BL GALAXY ELECTRICAL

MBRX0520

SMALL SURFACE MOUNT SCHOTTKY RECTIFIER

REVERSE VOLTAGE: 20 V CURRENT: 0.5 A

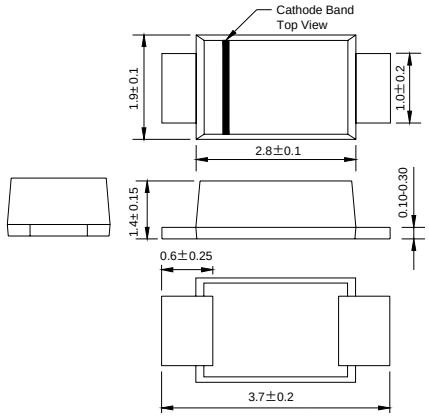
FEATURES

- ◇ 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
- ◇ Terminals:Solder Plated, solderable per MIL-STD-750, Method 2026
- ◇ Polarity: Color band denotes cathode end
- ◇ Weight: 0.006 ounces, 0.02 gram
- ◇ Device marking code: B2

SOD - 123FL



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase,half wave,60Hz,resistive or inductive load.For capactive 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 forword 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.

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ELECTRICAL CHARACTERISTICS

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

NOTES: 3.Pulse tes<300μs, duty cycle<2% .

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

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

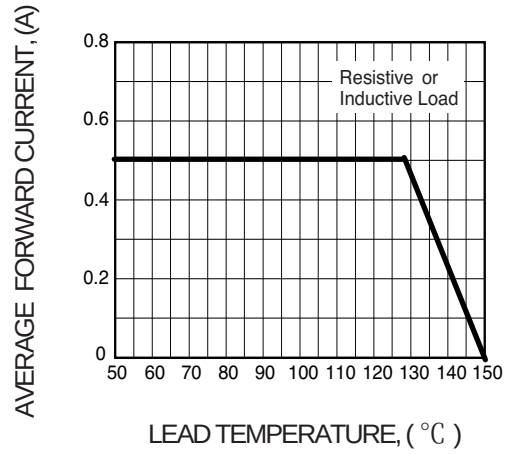

FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

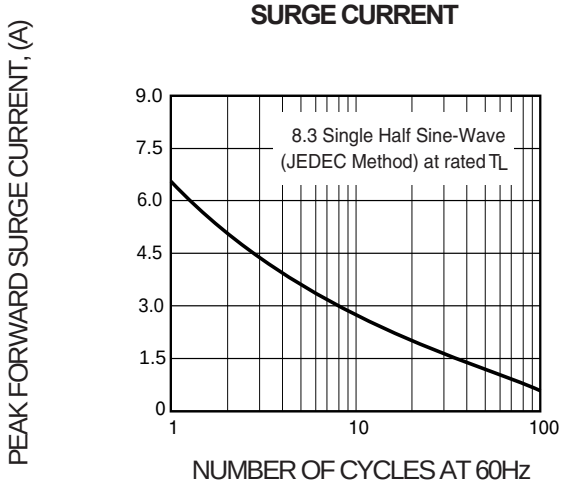

FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

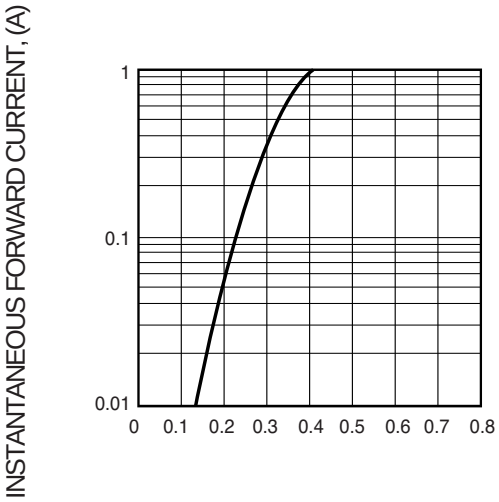

FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

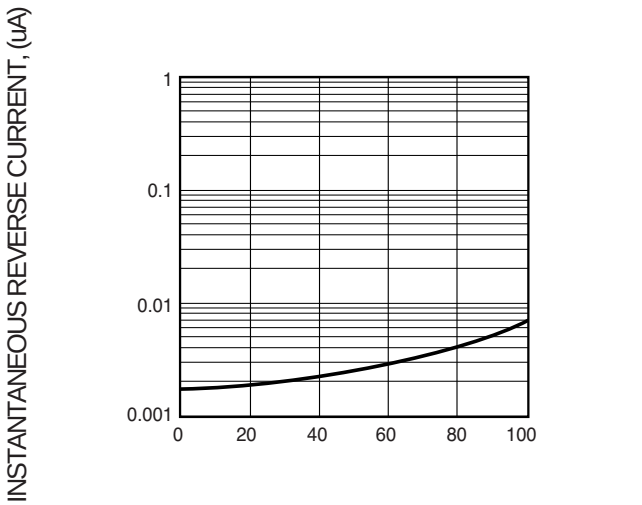

FIG. 5 - TYPICAL JUNCTION CAPACITANCE