Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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FAIRCHILD SEMICONDUCTOR™

FFA40U60DN

Features

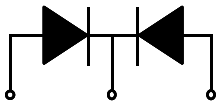
- High voltage and high reliability
- High speed switching
- Low forward voltage

Applications

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

TO-3P

1 2 3



1. Anode 2.Cathode 3. Anode

ULTRA FAST RECOVERY POWER RECTIFIER

Absolute Maximum Ratings (per diode) T_C=25°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°C	40	A
I_{FSM}	Non-repetitive Peak Surge Current 60Hz Single Half-Sine Wave	240	A
T_J, T_{STG}	Operating Junction and Storage Temperature	- 65 to +150	°C

Thermal Characteristics

Symbol	Parameter	Value	Units
$R_{\theta JC}$	Maximum Thermal Resistance, Junction to Case	0.7	°C/W

Electrical Characteristics (per diode) T_C=25 °C unless otherwise noted

Symbol	Parameter		Min.	Typ.	Max	Units
V_{FM} *	Maximum Instantaneous Forward Voltage					V
	I_F = 40A	T_C = 25 °C	-	-	2.1	
	I_F = 40A	T_C = 100 °C	-	-	1.9	
I_{RM} *	Maximum Instantaneous Reverse Current					μA
	@ rated V_R	T_C = 25 °C	-	-	20	
		T_C = 100 °C	-	-	200	
t_{rr}	Maximum Reverse Recovery Time		-	-	110	ns
I_{rr}	Maximum Reverse Recovery Current		-	-	10	A
Q_{rr}	Maximum Reverse Recovery Charge (I_F =40A, di/dt = 200A/μs)		-	-	550	nC
W_{AVL}	Avalanche Energy		1.0	-	-	mJ

