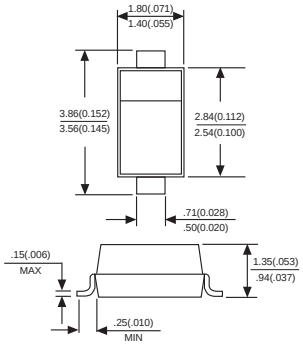
MBRX120 THRU MBRX160

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

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

Lead Free
RoHS Compliant

SOD-123



Dimensions in millimeters and (inches)

FEATURES

- Lead Free Finish/RoHS Compliant
  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℃ ambient temperature unless otherwise specified.
Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

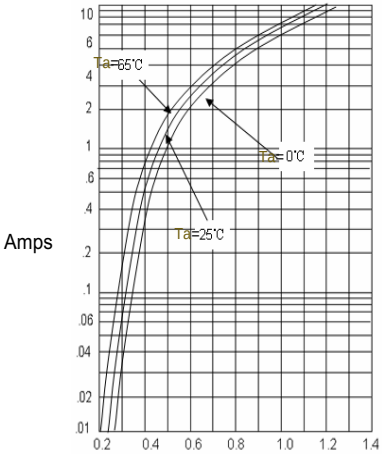
MDD Catalog Number	SYMBOLS	MBRX120	MBRX130	MBRX140	MBRX160	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	60	VOLTS
Maximum RMS voltage	V_{RMS}	14	21	28	42	VOLTS
Maximum DC blocking voltage	V_{DC}	20	30	40	60	VOLTS
Maximum average forward rectified current at $T_{L=90℃}$	$I_{(AV)}$	1.0				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℃ 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				°C
Storage temperature range	T_{STG}	-50 to +150				°C

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

RATINGS AND CHARACTERISTIC CURVES MBRX120 THRU MBRX160

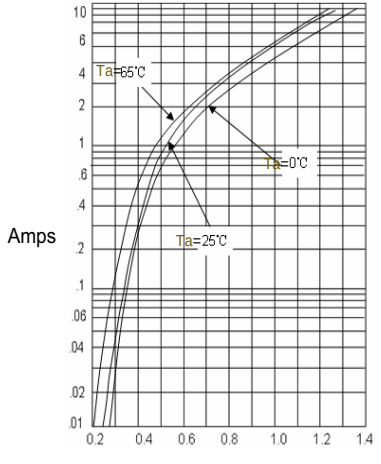
Figure 1
Typical Forward Characteristics

MBRX120



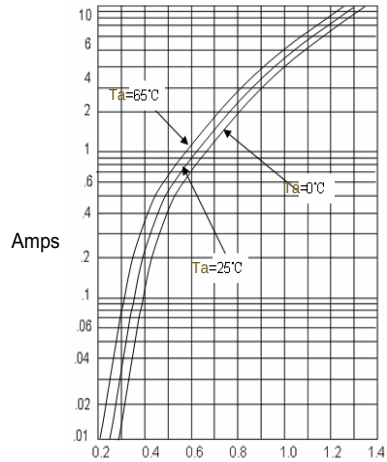
Instantaneous Forward Current -VS
Instantaneous Forward Voltage

MBRX130~140



Instantaneous Forward Current -VS
Instantaneous Forward Voltage

MBRX160



Instantaneous Forward Current -VS
Instantaneous Forward Voltage

Figure 2
Junction Capacitance

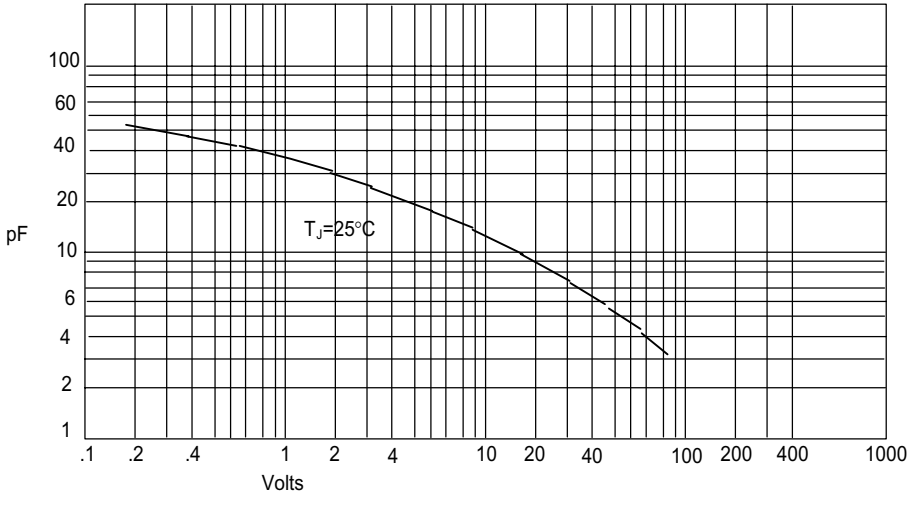
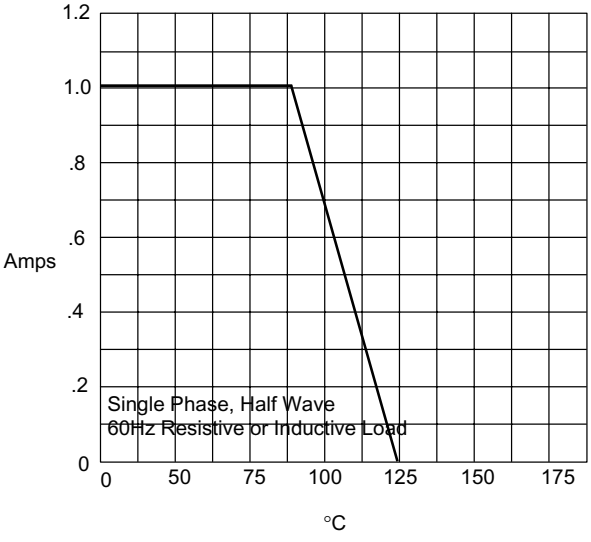
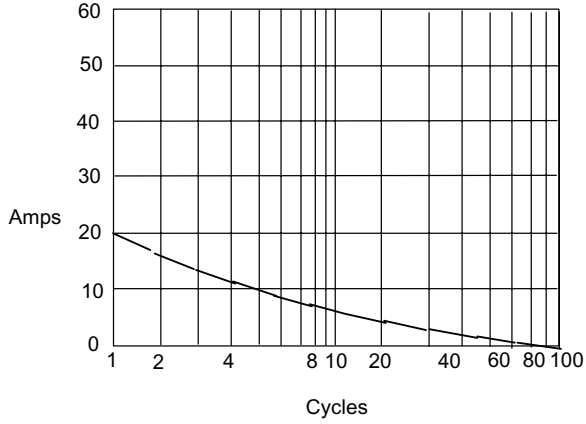


Figure 3
Forward Derating Curve



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