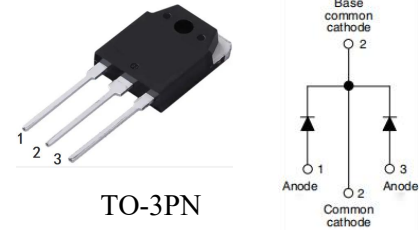


ULTRAFAST SOFT RECOVERY RECTIFIER DIODE FRD60B20

●DESCRIPTION:

The FRD60B20 is a ultrafast soft recovery rectifier diode. It has the characteristics of low forward voltage, low leakage current, low power loss, higher reliability systems, RoHS standard.



TO-3PN

●ABSOLUTE MAXIMUM RATINGS Ratings (at 25°C ambient temperature unless otherwise specified.)

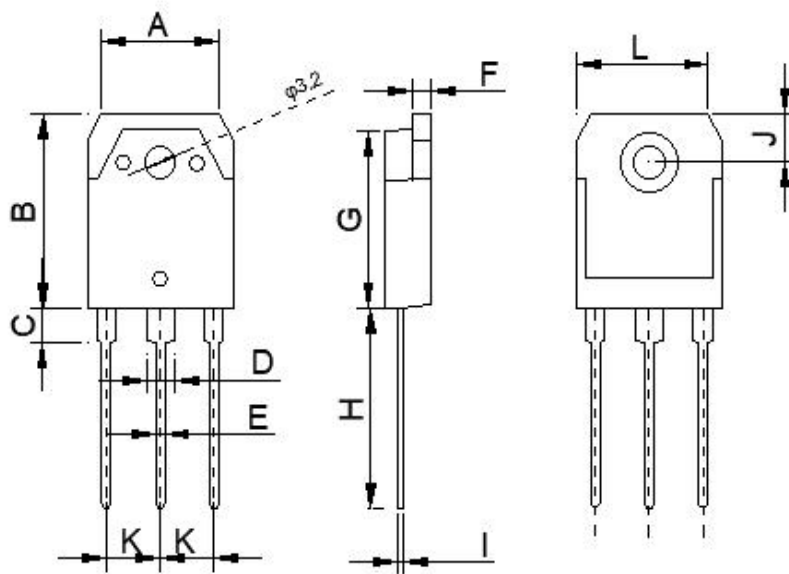
Symbol	Parameter	Value	Unit
V_R	Maximum D.C. Reverse Voltage	200	V
V_{RRM}	Maximum Peak Repetitive Reverse Voltage		
V_{RWM}	Working Peak Reverse Voltage		
$I_{F(AV)}$	Continuous forward current, $T_C=110^\circ\text{C}$	60	A
I_{FSM}	Single pulse forward current, $T_C=25^\circ\text{C}$	600	
T_j, T_{STG}	Operating and Storage Temperature Range	-55 to +175	$^\circ\text{C}$

●ELECTRICAL CHARACTERISTICS (at 25°C ambient temperature unless otherwise specified)

Symbol	Parameter	Test Condition	Value			Unit
			MIN	TYPE	MAX	
V_{BR}	Reverse breakdown voltage	$I_R=100\mu\text{A}$	200			V
V_F	Forward voltage	$I_F=30\text{A}$		0.96	1.15	
		$I_F=30\text{A}, T_j=125^\circ\text{C}$		0.86	1.00	
I_R	Reverse leakage current	$V_R=200\text{V}$			20	uA
		$T_j=150^\circ\text{C}, V_R=200\text{V}$			200	
t_{rr}	Reverse recovery time	$I_F=0.5\text{A}, I_R=1\text{A}, I_{RR}=0.25\text{A}$			35	ns
		$I_F=1\text{A}, V_R=30\text{V}, di/dt=200\text{A/us}$		23	35	

● PACKAGE MECHANICAL DATA

TO-3PXX



Symbol	Millimeter		Inches	
	Min	Max	Min	Max
A	12.4	12.5	0.488	0.492
B	19.9	20.1	0.783	0.791
C	3.3	3.5	0.130	0.138
D	2.9	3.1	0.114	0.122
E	1	1.15	0.039	0.045
F	1.95	2.05	0.077	0.081
G	18.35	18.45	0.722	0.726
H	19.8	20	0.780	0.787
I	0.62	0.65	0.024	0.026
J	4.95	5.05	0.195	0.199
K	5.4	5.5	0.213	0.217
L	15.4	15.5	0.606	0.610

● ELECTRICAL CHARACTERISTICS (CURVES)

