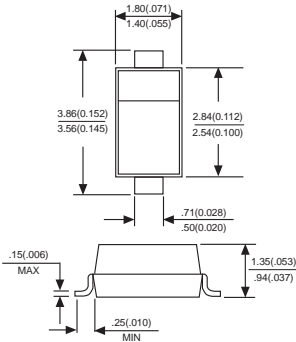


MBRX120 THRU MBRX160

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				°C
Storage temperature range	T_{STG}	-50 to +150				°C

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



CHARACTERISTIC CURVES MBRX120 THRU MBRX160

Figure 1
Typical Forward Characteristics

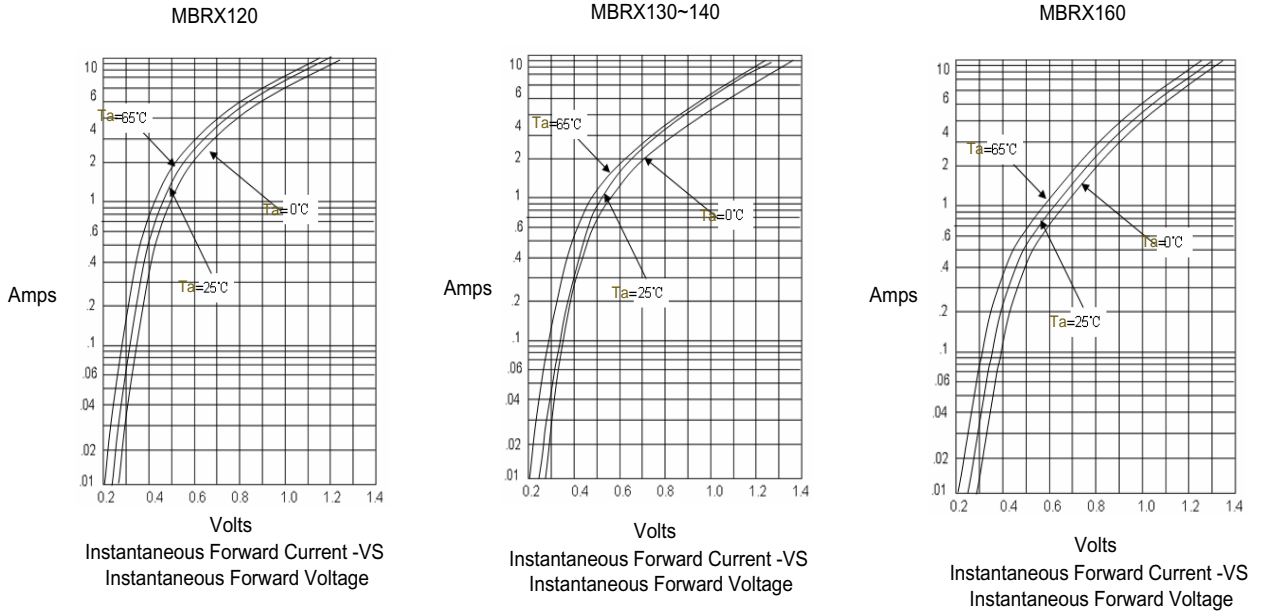
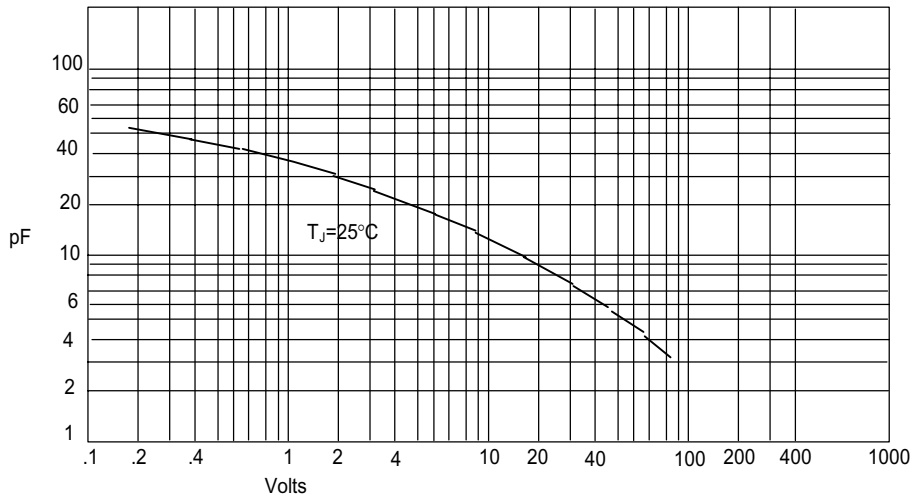
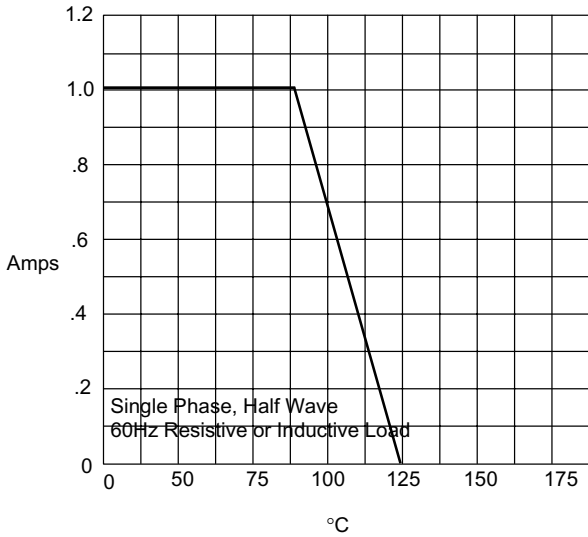


