Units mounted on P.C.B. with 0.5×0.5" (13×13mm) pads

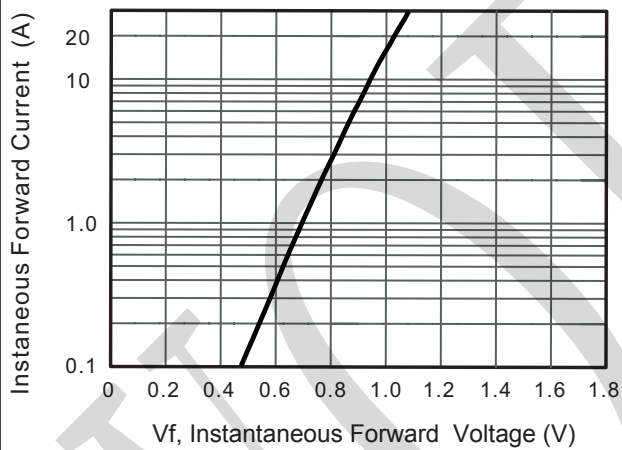
RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)



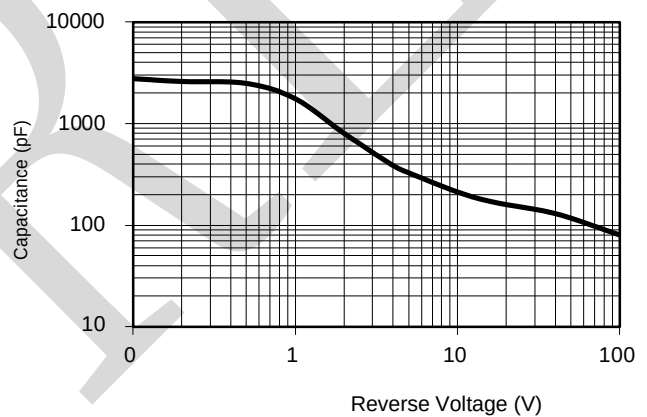
Current Derating, Case



Maximum Repetitive Surge Current



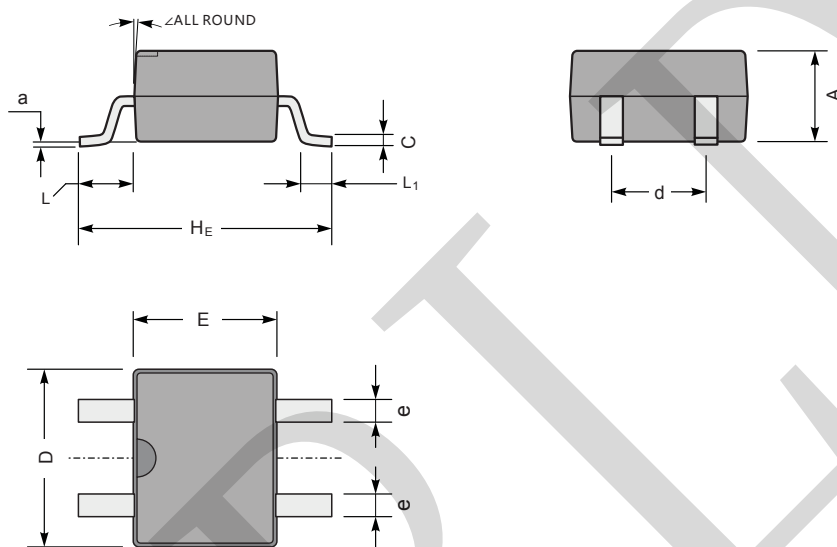
Typical Forward Volt



Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS

MBS



MBS mechanical data

UNIT		A	C	D	E	H _E	d	e	L	L ₁	a	∠
mm	max	2.6	0.22	5.0	4.1	7.0	2.7	0.7	1.7	1.1	0.2	7°
	min	2.2	0.15	4.5	3.6	6.4	2.3	0.5	1.3	0.5	—	
mil	max	102	8.7	197	161	276	106	28	67	43	8	
	min	94	5.9	177	142	252	91	20	51	20	—	

MBS Suggested Pad Layout

