



# SB40100LYT

## LOW VF SCHOTTKY BARRIER RECTIFIER

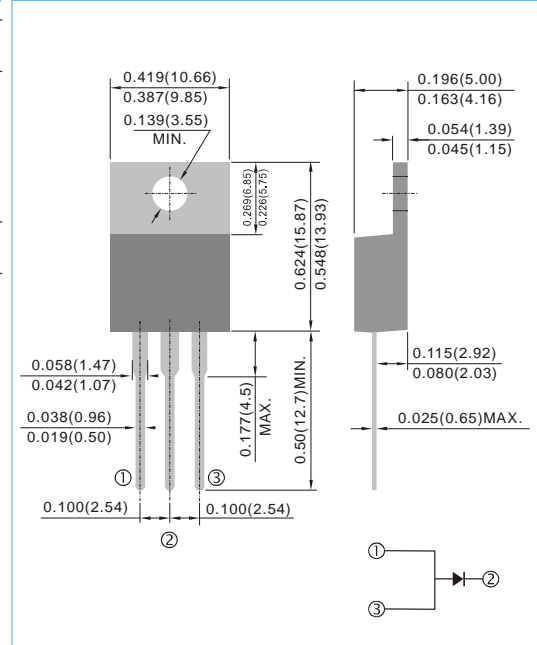
**VOLTAGE** 100 Volts **CURRENT** 40 Amperes **TO-220AB** Unit : inch(mm)

### FEATURES

- Low forward voltage drop, low power losses
- High efficiency operation
- In compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case : TO-220AB, Plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- Weight : 0.0655 ounces, 1.859 grams



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

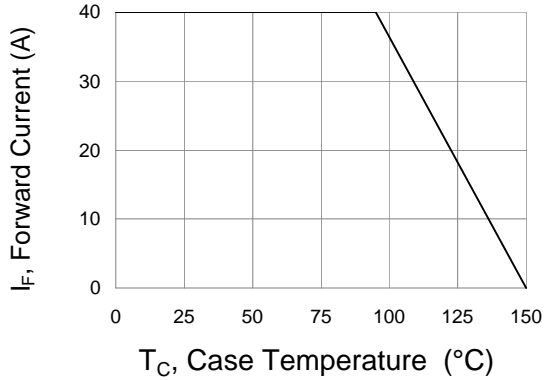
PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	100	V
Maximum average forward rectified current	$I_{F(AV)}$	40	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	375	A
Typical thermal resistance	$R_{\theta JC}$	2.0	$^\circ\text{C} / \text{W}$
Operating junction temperature range	$T_J$	-55 to + 150	$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 to + 150	$^\circ\text{C}$

### ELECTRICAL CHARACTERISTICS ( $T_A=25\text{ }^\circ\text{C}$ unless otherwise noted )

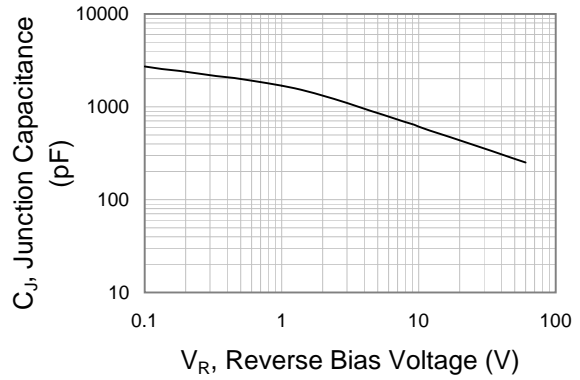
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Breakdown voltage	$V_{BR}$	$I_R=1.0\text{mA}$	100	-	-	V
Instantaneous forward voltage	$V_F$	$I_F=10\text{A}$	-	0.57	-	V
		$I_F=20\text{A}$	-	0.72	-	V
		$I_F=40\text{A}$	-	0.94	1.00	V
		$T_J=125^\circ\text{C}$	-	0.50	-	V
Reverse current	$I_R$	$V_R=70\text{V}$	-	25	-	$\mu\text{A}$
		$V_R=100\text{V}$	-	-	400	$\mu\text{A}$
		$T_J=25^\circ\text{C}$	-	-	200	$\mu\text{A}$
		$T_J=125^\circ\text{C}$	-	-	200	$\text{mA}$



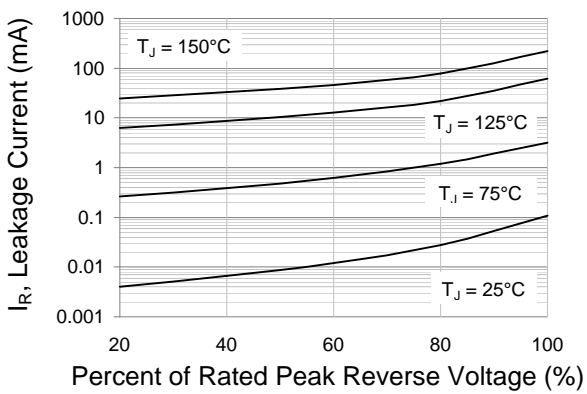
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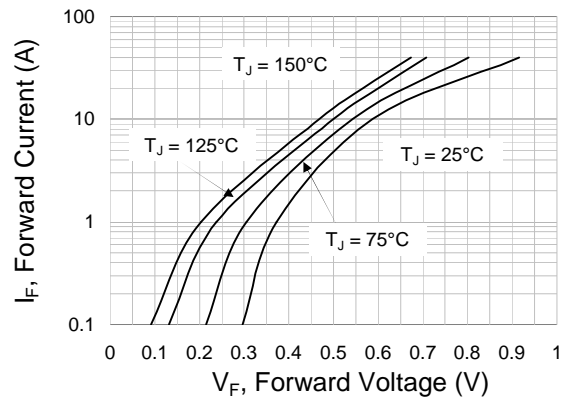
**Fig.1 Forward Current Derating Curve**



**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**