SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

MBRX120--MBRX1A0

FEATURES

- Low forward surge current
- Ideal for surface mounted applications
- Low leakage current

Lead-free

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

Maximum Ratings (@TA = 25°C unless otherwise specified)

Characteristic	Symbol	MBRX 120	MBRX 130	MBRX 140	MBRX 160	MBRX 180	MBRX 190	MBRX 1A0	UNITS
Device marking code		S2	S3	S4	S6	S8	S9	SA	
Maximum recurrent peak reverse voltage	V_{RRM}	20	30	40	60	80	90	100	V
Maximum RMS voltage	V_{RMS}	14	21	28	42	56	63	70	V
Maximum DC blocking voltage	V_{DC}	20	30	40	60	80	90	100	V
Maximum average forward rectified current T_J=90℃	$I_{(AV)}$	1.0							A
Peak forward surge current 8.3ms single half-sine-wave Superimpose on rated load	I_{FSM}	30							A

Thermal Characteristics

Characteristic	Symbol	MBRX 120	MBRX 130	MBRX 140	MBRX 160	MBRX 180	MBRX 190	MBRX 1A0	UNITS
Maximum thermal resistance	$R_{\theta JA}$	80							℃/W
Typical Junction Capacitance	C_J	60							PF
Operating temperature range	T_J	- 55 --- + 125				- 55 --- + 150			℃
Storage temperature range	T_{STG}	-- 55 --- + 150							℃

Electrical Characteristics (@TA = 25°C unless otherwise specified)

Characteristic	Symbol	MBRX 120	MBRX 130	MBRX 140	MBRX 160	MBRX 180	MBRX 190	MBRX 1A0	UNITS
Maximum instantaneous @I_{FM}=1.0A forward voltage	V_F	0.55			0.75	0.85			V
Maximum DC reverse current T_J=25℃	I_R	0.3							m A
at rated DC blocking voltage T_J=100℃		10			5.0				

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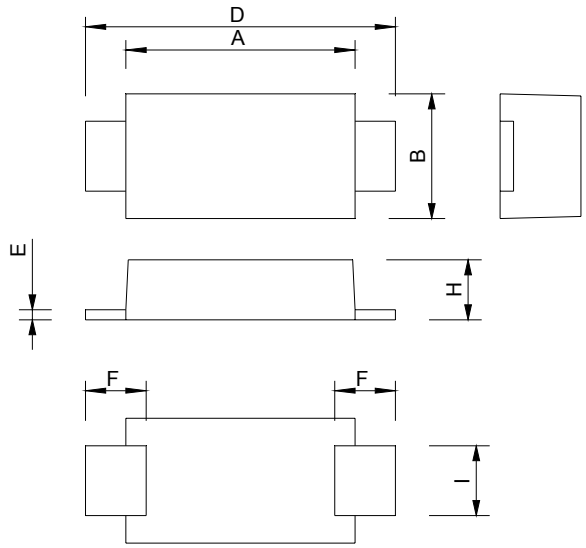
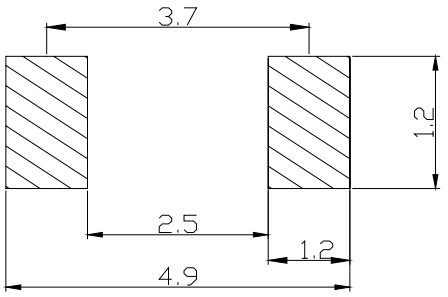
PACKAGE OUTLINE DIMENSIONS



SOD-123FL		
Dim	Min	Max
A	2.60	3.00
B	1.70	2.10
D	3.45	3.95
E	0.10	0.30
F	0.30	0.90
H	1.05	1.35
I	0.85	1.15
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit ： mm

PACKAGE INFORMATION

Device	Package	Shipping
MBRX120--MBRX1A0	SOD-123FL	10000/Tape&Reel

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FIG.1 – FORWARD DERATING CURVE

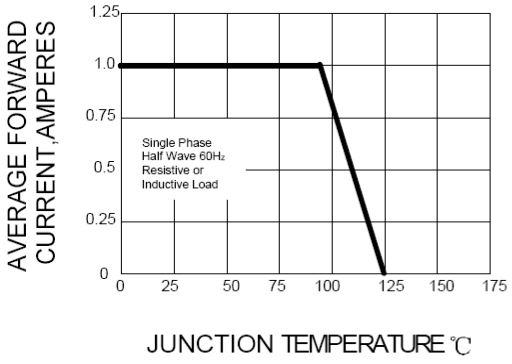

FIG.2– PEAK FORWARD SURGE CURRENT

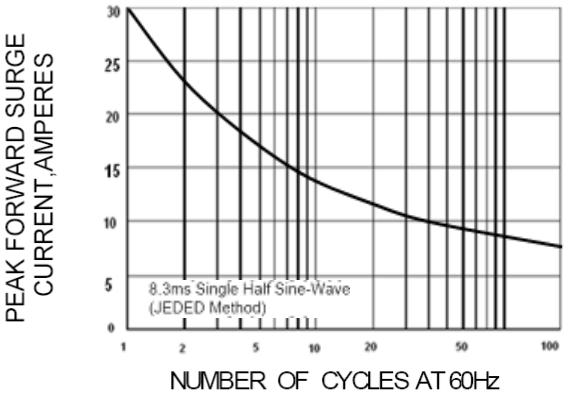

FIG.3 – TYPICAL FORWARD CHARACTERISTICS

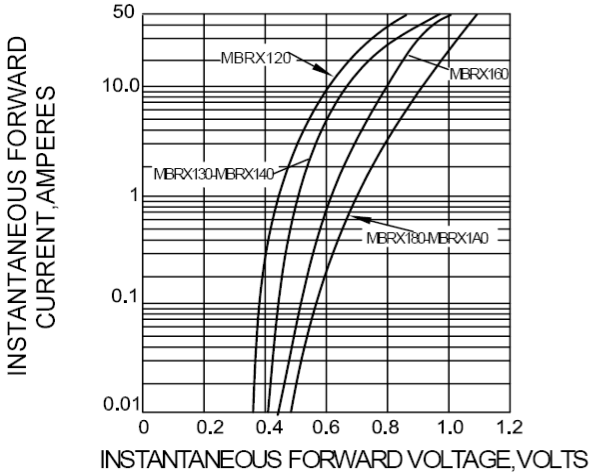

FIG.4 – TYPICAL REVERSE CHARACTERISTICS

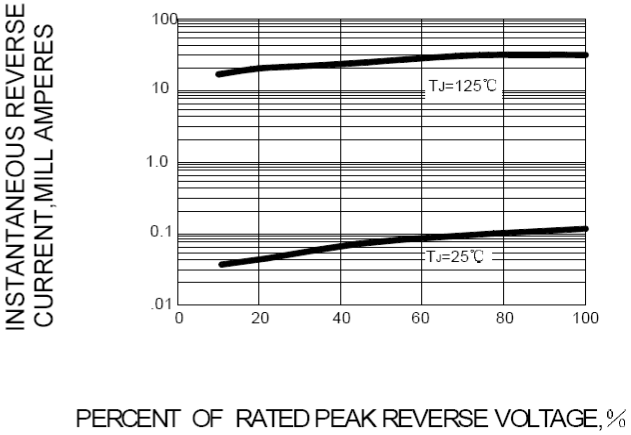

FIG.5–TYPICAL JUNCTION CAPACITANCE