Figure 2
Junction Capacitance



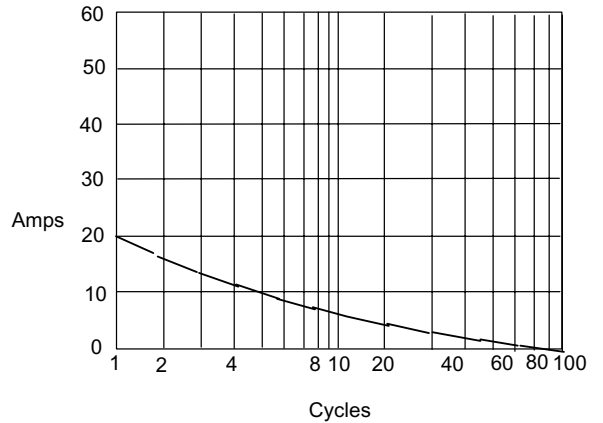
RATINGS AND CHARACTERISTIC CURVES MBRX120 THRU MBRX160

Figure 3
Forward Derating Curve



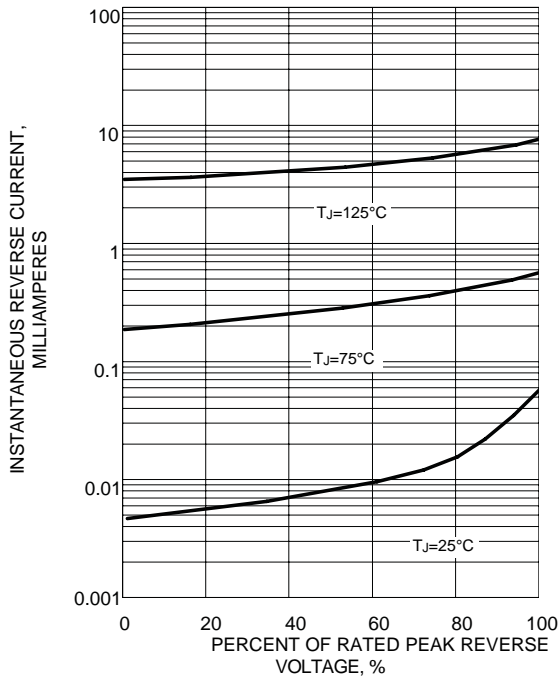
Average Forward Rectified Current - Amperes versus Ambient Temperature - °C

Figure 4
Peak Forward Surge Current



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

FIG. 5 - TYPICAL REVERSE CHARACTERISTICS



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