

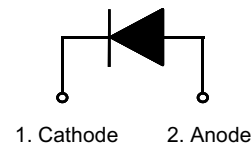
FFB20U60S

Features

- High voltage and high reliability
- High speed switching
- Low forward voltage

Applications

- General purpose
- Switching mode power supply
- Free-wheeling diode for motor application
- Power switching circuits



ULTRA FAST RECOVERY POWER RECTIFIER

Absolute Maximum Ratings $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{RRM}	Peak Repetitive Reverse Voltage	600	V
$I_{F(AV)}$	Average Rectified Forward Current @ $T_C = 100^\circ\text{C}$	20	A
I_{FSM}	Non-repetitive Peak Surge Current 60Hz Single Half-Sine Wave	120	A
T_J, T_{STG}	Operating Junction and Storage Temperature	- 65 to +150	$^\circ\text{C}$

Thermal Characteristics

Symbol	Parameter	Value	Units
$R_{\theta JC}$	Maximum Thermal Resistance, Junction to Case	1.25	$^\circ\text{C/W}$

Electrical Characteristics $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Min.	Typ.	Max.	Units
V_{FM}^*	Maximum Instantaneous Forward Voltage $I_F = 20\text{A}$ $I_F = 20\text{A}$ $T_C = 25^\circ\text{C}$ $T_C = 100^\circ\text{C}$			2.2 2.0	V
I_{RM}^*	Maximum Instantaneous Reverse Current @ rated V_R $T_C = 25^\circ\text{C}$ $T_C = 100^\circ\text{C}$			10 100	μA
t_{rr} I_{rr} Q_{rr}	Maximum Reverse Recovery Time Maximum Reverse Recovery Current Maximum Reverse Recovery Charge ($I_F = 20\text{A}$, $di/dt = 200\text{A}/\mu\text{s}$)			90 8 360	ns A nC
W_{AVL}	Avalanche Energy	1.0			mJ

