

Pb Free Plating Product

## SDB20100PR



20 Ampere Dual Common Anode Schottky Half Bridge Rectifier Diode

**Features**

- \* Fast switching for high efficiency
- \* Low forward voltage drop
- \* High current capability
- \* Low reverse leakage current
- \* High surge current capability

**Application**

- \* Automotive Inverters and Solar Inverters
- \* Plating Power Supply, SMPS and UPS
- \* Car Audio Amplifiers and Sound Device Systems

**Mechanical Data**

- \* Case: Fully Isolated TO-220FP FullPak Plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solderable per MIL-STD-202 method 208
- \* Polarity: As marked on diode body
- \* Mounting position: Any
- \* Weight: 2.1 gram approxiamtely

ITO-220AB Unit:mm

① ② ③ Case

① ② ③ Case

① ② ③ Case

① ② ③ Case

Positive Common Cathode Suffix "PI"  
 Negative Common Anode Suffix "PR"  
 Doubler Tandem Polarity Suffix "PD"  
 Reverse Doubler Tandem Polarity Suffix "PS"

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

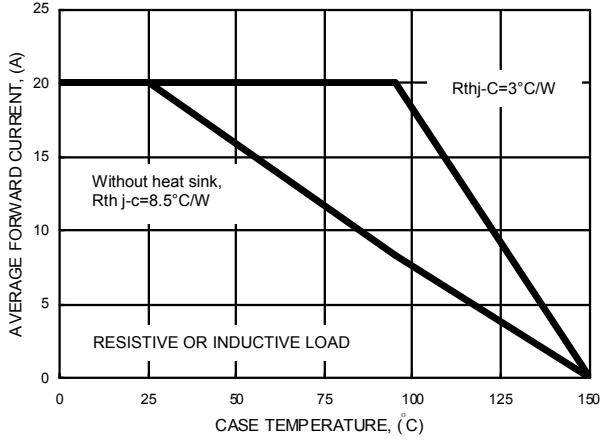
Ratings at 25°C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

PARAMETER	SYMBOL	SDB20100PR	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	100	V
Maximum RMS Voltage	$V_{RMS}$	70	V
Maximum DC Blocking Voltage	$V_{DC}$	100	V
Average Rectified Output Current @TC=95°C	$I_F$	20	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	150	A
Maximum Forward Voltage Note(1) $I_F=10A@ T_J=25^\circ C$ $I_F=10A@ T_J=125^\circ C$ $I_F=20A@ T_J=25^\circ C$ $I_F=20A@ T_J=125^\circ C$	$V_F$	0.85 0.75 0.95 0.85	V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^\circ C$ $T_J=125^\circ C$	$I_R$	0.1 50	mA
Typical Junction Capacitance per element (2)	$C_J$	250	pF
Typical thermal resistance Junction to Case (3)	$R_{\theta JC}$	3.0	°C/W
Operating junction temperature range	$T_J$	-55 to +150	°C
Storage temperature range	$T_{STG}$	-55 to +150	°C

- Note :
- (1) 300us Pulse Width, 2% Duty Cycle.
  - (2) Measured at 1.0MHz and applied reverse voltage of 4.0  $V_{DC}$ .
  - (3) Thermal Resistance Junction to Case, device mounted on L42 x H25 x W25mm\_black Aluminum finny heat sink,

## RATINGS AND CHARACTERISTIC CURVES

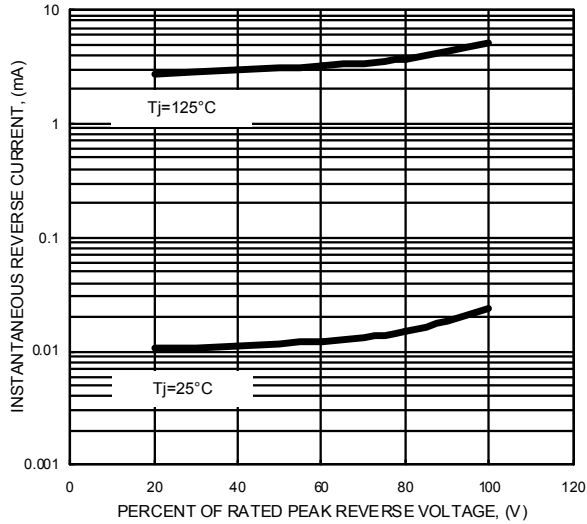
**FIG.1- FORWARD CURRENT DERATING CURVE**



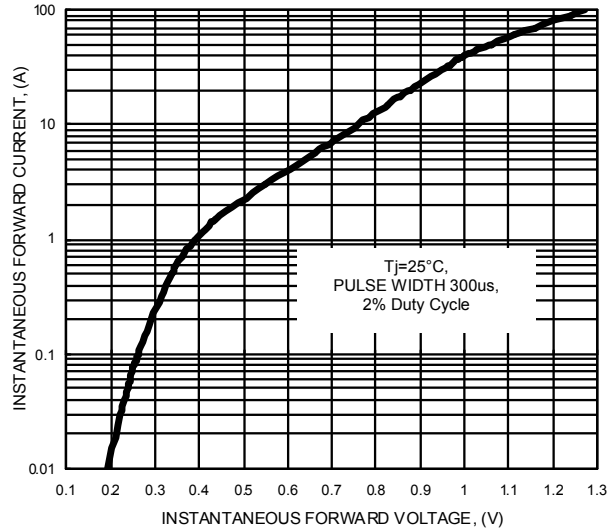
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



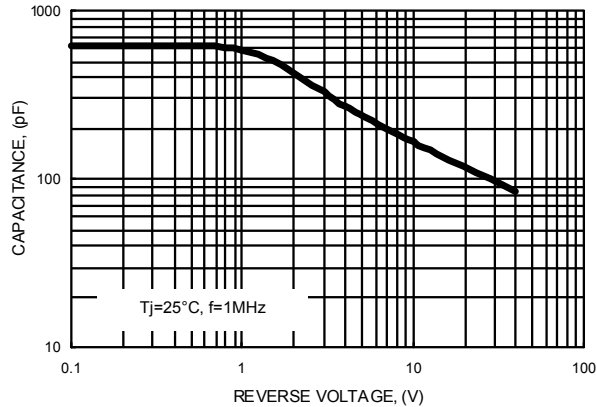
**FIG.3- TYPICAL REVERSE CHARACTERISTICS**



**FIG.4- TYPICAL FORWARD CHARACTERISTICS**



**FIG.5- TYPICAL JUNCTION CAPACITANCE**



**FIG.6- DC REVERSE VOLTAGE DERATING CURVE**

