



10BF.. Series

SURFACE MOUNTABLE ULTRAFAST RECOVERY DIODE

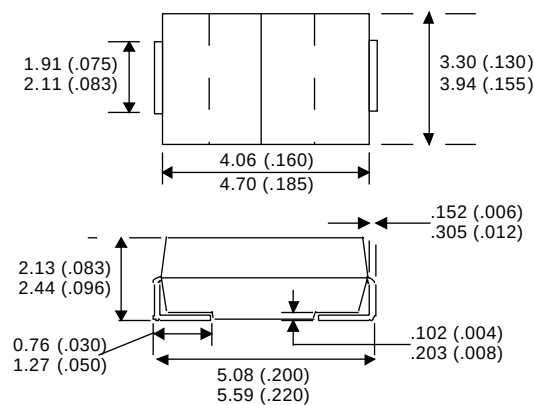


Major Ratings and Characteristics

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_{rr} @ $T_J = 25^\circ\text{C}$	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



Outline SMB (DO-214AA)

Dimensions in millimeters and (inches)

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

International
IOR 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° C
I _{FSM}	Peak Forward Surge Current	30					A	8.3ms single half sine waves superimposed on rated load (JEDEC Method) T _A = 55° C
V _{FM}	Max. Instantaneous Forward Voltage	0.95		1.4	1.7		V	@ 3A
I _{RM}	Maximum DC Reverse Current	10					μA	T _A = 25° C
	at Rated DC Blocking Voltage	100						T _A = 100° C
t _{rr}	Reverse Recovery Time	35		50	100		ns	I _F = 0.5A, I _R = 1.0A, I _{rr} = 0.25A
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%.

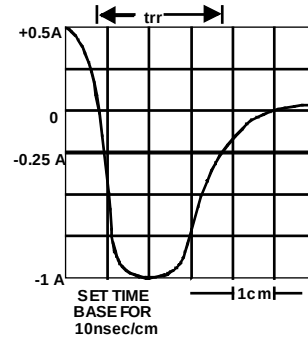
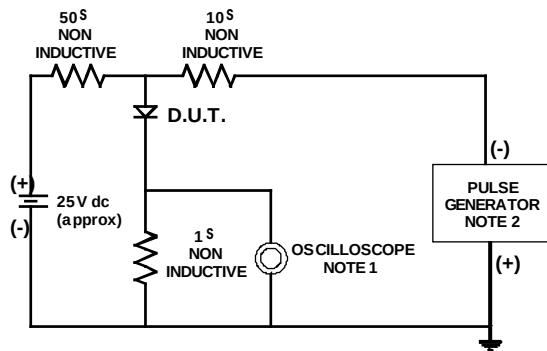


Fig. 1 - Reverse Recovery Time Characteristic and Test Circuit Diagram

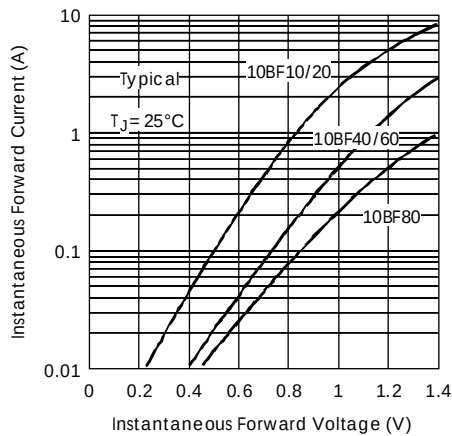


Fig. 2 - Typical Forward Characteristics

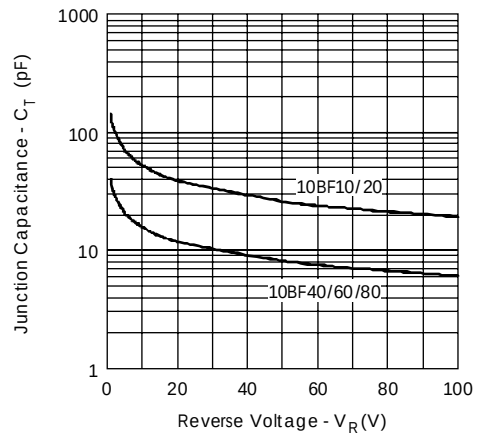


Fig. 3 - Typical Junction Capacitance

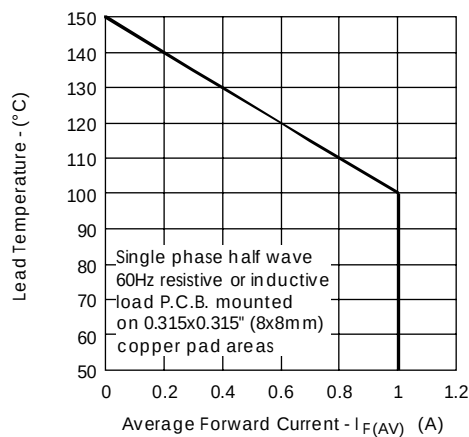


Fig. 4 - Forward Current Derating Curve

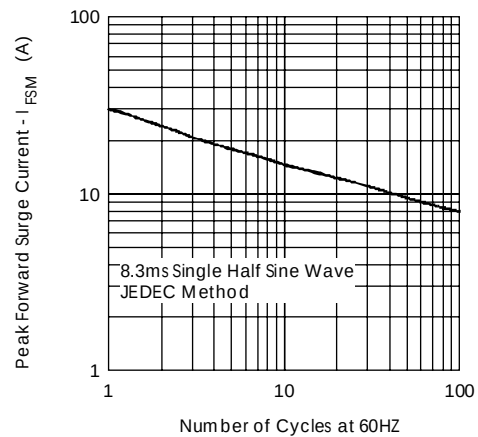


Fig. 5 - Peak Forward Surge Current

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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

