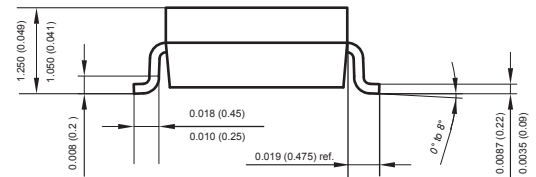
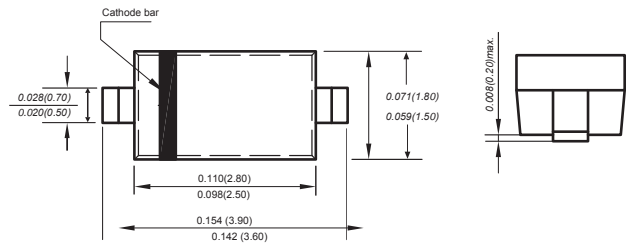


## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### Features

- ◆ Fast switching speed
- ◆ Surface mount package ideally suited
- ◆ for automatic insertion
- ◆ For general purpose switching applications High
- ◆ conductance

**SOD-123**



### Mechanical Data

Case: JEDEC SOD-123 molded plastic body  
 Terminals: Plated leads solderable per MIL-STD-750, Method 2026  
 Polarity: Polarity symbols marked on case  
 Weight : 0.0007 ounce, 0.02 grams  
 Marking: MBRX120:X2, MBRX130:X3  
 MBRX140:X4, MBRX160:X6

Dimensions in inches and (millimeters)

### Absolute Maximum Ratings at 25 °C

MDD Catalog Number	SYMBOLS	MBRX120	MBRX130	MBRX140	MBRX160	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	60	VOLTS
Maximum RMS voltage	$V_{RMS}$	14	21	28	42	VOLTS
Maximum DC blocking voltage	$V_{DC}$	20	30	40	60	VOLTS
Maximum average forward rectified current at $T_L=90^{\circ}C$	$I_{(AV)}$	1.0				Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	20.0				Amps
Maximum instantaneous forward voltage at 1.0A	$V_F$	0.5	0.55		0.72	Volts
Maximum DC reverse current $T_J=25^{\circ}C$ at rated DC blocking voltage	$I_R$	0.3				mA
Typical junction capacitance (NOTE 1)	$C_J$	30				pF
Operating junction temperature range	$T_J$	-55 to +150				$^{\circ}C$
Storage temperature range	$T_{STG}$	-50 to +150				$^{\circ}C$

