

**SURFACE MOUNTABLE  
 ULTRAFAST RECOVERY DIODE**

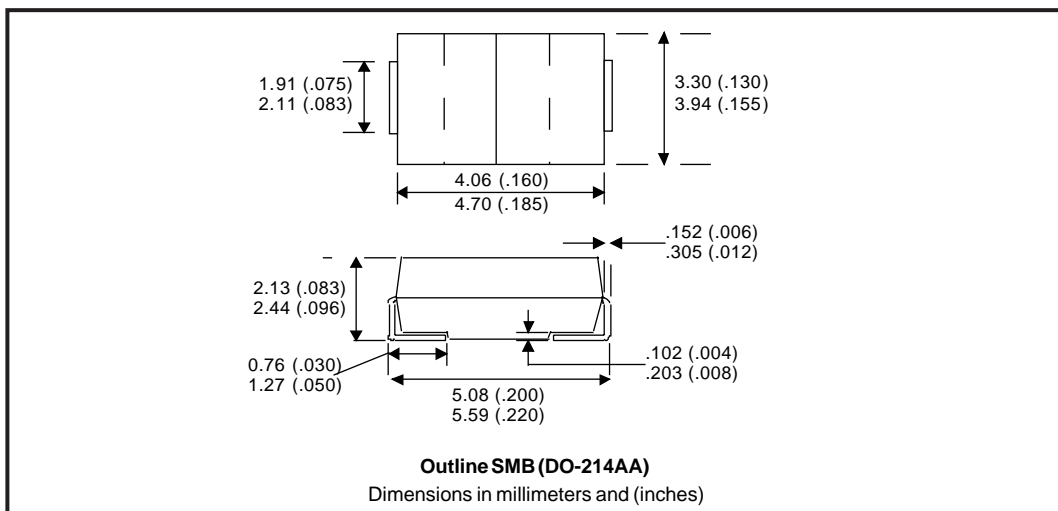


**Major Ratings and Characteristics**

Characteristics	10BF..					Units
	10	20	40	60	80	
$I_{F(AV)}$	1					A
$V_{RRM}$	100 to 800					V
$I_{FSM}$	30					A
$V_F$ @ 1A, $T_J=25^\circ\text{C}$	0.95	1.4	1.7			V
$t_{tr}$ @ $T_J=25^\circ\text{C}$	35	50	100			ns
$T_J$ range	-50 to 150					$^\circ\text{C}$

**Features**

- For surface mounted applications
- Low profile package
- Built-in stress relief
- Compatible with all pick & place equipments
- Ultrafast recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated junction
- High temperature soldering: 260 $^\circ\text{C}$ \10 seconds at terminals



## 10BF.. Series

Preliminary Data Sheet PD-20482 rev. B 06/99

International  
 Rectifier

### Voltage Ratings

Part Number	$V_{RRM}$ , maximum peak reverse voltage V	$V_{DC}$ , maximum blocking voltage V	$I_{RRM}$ 100°C μA
10BF10	100	100	100
10BF20	200	200	
10BF40	400	400	
10BF60	600	600	
10BF80	800	800	

### Maximum Ratings and Electrical Characteristics

Parameters	10BF..					Units	Conditions
	10	20	40	60	80		
$I_{F(AV)}$ Maximum Average Forward Current	1					A	@ $T_L = 100^\circ\text{C}$
$I_{FSM}$ Peak Forward Surge Current	30					A	8.3ms single half sine waves superimposed on rated load (JEDEC Method) $T_A = 55^\circ\text{C}$
$V_{FM}$ Max. Instantaneous Forward Voltage	0.95	1.4	1.7			V	@ 3A
$I_{RM}$ Maximum DC Reverse Current at Rated DC Blocking Voltage	10					μA	$T_A = 25^\circ\text{C}$
	100						$T_A = 100^\circ\text{C}$
$t_{rr}$ Reverse Recovery Time	35	50	100			ns	$I_F = 0.5\text{A}, I_R = 1.0\text{A}, I_{rr} = 0.25\text{A}$
$C_J$ Typical Junction Capacitance	10	15				pf	@ 1.0MHz applied reverse voltage of 4.0V
$R_{thJ}$ Maximum Thermal Resistance	35	30				°C/W	8.0mm <sup>2</sup> (.013mm thick) land areas
$T_J$ Operating Temperature Range	-50 to 150					°C	
$T_{stg}$ Storage Temperature Range	-50 to 150					°C	
wt Approximate Weight	0.21 (0.007)					g (oz)	
Case Style	SMB/DO-214AA						JEDEC molded plastic

Ratings at 25°C ambient temperature unless otherwise specified.  
 Resistive or inductive load.  
 For capacitive load, derate current by 20%.

