

# MBRX0520

Small Surface Mount Schottky Rectifier

**REVERSE VOLTAGE: 20 V**

**CURRENT: 0.5 A**

**SOD - 123FL**

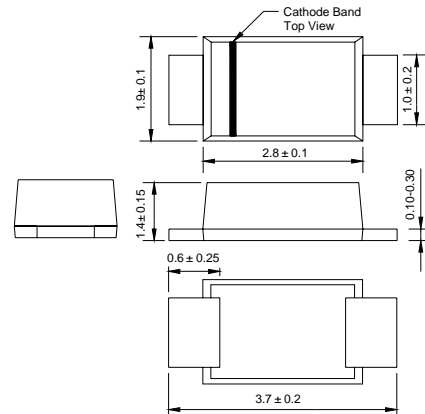


## Features

- Low profile package
- For surface mouted applications
- Idear for automated placement
- Low power loss,high efficiency
- High temperature soldering:  
250 /10 seconds at terminals

## Mechanical Data

- Case:JEDEC SOD-123FL,molded plastic over passivated chip
- Polarity: Color band denotes cathode end
- Weight: 0.006 ounces, 0.02 gram
- Device marking code: B2



Dimensions in millimeters

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

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

### ABSOLUTE RATINGS

Parameter	Symbol	Value	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	V
Maximum working peak reverse voltage	$V_{RWM}$	20	V
Maximum DC blocking voltage	$V_R$	20	V
Maximum average forward rectified current at rated $V_R$ @ $T_L=129$	$I_{(AV)}$	0.5	A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_L=25$	$I_{FSM}$	6.5	A
Typical thermal resistance to ambient (NOTE 1)	$R_{j\theta A}$	200	/W
Typical thermal resistance to lead (NOTE 2)	$R_{j\theta L}$	150	/W
Operating temperature range	$T_j$	-55---+150	
Storage temperature range	$T_{STG}$	-55---+150	

NOTES:1.Mounted on PC board FR4 with minimum pad size

2. 1 inch square pad size (1 × 0.5 inch for each lead) on FR4 board.

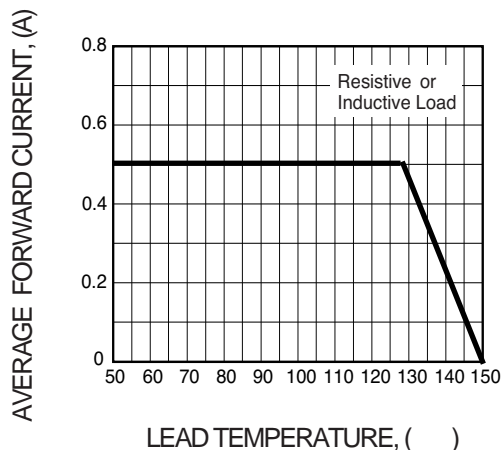
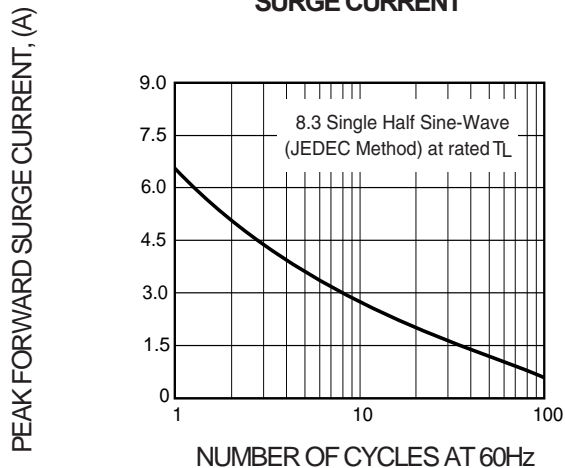
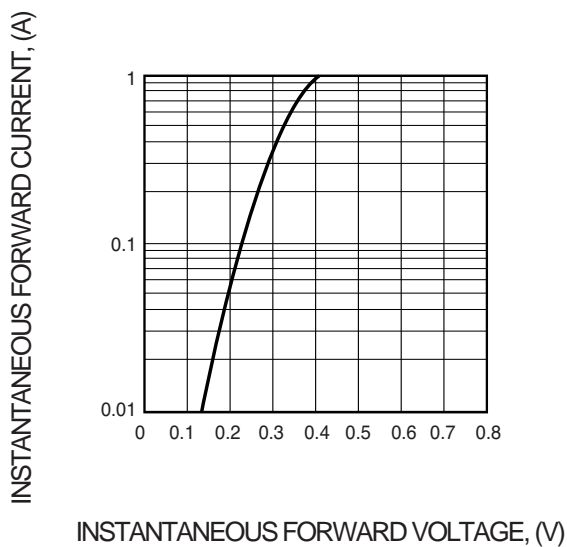
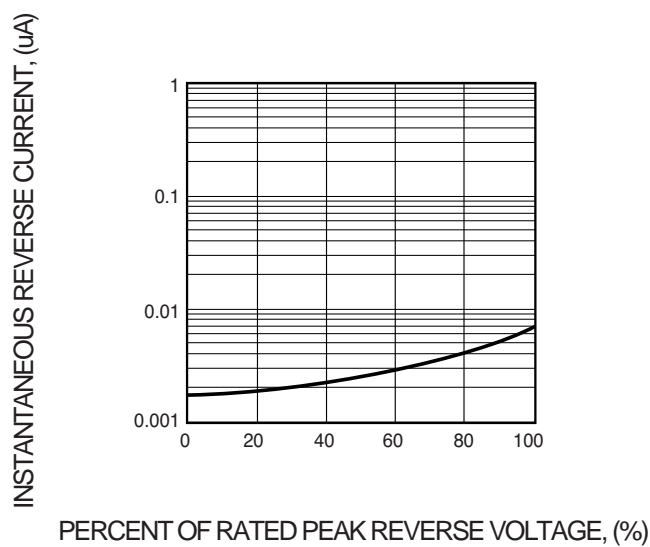
**ELECTRICAL CHARACTERISTICS**

Parameter	Symbol	Min	Typ.	Max.	Unit
Maximum instantaneous forward voltage (NOTE 3)	$V_F$	-	-	0.375	V
@ $I_F=0.1A, T_J=25$		-	-	0.260	
@ $I_F=0.1A, T_J=100$		-	-	0.440	
@ $I_F=0.5A, T_J=25$		-	-	0.360	
Maximum DC reverse current at rated DC blocking voltage	$I_R$	-	-	40	$\mu A$
@ $V_R=10V, T_J=25$		-	-	3.0	mA
@ $V_R=10V, T_J=100$		-	-	150	$\mu A$
@ $V_R=20V, T_J=25$		-	-	7.0	mA
Max.junction capacitance (Note 4)	$C_T$	-	-	110	pF

 NOTES: 3.Pulse tes<300 $\mu$ s, duty cycle<2% .

 4. $V_R=5V_{DC}$  (test signal range 100KHz to 1MHz).

## Ratings AND Characteristic Curves

**FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE**

**FIG. 2 - MAXIMUM NON-REPETTIVE FORWARD SURGE CURRENT**

**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**

**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**

**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**
