



TAYCHIPST

SURFACE MOUNTABLE ULTRAFAST RECOVERY

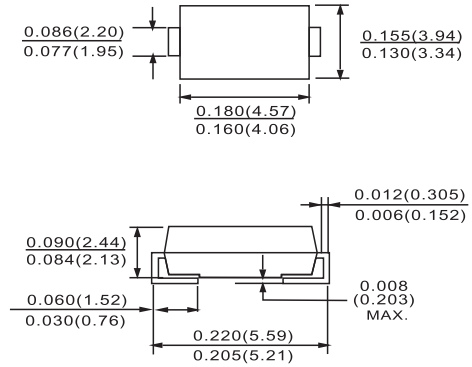
10BF10 THRU 10BF80

100V-800V 1.0A

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°C\10 seconds at terminals

DO-214AA(SMB)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Parameters	10BF..					Units	Conditions
	10	20	40	60	80		
$I_{F(AV)}$ Maximum Average Forward Current	1					A	@ $T_L = 100^\circ C$
I_{FSM} Peak Forward Surge Current	30					A	8.3ms single half sine waves superimposed on rated load (JEDEC Method) $T_A = 55^\circ C$
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	$T_A = 25^\circ C$
	100						$T_A = 100^\circ C$
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				$^\circ C/W$	8.0mm ² (.013mm thick) land areas
T_J Operating Temperature Range	-50 to 150					$^\circ C$	
T_{stg} Storage Temperature Range	-50 to 150					$^\circ C$	
wt Approximate Weight	0.21 (0.007)					g (oz)	
Case Style	SMB/DO-214AA					JEDEC molded plastic	

Voltage Ratings

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

Notes:

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

RATINGS AND CHARACTERISTIC CURVES 10BF10 THRU 10BF80

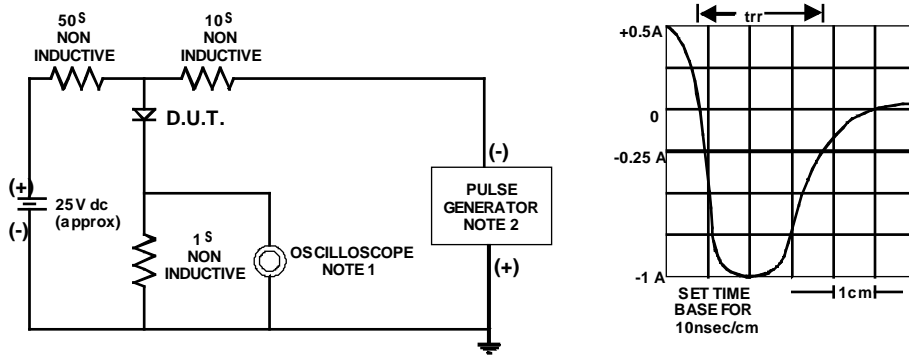


Fig. 1 - Reverse Recovery Time Characteristic and Test Circuit Diagram

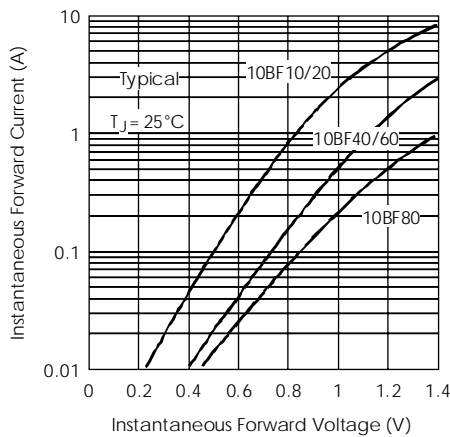


Fig. 2 - Typical Forward Characteristics

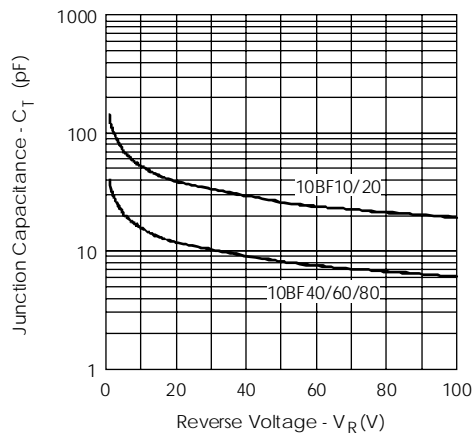


Fig. 3 - Typical Junction Capacitance

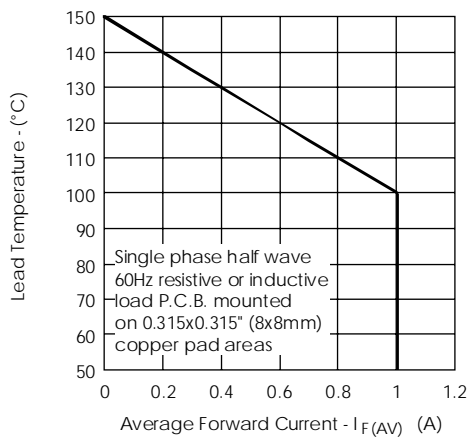


Fig. 4 - Forward Current Derating Curve

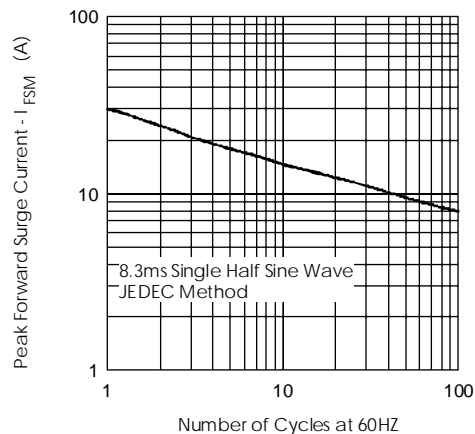


Fig. 5 - Peak Forward Surge Current