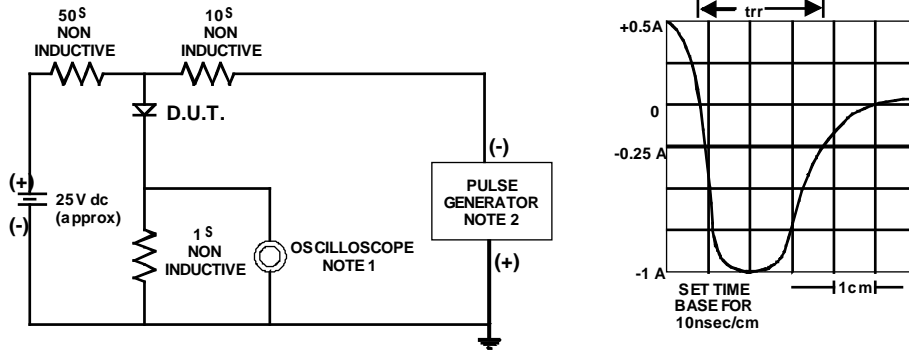


Fig. 1 - Reverse Recovery Time Characteristic and Test Circuit Diagram

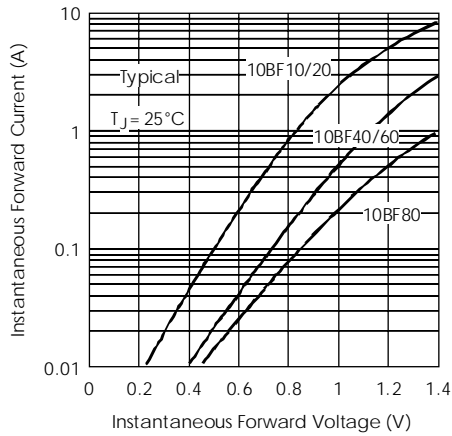


Fig. 2 - Typical Forward Characteristics

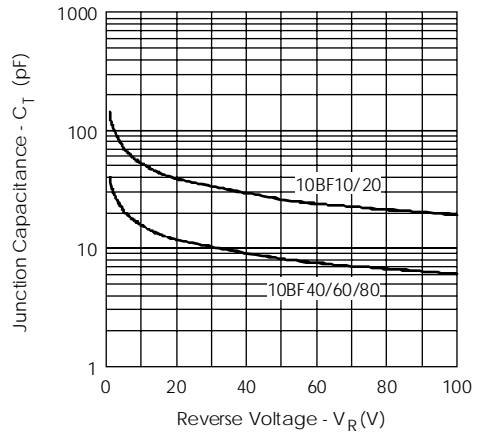


Fig. 3 - Typical Junction Capacitance

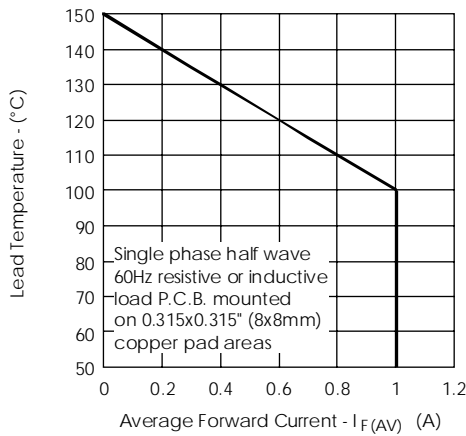


Fig. 4 - Forward Current Derating Curve

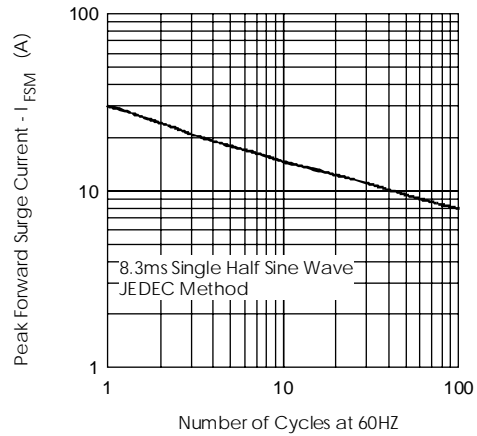


Fig. 5 - Peak Forward Surge Current

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## Ordering Information Table

Device Code			
10	B	F	80
①	②	③	④

<b>1</b>	-	Current Rating x 10: 10 = 1A
<b>2</b>	-	B = DO-214AA (SMB) Surface Mount
<b>3</b>	-	F = Ultrafast Recovery
<b>4</b>	-	Voltage code: Code = $V_{RRM} / 10$

## Tape & Reel Information