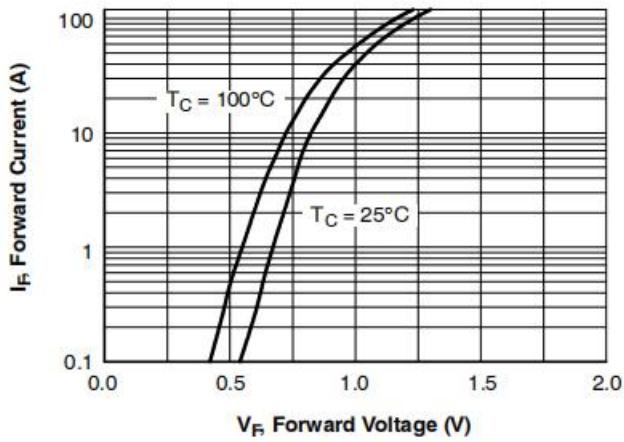


Figure 3. Typical Forward Voltage Drop vs. Forward Current

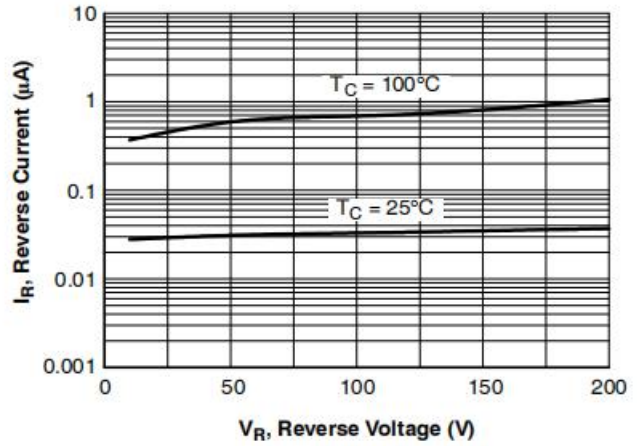


Figure 4. Typical Reverse Current vs. Reverse Voltage

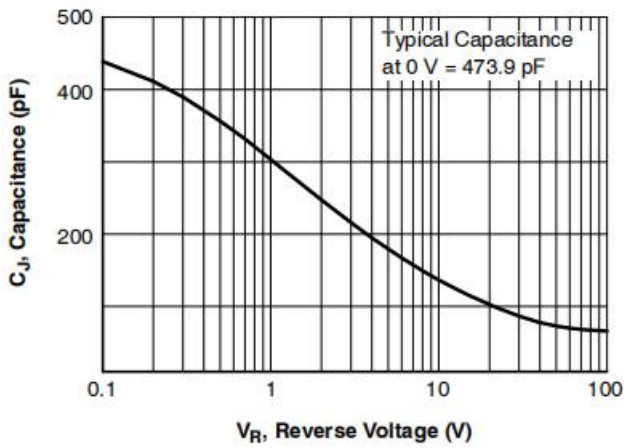


Figure 5. Typical Junction Capacitance

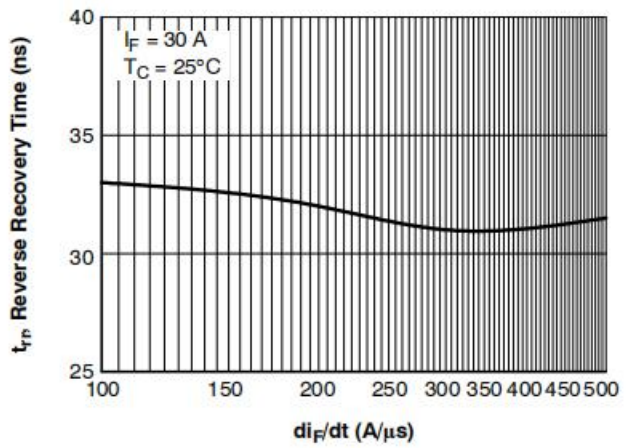


Figure 6. Typical Reverse Recovery Time vs. di_F/dt

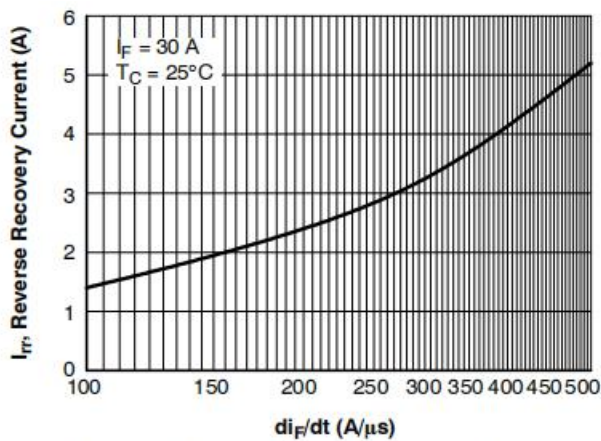


Figure 7. Typical Reverse Recovery Current vs. di_F/dt

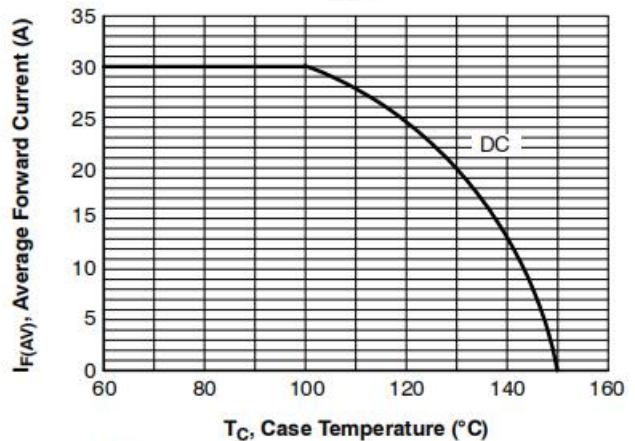


Figure 8. Forward Current Derating Curve