

**SURFACE MOUNTABLE
 ULTRAFAST RECOVERY DIODE**

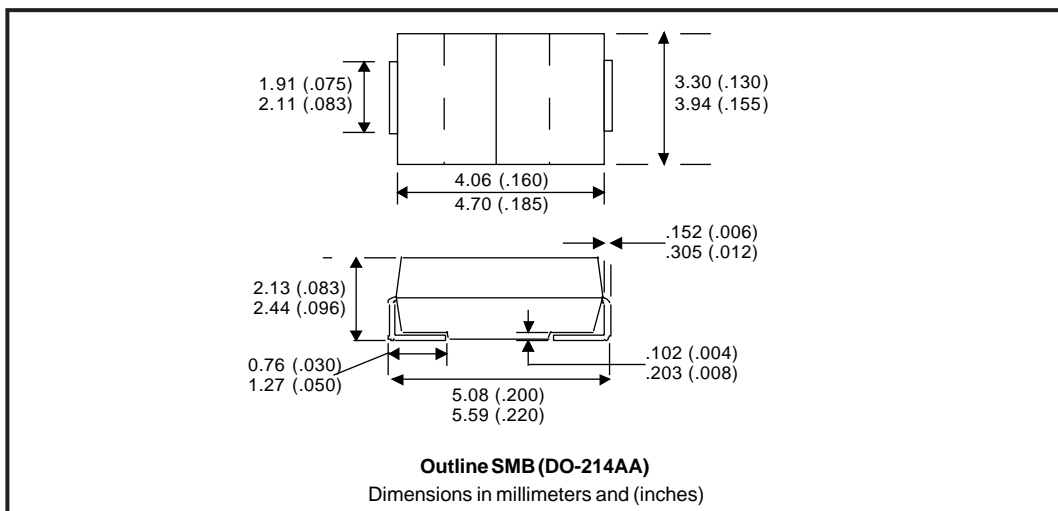


Major Ratings and Characteristics

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 ² (.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%.

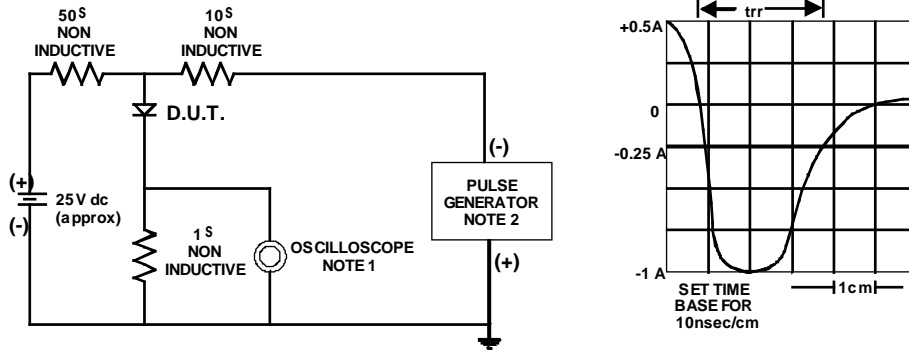


Fig. 1 - Reverse Recovery Time Characteristic and Test Circuit Diagram

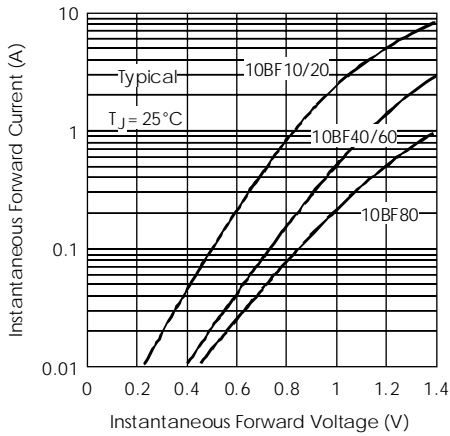


Fig. 2 - Typical Forward Characteristics

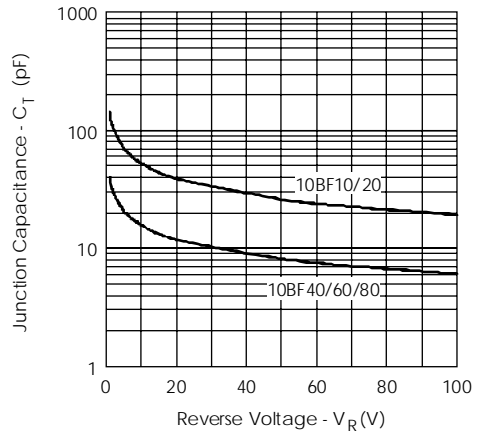


Fig. 3 - Typical Junction Capacitance

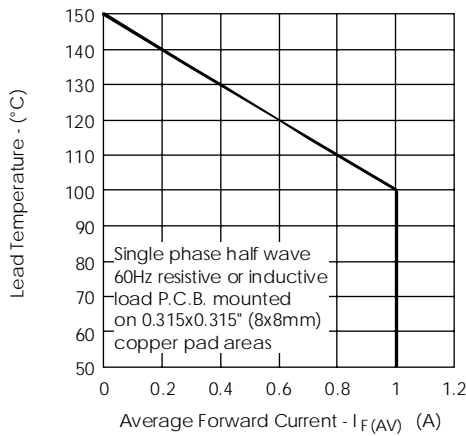


Fig. 4 - Forward Current Derating Curve

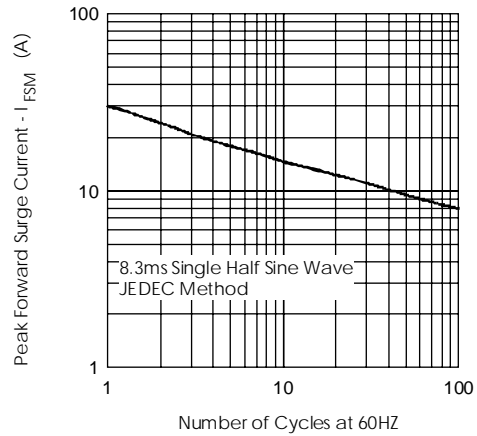


Fig. 5 - Peak Forward Surge Current

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International
IOR Rectifier

Ordering Information Table

Device Code			
10	B	F	80
①	②	③	④

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

Tape & Reel Information

