

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°C	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 _{θJA}	80							°C/W	
Typical Junction Capacitance	C _J	60							PF	
Operating temperature range	T _J	- 55 --- + 125				- 55 --- + 150				°C
Storage temperature range	T _{STG}	- 55 --- + 150							°C	

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

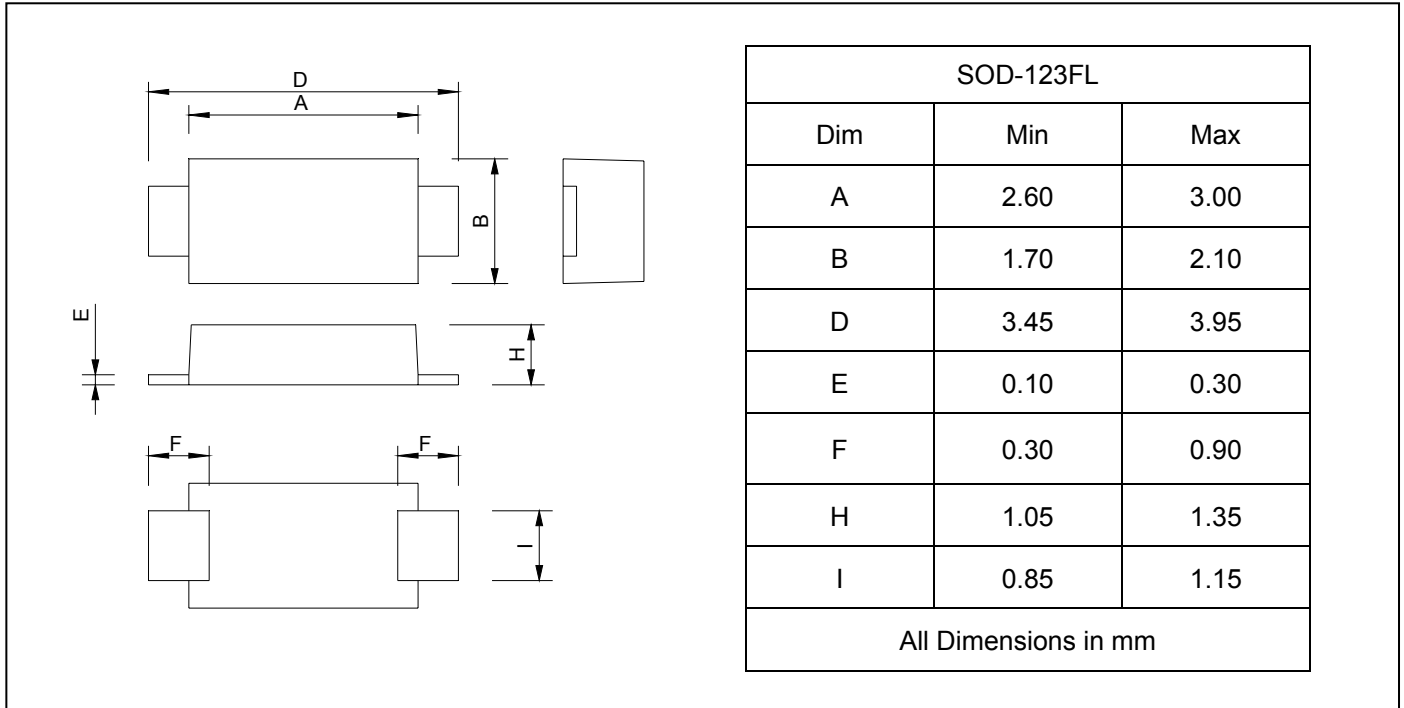
Characteristic	Symbol	MBRX 120	MBRX 130	MBRX 140	MBRX 160	MBRX 180	MBRX 190	MBRX 1A0	UNITS
Maximum instantaneous @I _{FM} =1.0A forward voltage	V _F	0.55			0.75	0.85			V
Maximum DC reverse current T _J =25°C at rated DC blocking voltage T _J =100°C	I _R	10			0.3		5.0		m A



