



### FEATURES

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* Low forward voltage drop

### MECHANICAL DATA

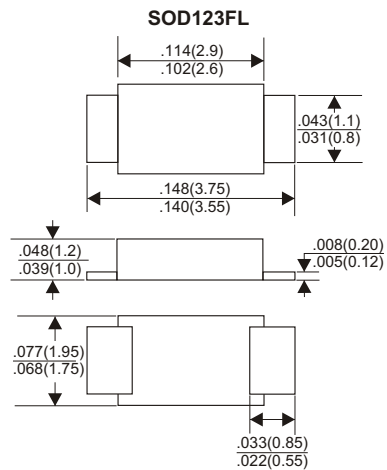
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

### VOLTAGE RANGE

40 Volts

### CURRENT

3.0 Amperes



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

TYPE NUMBER	MBR120VLSF	UNITS
Maximum Recurrent Peak Reverse Voltage	40	V
Maximum RMS Voltage	28	V
Maximum DC Blocking Voltage	40	V
Maximum Average Forward Rectified Current		
See Fig. 1	3.0	A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	80	A
Maximum Instantaneous Forward Voltage at 3.0A	0.41	V
Maximum DC Reverse Current $T_a=25^{\circ}\text{C}$	200	$\mu\text{A}$
at Rated DC Blocking Voltage $T_a=125^{\circ}\text{C}$	30	mA
Typical Junction Capacitance (Note1)	240	pF
Typical Thermal Resistance $R_{JA}$ (Note 2)	88	$^{\circ}\text{C}/\text{W}$
Operating Temperature Range $T_J$	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range $T_{stg}$	-55 to +150	$^{\circ}\text{C}$

#### NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. P.C.B. mounted with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

# RATING AND VCHARACTERISTIC CURVES(MBR120VLSF)

FIG.1-FORWARD CURRENT DERATING CURVE

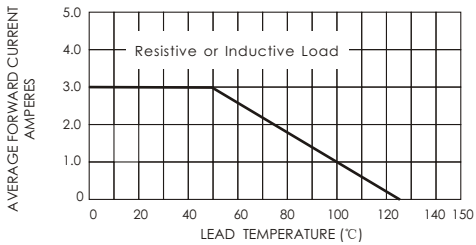


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

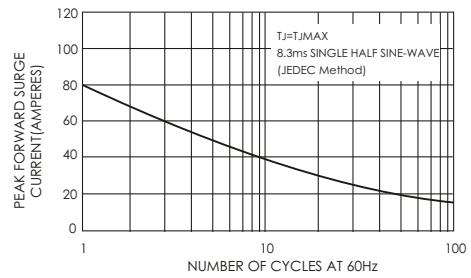


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

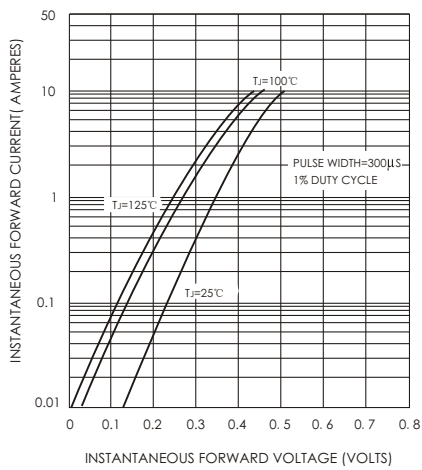


FIG.4-TYPICAL REVERSE CHARACTERISTICS

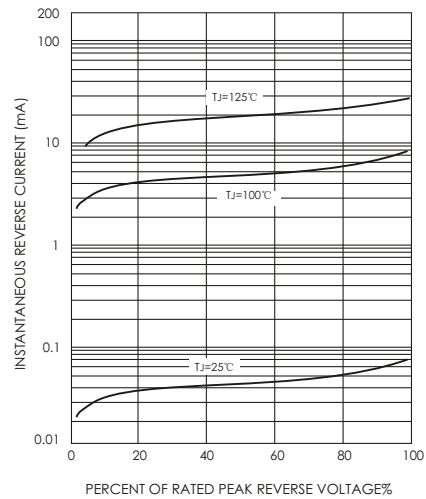


FIG.5-TYPICAL JUNCTION CAPACITANCE

