FAIRCHILD
SEMICONDUCTOR®

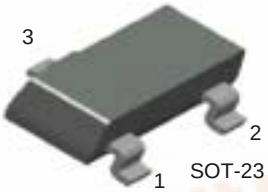
FYV0704S

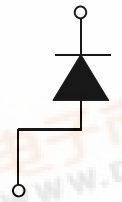
Features

- Very low forward voltage drop
- High frequency properties and switching speed
- Guard ring for over-voltage protection

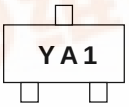
Applications

- DC-DC converters
- Freewheeling diodes





marking



SCHOTTKY BARRIER RECTIFIER

Absolute Maximum Ratings T_A=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{RRM}	Maximum Repetitive Reverse Voltage	40	V
V_R	Maximum DC Reverse Voltage	40	V
$I_{F(AV)}$	Average Rectified Forward Current @ T_A = 40°C	0.75	A
I_{FSM}	Non-repetitive Peak Surge Current 60Hz Single Half-Sine Wave	8	A
T_J	Operating Junction Temperature	-65 to +125	°C
T_{STG}	Storage Temperature	-65 to +150	°C

Thermal Characteristics

Symbol	Parameter	Value	Units
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	250	°C/W

Electrical Characteristics

Symbol	Parameter		Min.	Typ.	Max.	Units
V_F *	Forward Voltage Drop					V
	I_F = 50mA	T_A = 25 °C	-	0.270	-	
	I_F = 100mA	T_A = 25 °C	-	0.290	-	
	I_F = 500mA	T_A = 25 °C	-	0.380	-	
	I_F = 750mA	T_A = 25 °C	-	0.425	0.48	
	I_F = 1A	T_A = 25 °C	-	0.460	-	
	I_F = 1.5A	T_A = 25 °C	-	0.535	-	
	I_F = 750mA	T_A = 125 °C	-	0.375	-	
I_R *	Reverse Current					mA
	@ rated V_R	T_A = 25 °C	-	0.02	0.1	
		T_A= 125 °C	-	10	-	