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

Typical Characteristics

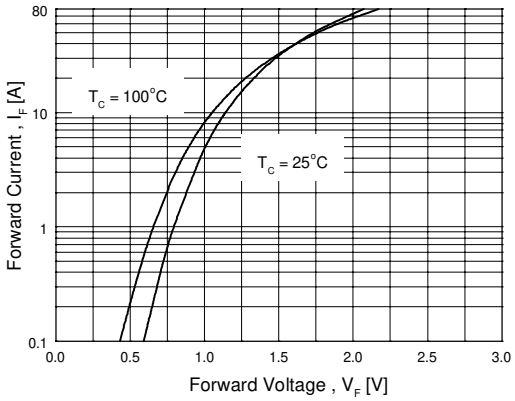


Figure 1. Typical Forward Voltage Drop vs. Forward Current

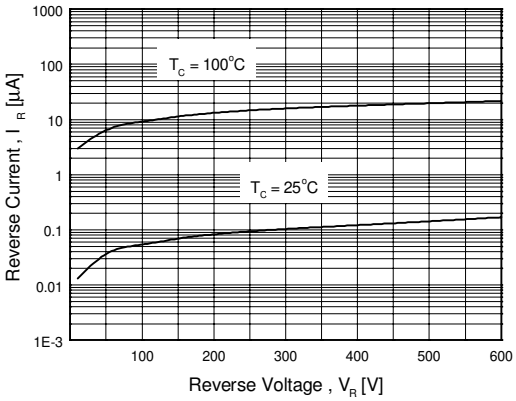


Figure 2. Typical Reverse Current vs. Reverse Voltage

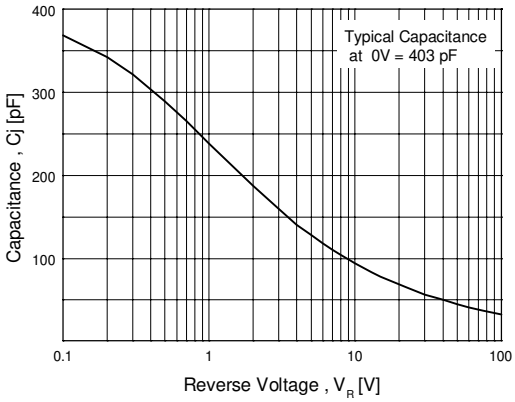


Figure 3. Typical Junction Capacitance

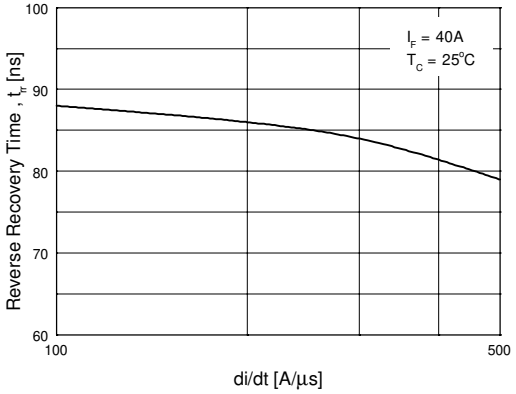


Figure 4. Typical Reverse Recovery Time vs. di/dt

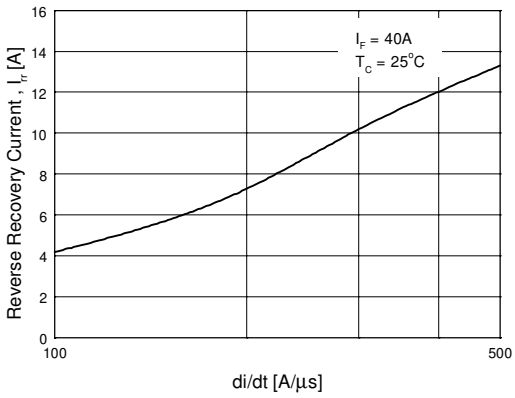


Figure 5. Typical Reverse Recovery Current vs. di/dt

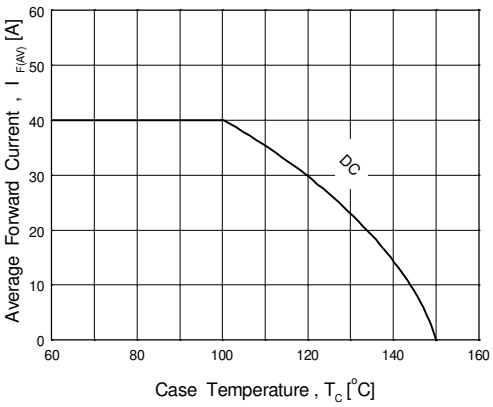
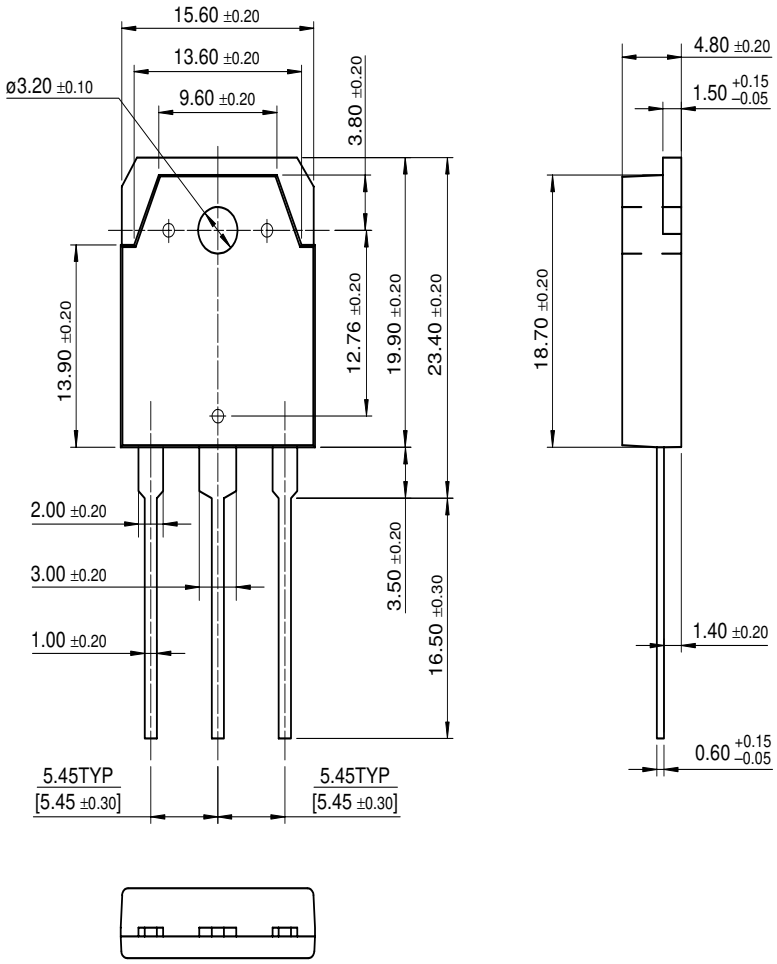


Figure 6. Forward Current Derating Curve

Package Dimensions

TO-3P



Dimensions in Millimeters

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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