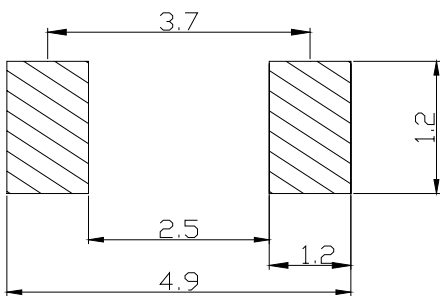
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BARRIER RECTIFIERS**

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PACKAGE OUTLINE DIMENSIONS



SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

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

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BARRIER RECTIFIERS**

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FIG.1 – FORWARD DERATING CURVE

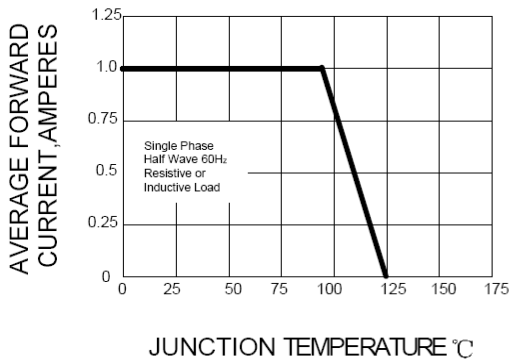


FIG.2- PEAK FORWARD SURGE CURRENT

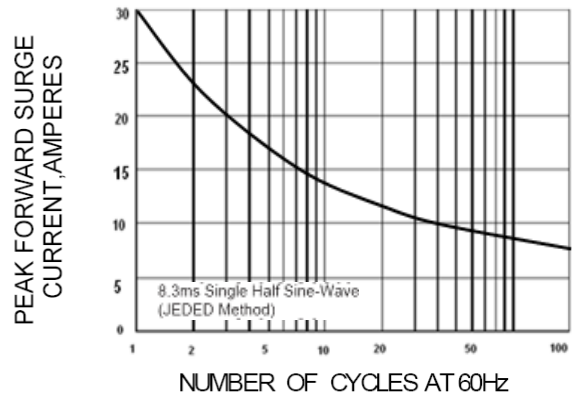


FIG.3 – TYPICAL FORWARD CHARACTERISTICS

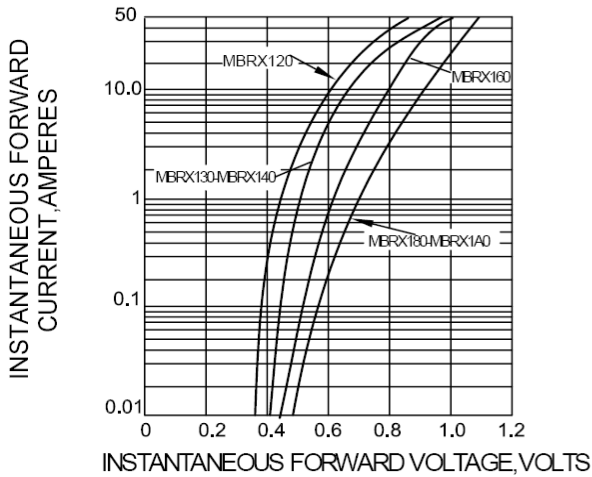


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

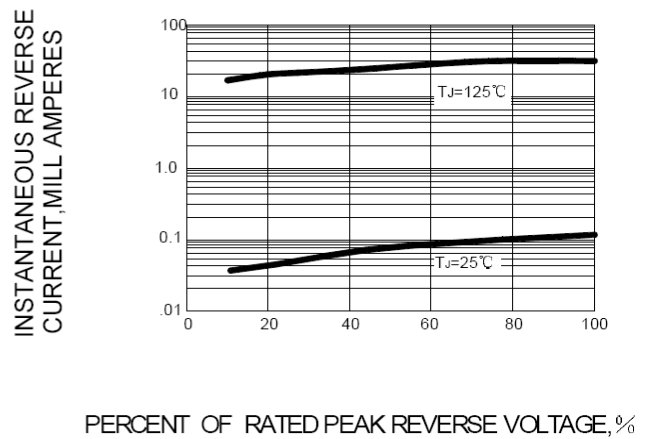


FIG.5-TYPICAL JUNCTION CAPACITANCE