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

Typical Characteristics

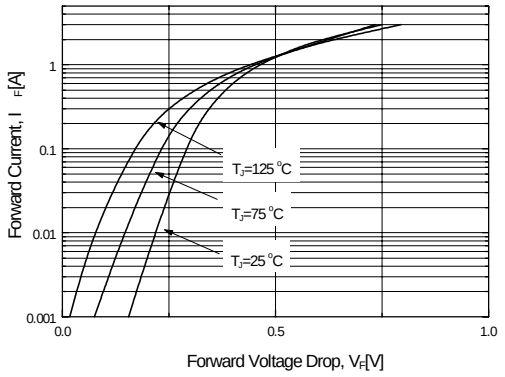


Figure 1. Typical Forward Voltage Characteristics

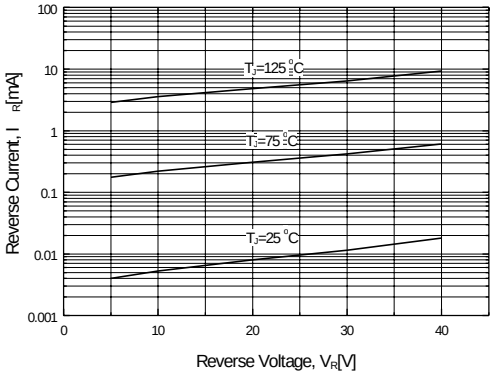


Figure 2. Typical Reverse Current vs. Reverse Voltage

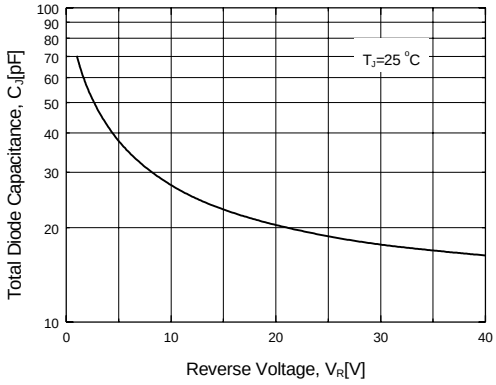


Figure 3. Total Diode Capacitance

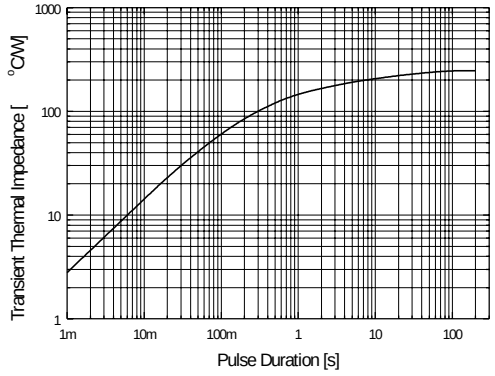


Figure 4. Thermal Impedance Characteristics

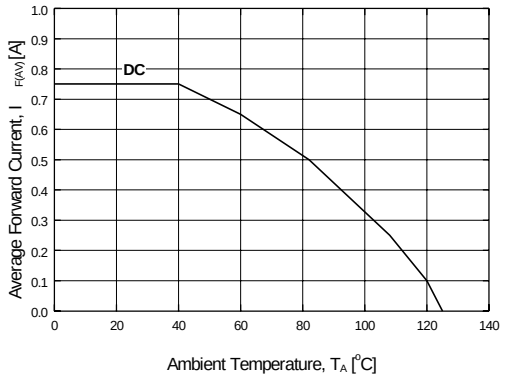


Figure 5. Forward Current Derating Curve

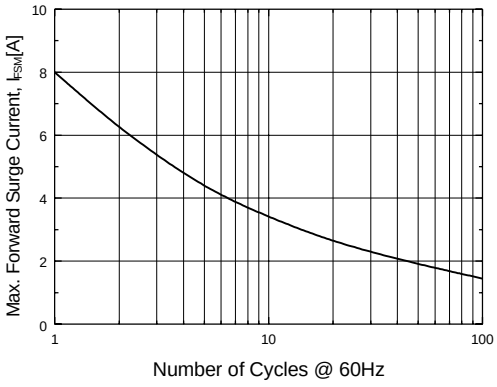
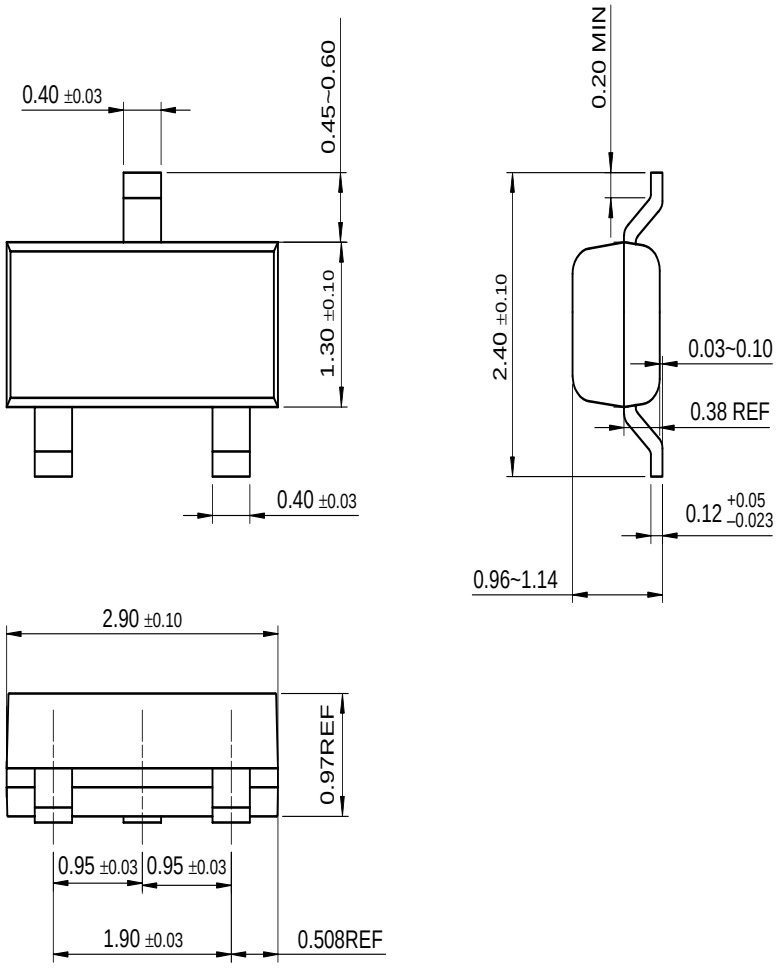


Figure 6. Non-Repetive Surge Current

Package Dimensions

SOT-23



Dimensions in Millimeters

TRADEMARKS

The following are registered and unregistered trademarks Fairchild Semiconductor owns or is authorized to use and is not intended to be an exhaustive list of all such trademarks.

ACEx™	FAST®	OPTOPLANAR™	SuperSOT™-3
Bottomless™	FASTr™	PACMAN™	SuperSOT™-6
CoolFET™	FRFET™	POP™	SuperSOT™-8
CROSSVOLT™	GlobalOptoisolator™	PowerTrench®	SyncFET™
DenseTrench™	GTO™	QFET™	TinyLogic™
DOME™	HiSeC™	QS™	UHC™
EcoSPARK™	ISOPLANAR™	QT Optoelectronics™	UltraFET®
E^2CMOS™	LittleFET™	Quiet Series™	VCX™
EnSigna™	MicroFET™	SLIENT SWITCHER®	
FACT™	MICROWIRE™	SMART START™	
FACT Quiet Series™	OPTOLOGIC™	Stealth™	

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF FAIRCHILD SEMICONDUCTOR CORPORATION.

As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, or (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.

2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.