**Note:** 1.. High Temperature Solder Exemption Applied, see EU Directive Annex 7

## Typical Characteristics

Figure 1  
Typical Forward Characteristics

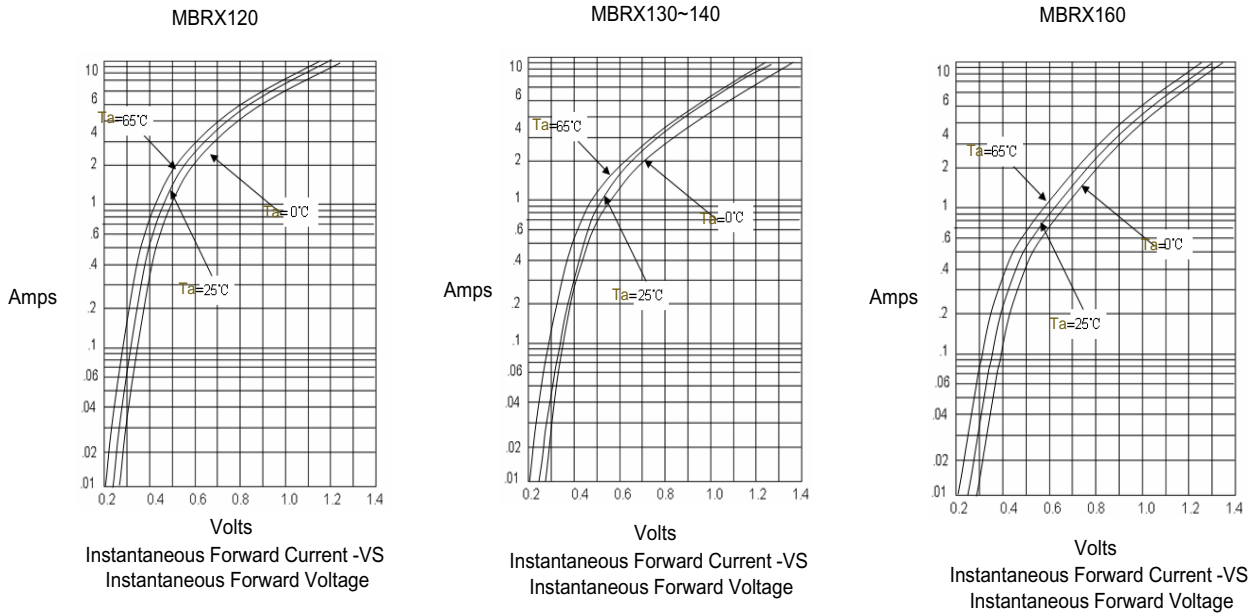
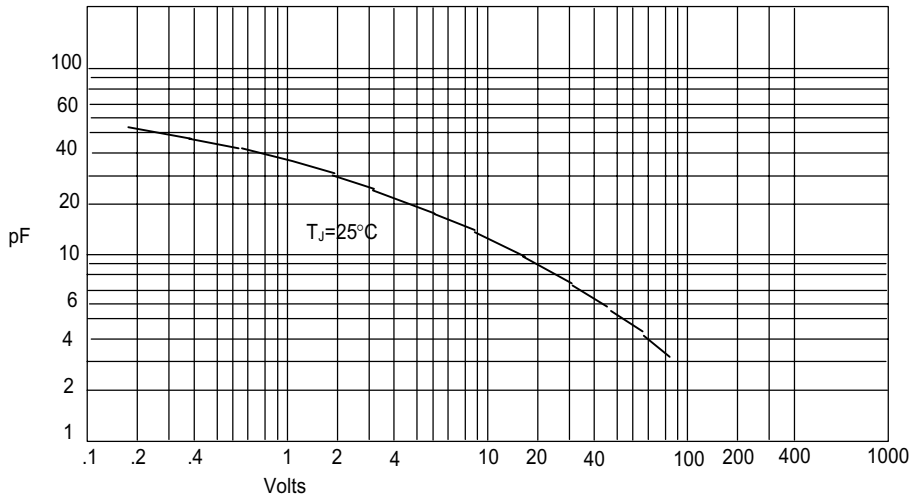
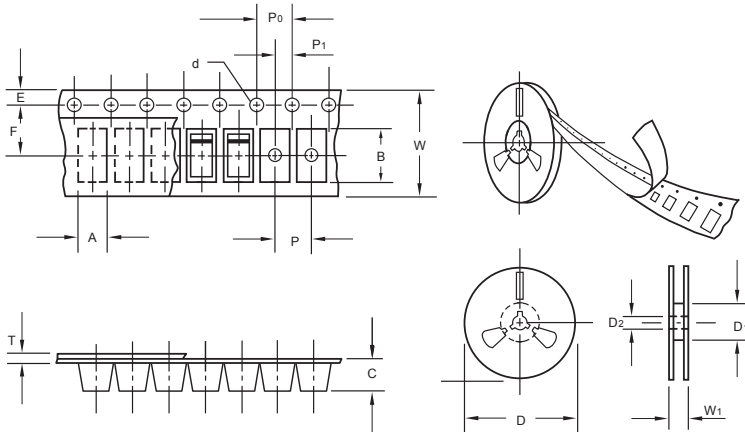


Figure 2  
Junction Capacitance



The curve above is for reference only.

## Packing information



unit:mm

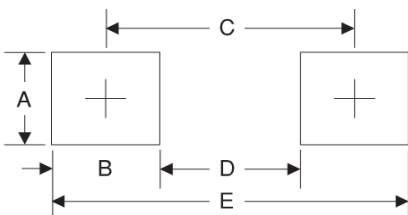
Item	Symbol	Tolerance	SOD-123
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D <sub>1</sub>	min	50.0
Feed hole diameter	D <sub>2</sub>	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P <sub>0</sub>	0.1	4.00
Embossment center	P <sub>1</sub>	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.15
Reel width	W <sub>1</sub>	1.0	10.5

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

## Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOD-123	7"	3,000	4.0	45,000	210*208*203	178	430*430*235	180,000	9.0

## Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.047
B	1.2	0.047
C	3.2	0.126
D	2.0	0.079
E	4.4	0.173