* Pulse Test: Pulse Width=300 μs , Duty Cycle=2%

Typical Characteristics

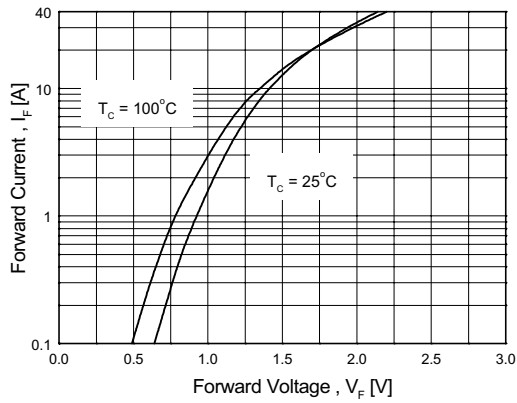


Figure 1. Typical Forward Voltage Drop vs. Forward Current

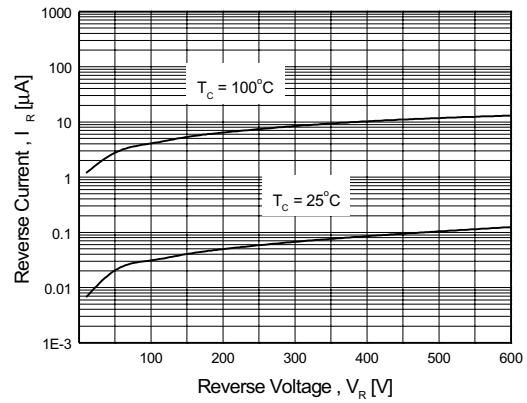


Figure 2. Typical Reverse Current vs. Reverse Voltage

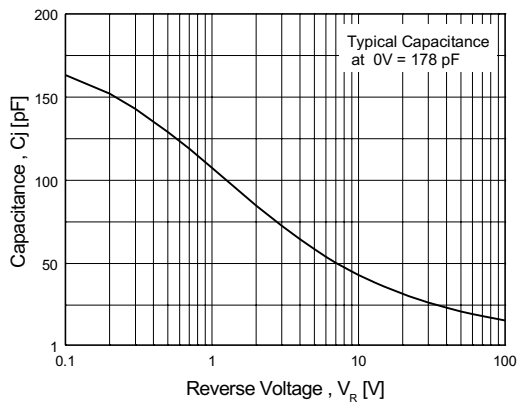


Figure 3. Typical Junction Capacitance

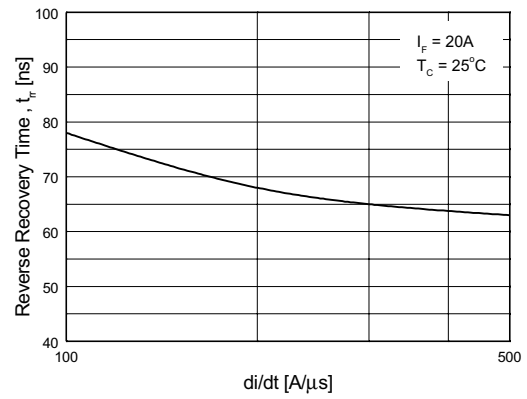


Figure 4. Typical Reverse Recovery Time vs. di/dt

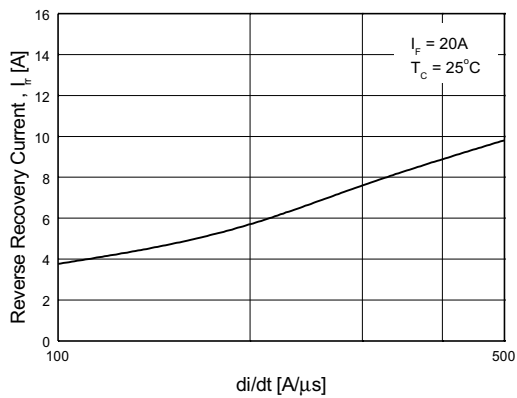


Figure 5. Typical Reverse Recovery Current vs. di/dt

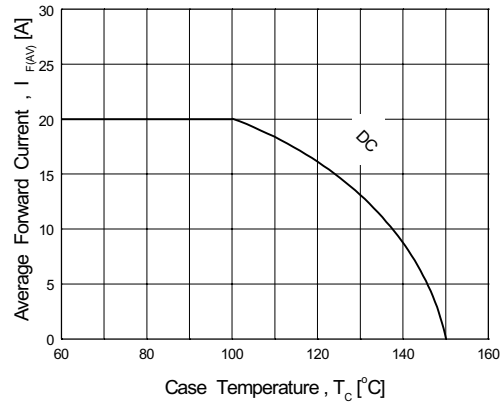


Figure 6. Forward Current Derating Curve

FFB20U60S

Technical drawing of a 10-pin D-subminiature connector, showing three views: front, side, and top. Dimensions are in millimeters.

Front View:

- Overall width: 9.90 ± 0.20
- Overall height: 15.30 ± 0.30
- Pin height: 4.90 ± 0.20
- Pin pitch: 2.54 TYP
- Pin diameter: 0.80 ± 0.10
- Pin length: 1.20 ± 0.20
- Pin spacing: 1.40 ± 0.20
- Pin diameter: 0.40

Side View:

- Overall width: 4.50 ± 0.20
- Overall height: 2.54 ± 0.30
- Pin height: 2.00 ± 0.10
- Pin pitch: 2.54 TYP
- Pin diameter: 0.80 ± 0.10
- Pin length: 1.20 ± 0.20
- Pin spacing: 1.40 ± 0.20
- Pin diameter: 0.40

Top View:

- Overall width: 10.00 ± 0.20
- Overall height: 9.20 ± 0.20
- Pin height: 4.90 ± 0.20
- Pin pitch: 2.54 TYP
- Pin diameter: 0.80 ± 0.10
- Pin length: 1.20 ± 0.20
- Pin spacing: 1.40 ± 0.20
- Pin diameter: 0.40

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Rev. F, November 2000

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20A/600V Ultra Fast Recovery Rectifiers

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Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Leads	Packing method
FFB20U60STM	Full Production	\$0.74	TO-263(D2PAK)	2	TAPE REEL

* 1,000 piece Budgetary Pricing

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