



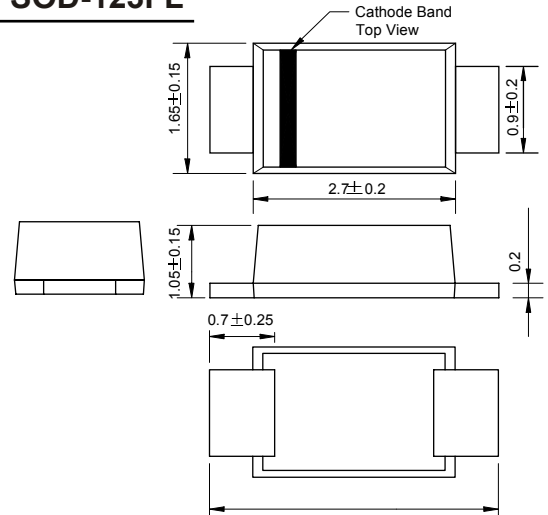
## FEATURES

- ◆ 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

## MECHANICAL DATA

**Case:** JEDEC SOD-123FL molded plastic body  
**Terminals:** Solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any

## SOD-123FL



Dimensions in inches and (millimeters)

## 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%.

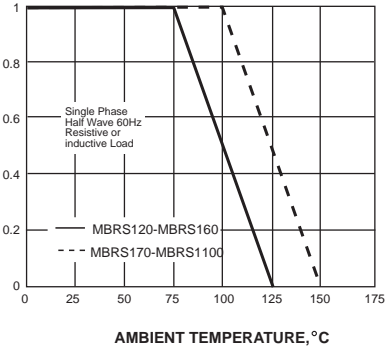
	SYMBOLS	MBS 120-FL	MBS 130-FL	MBS 140-FL	MBS 150-FL	MBS 160-FL	MBS 170-FL	MBS 180-FL	MBS 190-FL	MBS 1100-FL	UNITS
	Marking	D12	D13	D14	D15	D16	D17	D18	D19	D110	
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	70	80	90	100	VOLTS
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	49	56	63	70	VOLTS
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	70	80	90	100	VOLTS
Maximum average forward rectified current	$I_{(AV)}$	1.0									Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	25.0									Amps
Maximum instantaneous forward voltage at 1.0A	$V_F$	0.55			0.70			0.85			Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$	0.5						5.0			mA
		10.0									
Typical junction capacitance (NOTE 1)	$C_J$	110						80			pF
Operating junction temperature range	$T_J$	-65 to +125						-65 to +150			°C
Storage temperature range	$T_{STG}$	-65 to +150									°C

**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.



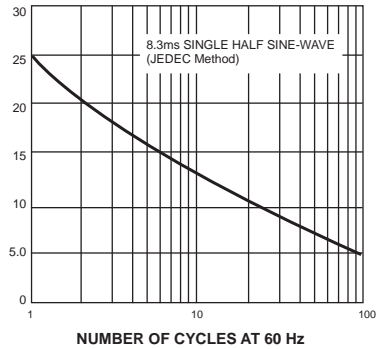
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



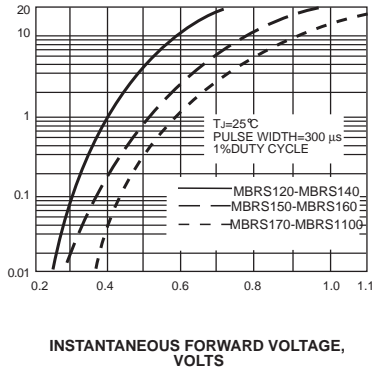
PEAK FORWARD SURGE CURRENT,  
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



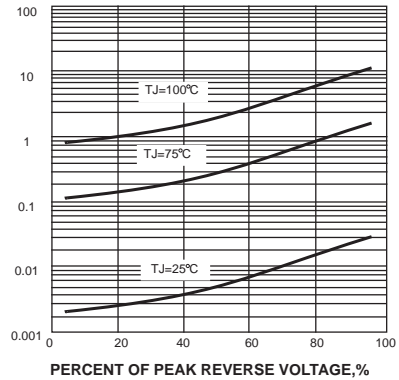
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,  
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE

