

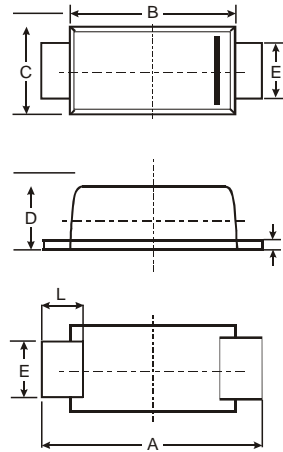
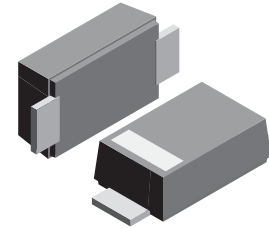
**VOLTAGE RANGE: 20 - 100V**  
**CURRENT: 0.5 A**

### Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High forward surge current capability
- High temperature soldering guaranteed:  
250°C/10 seconds, 0.375(9.5mm) lead length,  
5 lbs. (2.3kg) tension

### Mechanical Data

- Case: JEDEC SOD-123FL molded plastic body over passivated junction
- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.0007 ounce, 0.02 grams



SOD-123FL			
Dim	Min	Max	Typ
A	3.50	3.80	3.65
B	2.60	2.90	2.75
C	1.70	1.90	1.80
D	0.09	1.10	1.00
E	0.08	1.10	0.095
H	0.12	0.20	0.16
L	0.07	0.09	0.08
All Dimensions in mm			

### Maximum Ratings and Electrical Characteristics T<sub>A</sub> = 25°C unless otherwise specified

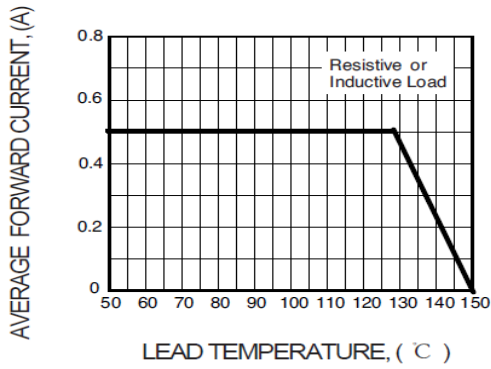
Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	MBRX0520	MBRX0530	MBRX0540	MBRX0560	MBRX0580	MBRX05100	Unit
Maximum recurrent peak reverse voltage	$V_{RRM}$	20	30	40	60	80	100	V
Maximum RMS voltage	$V_{RMS}$	14	21	28	42	56	70	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	60	80	100	V
Maximum average forward rectified current $T_j=90$	$I_{(AV)}$	0.5						A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load	$I_{FSM}$	20						A
Maximum instantaneous forward voltage @ $I_{FM}=0.5A$	$V_F$	0.45	0.55	0.70	0.80			V
Repetitive peak reverse current at rated DC blocking voltage	$I_R$	0.3						mA
Typical junction capacitance	$C_J$	30						pF
Operating temperature range	$T_j$	- 55 --- + 125						
Storage temperature range	$T_{STG}$	- 55 --- + 150						

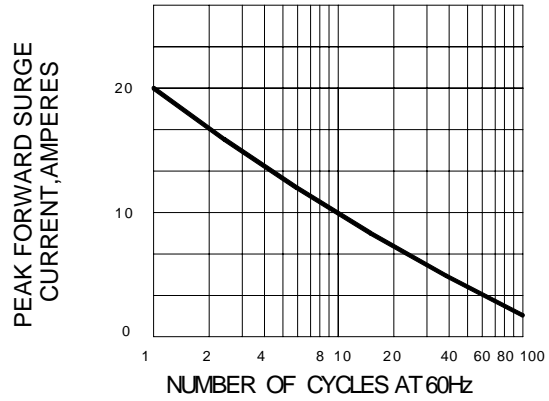
NOTE1. Measured at  $f=1.0MHz, V_R=4.0V$

## RATINGS AND CHARACTERISTIC CURVES MBRX0520 THRU MBRX05100

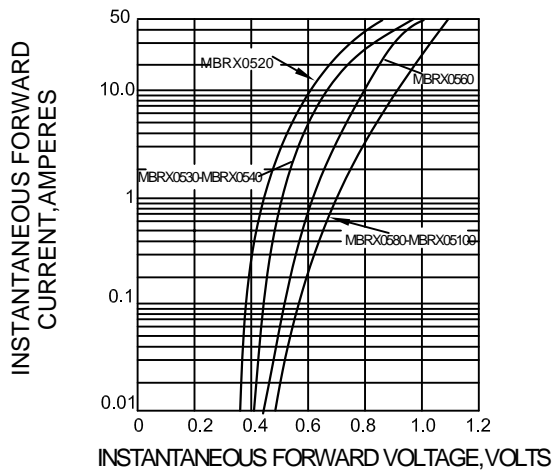
**FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE**



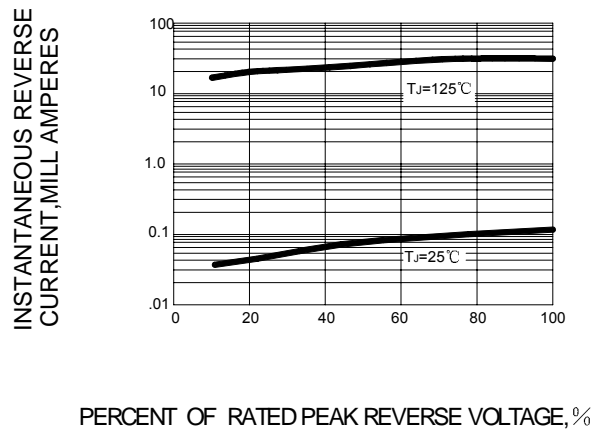
**FIG.2- PEAK FORWARD SURGE CURRENT**



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**

