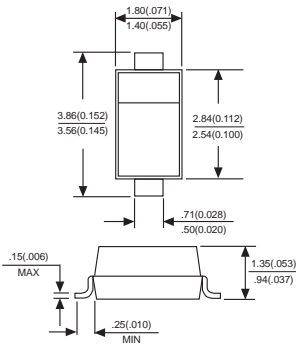


# MBRX120 THRU MBRX160

**SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**

Reverse Voltage - 20 to 60 Volts Forward Current - 1.0 Amperes

## SOD-123



Dimensions in millimeters and (inches)

## FEATURES

- ◆ Lead Free Finish/RoHS Compliant (Note1)("P" Suffix designates Compliant. See ordering information)
- ◆ Extremely Low Thermal Resistance
- ◆ For Surface Mount Application
- ◆ Low Forward Voltage
- ◆ Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL rating 1

## MECHANICAL DATA

**Terminals:** Plated leads solderable per MIL-STD-750, Method 2026

**Polarity:** Polarity symbols marked on case

**Marking:** MBRX120:X2, MBRX130:X3,  
: MBRX140:X4, MBRX160:X6

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

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	$T_J$	-50 to +125				$^\circ C$
Storage temperature range	$T_{STG}$	-50 to +150				$^\circ C$

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



# CHARACTERISTIC CURVES MBRX120 THRU MBRX160

Figure 1  
Typical Forward Characteristics

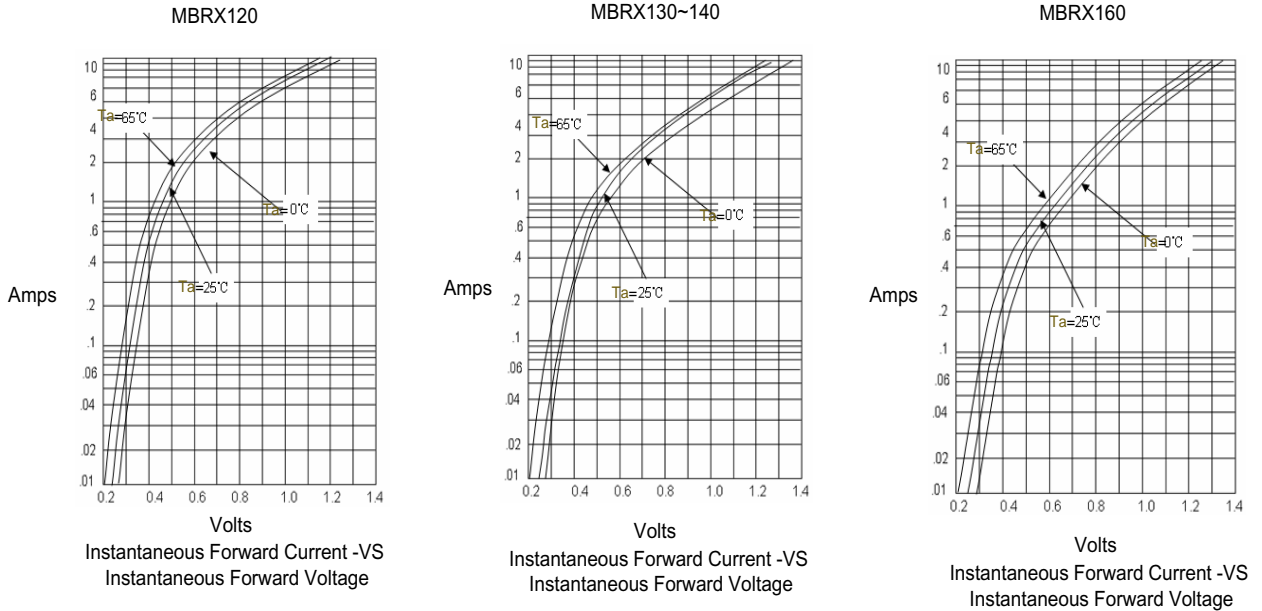
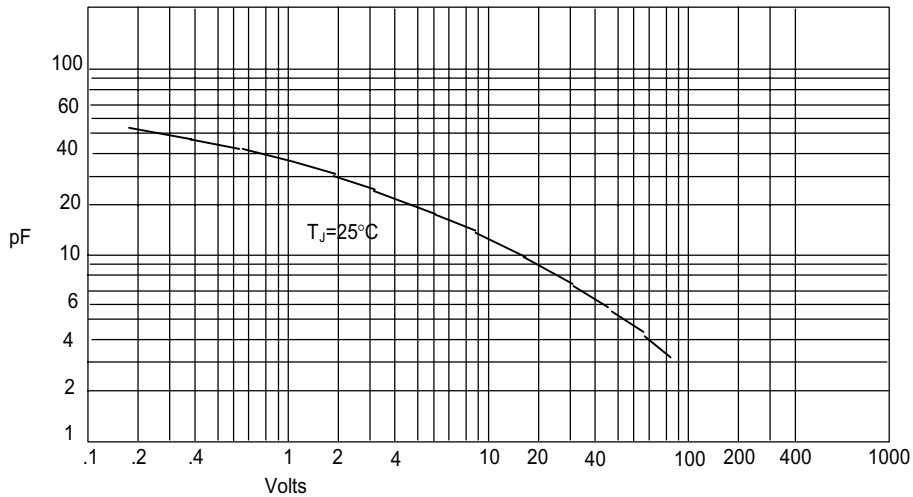
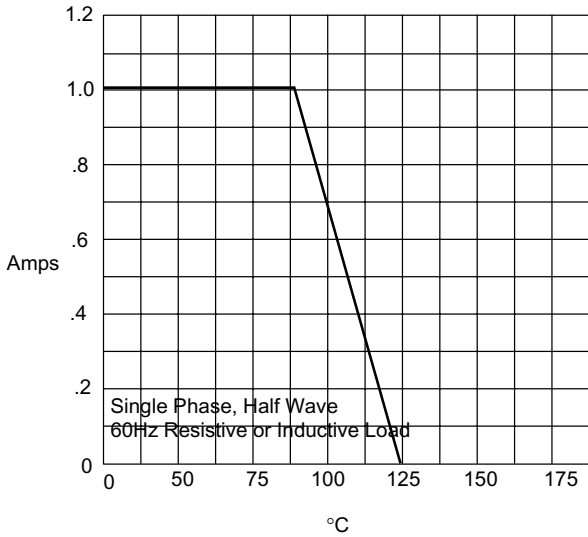


Figure 2  
Junction Capacitance



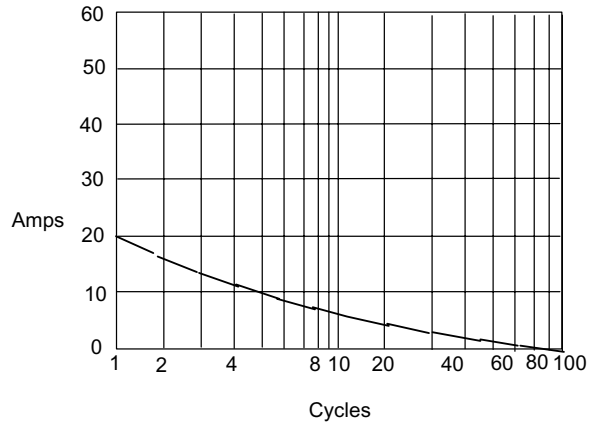
# RATINGS AND CHARACTERISTIC CURVES MBRX120 THRU MBRX160

Figure 3  
Forward Derating Curve



Average Forward Rectified Current - Amperes versus Ambient Temperature - °C

Figure 4  
Peak Forward Surge Current



Peak Forward Surge Current - Amperes versus Number Of Cycles At 60Hz - Cycles

FIG. 5 - TYPICAL REVERSE CHARACTERISTICS

