



YEA SHIN TECHNOLOGY CO., LTD

MBRL120S THRU MBRL140S

1A Low V_F SCHOTTKY Barrier Rectifier**Voltage - 20 to 40 Volts Current – 1 Amperes****Features**

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0 utilizing Flame Retardant Epoxy Molding Compound.
- For surface mounted applications.
- Exceeds environmental standards of MIL-S-19500/ 228
- Low leakage current
- ESD Range: Class 2B

Mechanical data

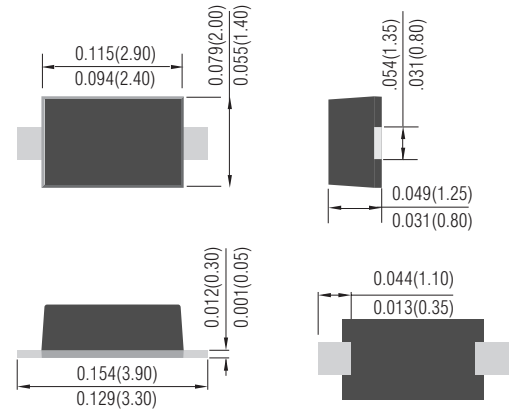
Case : Molded plastic, JEDEC SOD-123S

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Indicated by cathode band

Mounting Position: Any

SOD-123S Unit: inch(mm)

**MAXIMUM RATINGS (AT $T_A=25^\circ\text{C}$ unless otherwise noted)**

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	I_O			1.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	I_{FSM}			20	A
Reverse current	$V_R = V_{RRM} \quad T_A = 25^\circ\text{C}$	I_R			1.0	mA
	$V_R = V_{RRM} \quad T_A = 125^\circ\text{C}$				25	mA
Thermal resistance	Junction to ambient	R_{JA}		235		$^\circ\text{C} / \text{w}$
Diode junction capacitance	f=1MHz and applied 4vDC reverse voltage	C_J		120		pF
Storage temperature		T_{STG}	-55		+150	$^\circ\text{C}$
Power Dissipation		P_d		500		mW

SYMBOLS	V_{RRM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	Operating temperature ($^\circ\text{C}$)
MBRL120S	20	14	20	0.38	-55 to +125
MBRL130S	30	21	30	0.38	
MBRL140S	40	28	40	0.40	

DEVICE MARKING

MBRL120S	L2 *5
MBRL130S	L3
MBRL140S	L4

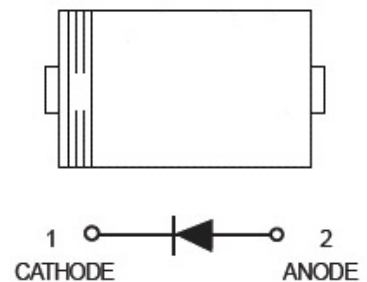
*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage @ $I_F=1.0A$

*5 DEVICE Marking



DEVICE CHARACTERISTICS

MBRL120S THRU MBRL140S

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

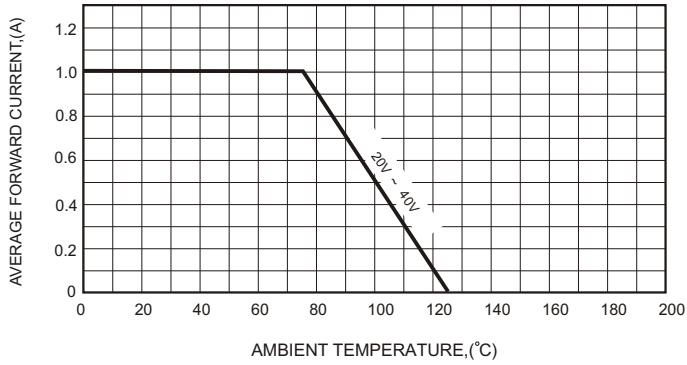


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

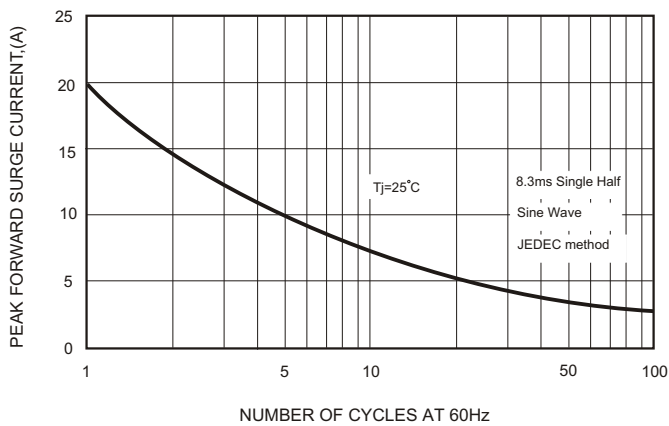


FIG.4-TYPICAL JUNCTION CAPACITANCE

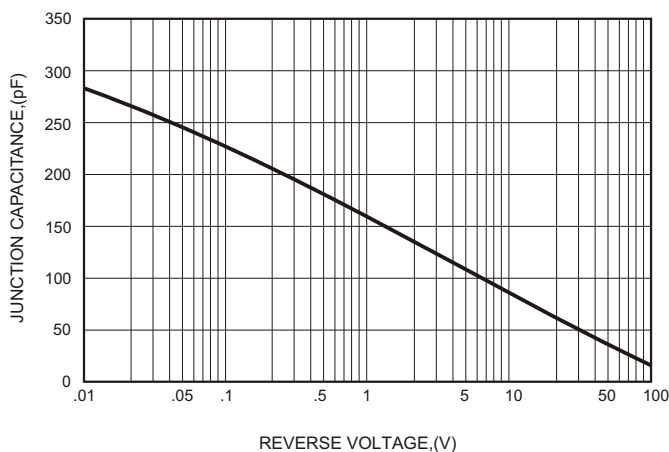


FIG.2-TYPICAL FORWARD CHARACTERISTICS

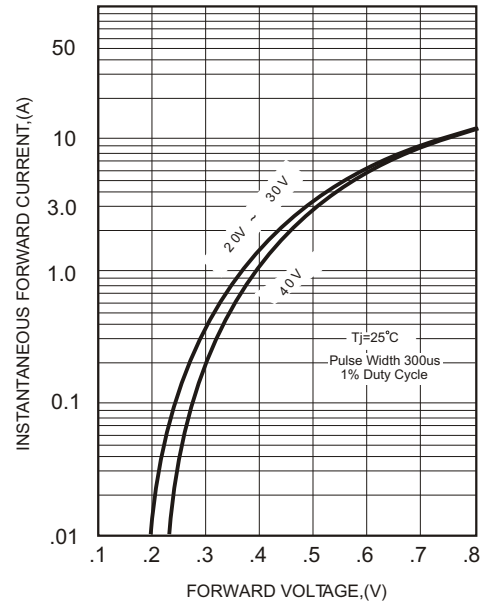


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

