



10A Low VF Schottky Barrier Rectifier

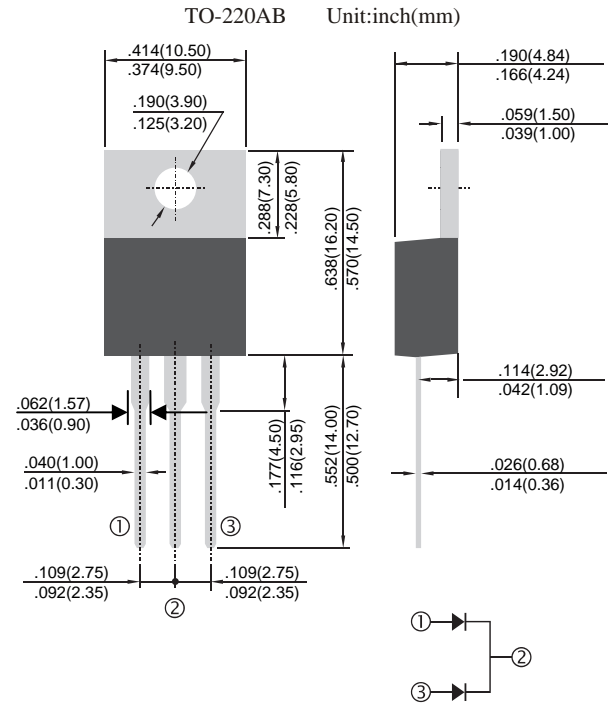


Features

- Ultra Low Forward Voltage Drop
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability

Mechanical Data

- Case: TO-220AB
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish annealed over Copper leadframe Solderable per MIL-STD-202, Method 208



MAXIMUM RATINGS(T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	V _{RRM}	300	V
Maximum RMS voltage	V _{RMS}	210	V
Maximum average forward rectified current	I _{F(AV)}	10 5	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	200	A
Typical junction capacitance (V _R =4V, f=1MHz)	C _J	620	pF
Typical thermal resistance Per Diode	R _{θJC}	15	°C/W
Operating junction temperature range	T _J	-55 to + 150	°C
Storage temperature range	T _{STG}	-55 to + 150	°C

Note : 1. Mounted on infinite heatsink.

DEVICE CHARACTERISTICS

SBP10L300CT

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT	
Breakdown voltage Per Diode	V_{BR}	$I_R=0.5\text{mA}$	300	-	-	V	
Instantaneous forward voltage Per Diode	V_F	$I_F=1\text{A}$	-	0.65	-	V	
		$I_F=2\text{A}$	-	0.70	-	V	
		$I_F=5\text{A}$	-	0.78	0.93	V	
			$T_J=25^\circ\text{C}$				
Reverse current Per Diode	I_R	$V_R=210\text{V}$	-	12	-	μA	
		$V_R=300\text{V}$	-	-	50	μA	
			$T_J=25^\circ\text{C}$	-	-	-	μA
			$T_J=125^\circ\text{C}$	-	13	-	mA

RATING AND CHARACTERISTIC CURVES

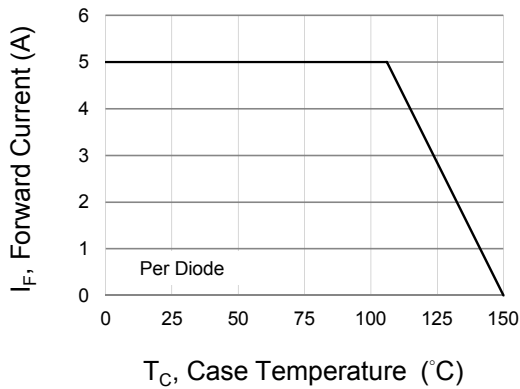


Fig.1 Forward Current Derating Curve

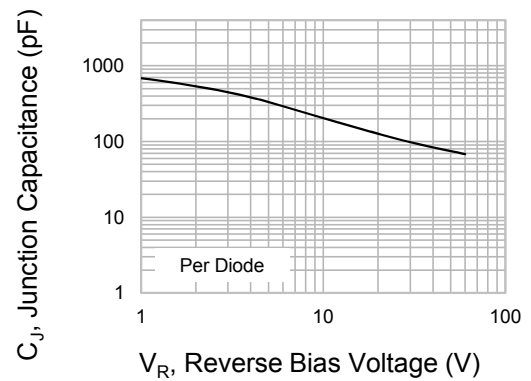


Fig.2 Typical Junction Capacitance

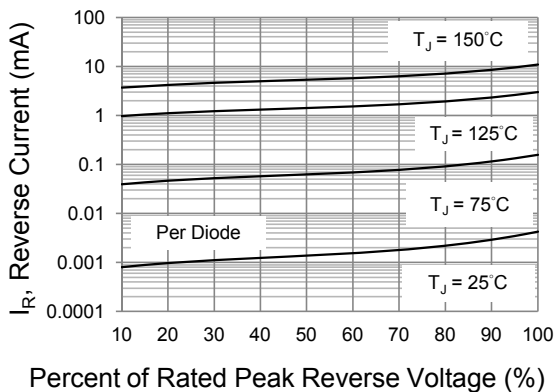


Fig.3 Typical Reverse Characteristics

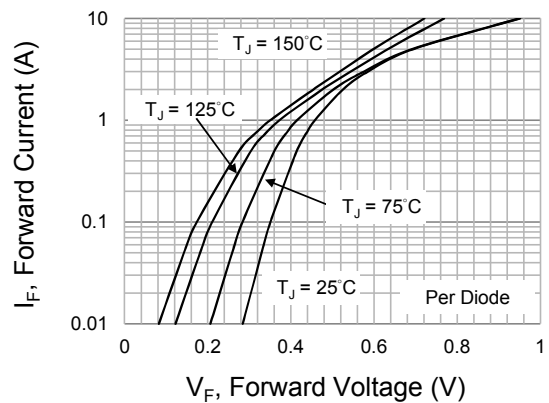


Fig.4 Typical Forward Characteristics