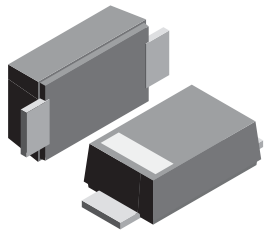
MBRX0520 - MBRX05100

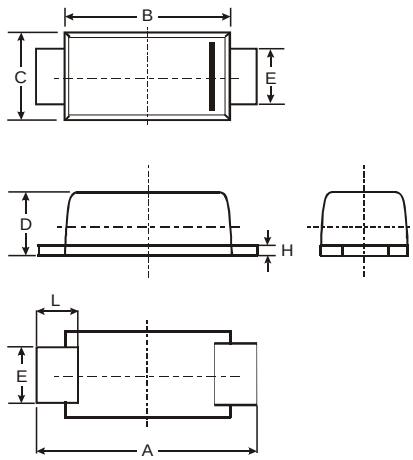
SURFACE MOUNT SCHOTTKY BARRIER DIODES

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



SOD-123FL			
Dim	Min	Max	Typ
A	3.58	3.72	3.65
B	2.72	2.78	2.75
C	1.77	1.83	1.80
D	1.02	1.08	1.05
E	0.097	1.03	1.00
H	0.13	0.17	0.15
L	0.53	0.57	0.55
All Dimensions in mm			

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

RoHS COMPLIANT

Maximum Ratings and Electrical Characteristics T_A = 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
	Marking	X20	X30	S4	S6	S8	SA	
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 forword rectified current T_J=90°C	$I_{(AV)}$	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						p F
Operating temperature range	T_j	- 55 --- + 125						°C
Storage temperature range	T_{STG}	- 55 --- + 150						°C

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

RATINGS AND CHARACTERISTIC CURVES MBRX0520 THRU MBRX05100

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

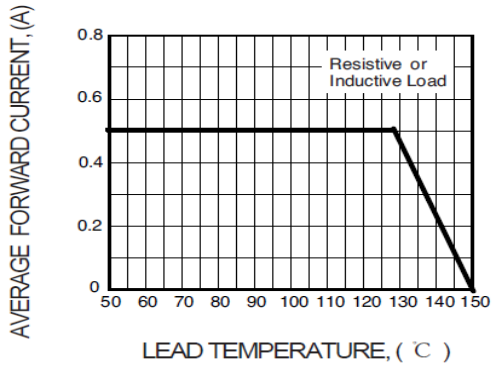


FIG.2-- PEAK FORWARD SURGE CURRENT

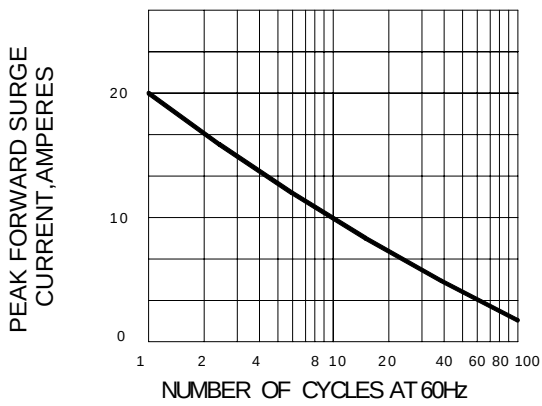


FIG.3 – TYPICAL FORWARD CHARACTERISTICS

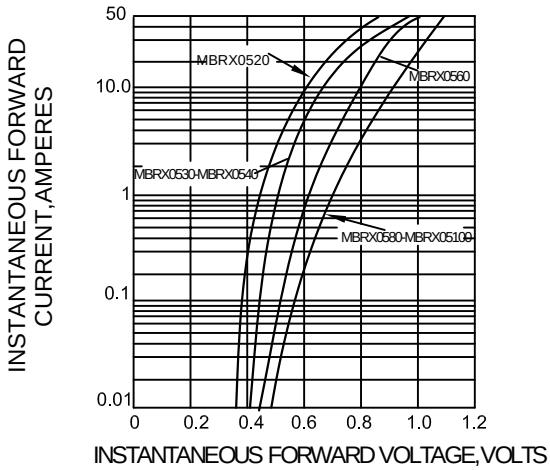


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

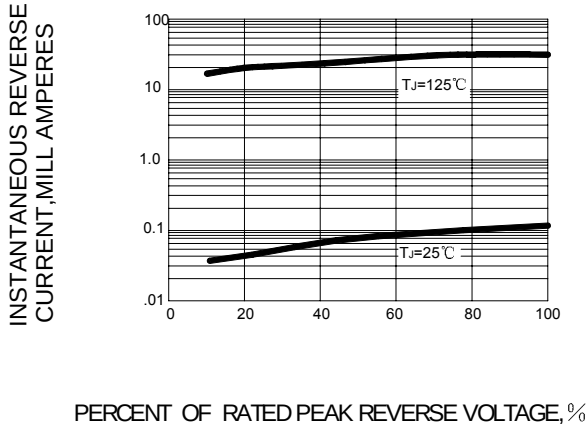


FIG.5–TYPICAL JUNCTION CAPACITANCE