FAIRCHILD
SEMICONDUCTOR®

MBR0520L

SOD123
Color Band Denotes Cathode
Mark: B2

Features

- 0.5 Ampere, low forward voltage, less then 385mV
- 400 milliwatt Power Dissipation package
- Compact surface mount package with the same footprint as mini-melf

Schottky Rectifier

Absolute Maximum Ratings*

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{RRM}	Maximum Repetitive Reverse Voltage	20	V
$I_{F(AV)}$	Average Rectified Forward Current	500	mA
I_{FSM}	Non Repetitive Peak Forward Current (Surge applied at rated load conditions half wave, single phase, 60 Hz)	5.5	A
T_{stg}	Storage Temperature Range	-65 to +150	°C
$T_{j\ max}$	Operating Junction Temperature	-65 to +125	°C

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics

Symbol	Parameter	Value	Units
$R_{\theta JA}$	Thermal Resistance Junction to Ambient*	340	°C/W
$R_{\theta JL}$	Thermal Resistance Junction to Lead	150	°C/W

*FR-4 or FR-5 = 3.5 x 1.5 inches using minimum recommended Land Pads.

Electrical Characteristics

T_A = 25°C unless otherwise noted

Symbol	Parameter		Value	Units
V_F	Forward Voltage	@ I_F = 100 mA,	300	mV
		I_F = 100 mA, T_A = 100 °C	220	mV
		I_F = 500 mA,	385	mV
		I_F = 500 mA, T_A = 100 °C	330	mV
I_R	Reverse Current	@ V_R = 10 V,	75	µA
		V_R = 10 V, T_A = 100 °C	5.0	mA
		V_R = 20 V,	250	µA
		V_R = 20 V, T_A = 100 °C	8.0	mA

Typical Characteristics

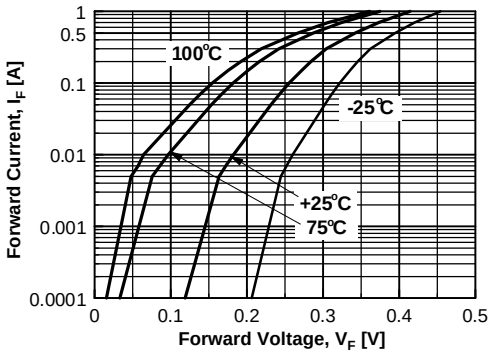

Figure 1. Forward Voltage Characteristics

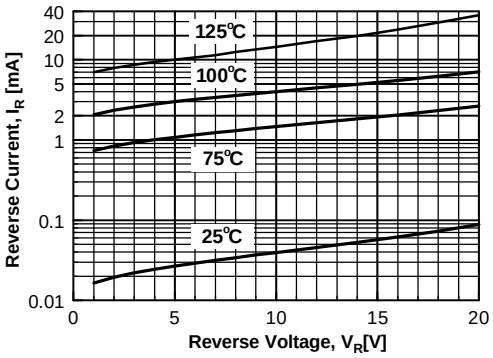

Figure 2. Reverse Current vs Reverse Voltage

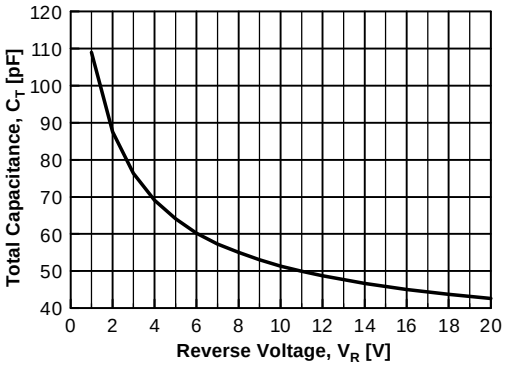

Figure 3. Total Capacitance

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 ®	OPTOLOGIC™	SMART START™	VCX™
Bottomless™	FASTr™	OPTOPLANAR™	STAR*POWER™	
CoolFET™	FRFET™	PACMAN™	Stealth™	
CROSSVOLT™	GlobalOptoisolator™	POP™	SuperSOT™-3	
DenseTrench™	GTO™	Power247™	SuperSOT™-6	
DOME™	HiSeC™	PowerTrench®	SuperSOT™-8	
EcoSPARK™	ISOPLANAR™	QFET™	SyncFET™	
E^2CMOS™	LittleFET™	QS™	TinyLogic™	
EnSigna™	MicroFET™	QT Optoelectronics™	TruTranslation™	
FACT™	MicroPak™	Quiet Series™	UHC™	
FACT Quiet Series™	MICROWIRE™	SILENT SWITCHER®	UltraFET®	

STAR*POWER is used under license

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.

MBR0520L

0.5 Ampere Schottky Power Rectifiers

Contents

BUY

Datasheet
Download this datasheet

e-mail this datasheet

This page
Print version

Related Links

- Request samples
- How to order products
- Product Change Notices (PCNs)
- Support
- Sales support
- Quality and reliability
- Design center

Features

- 0.5 Ampere, low forward voltage less than 385mv
- 400 milliwatt Power Dissipation package
- Compact surface mount with same footprint as mini-melf

back to top

Product status/pricing/packaging

BUY

Product	Product status	Pb-free Status	Pricing*	Package type	Leads	Packing method	Package Marking Convention**
MBR0520L	Full Production	Full Production	$0.056	SOD-123	2	TAPE REEL	Line 1: &**Y** (Binary Calendar Year Coding) Line 2: B2
MBR0520L_F065	Full Production	Full Production	N/A	SOD-123	2	TAPE REEL	Line 1: &**Y** (Binary Calendar Year Coding) Line 2: B2
MBR0520L_NF065	Full Production	Full Production	N/A	SOD-123	2	TAPE REEL	Line 1: &**Y** (Binary Calendar Year Coding) Line 2: B2
MBR0520L_NL	Full Production		N/A	SOD-123	2	TAPE REEL	Line 1: &**Y** (Binary Calendar Year Coding)

		Full Production					Line 2: B2

* Fairchild 1,000 piece Budgetary Pricing
** A sample button will appear if the part is available through Fairchild's on-line samples program. If there is no sample button, please contact a Fairchild distributor to obtain samples

Indicates product with Pb-free second-level interconnect. For more information click here.

Package marking information for product MBR0520L is available. Click here for more information .

back to top

Models

Package & leads	Condition	Temperature range	Software version	Revision date
PSPICE				
SOD-123-2	Electrical	25°C	6.0	Sep 2, 2002

back to top

Application notes

AB-18: Using the RC5051 for a Katmai Motherboard Design (41 K) Jul 27, 2007

back to top

Qualification Support

Click on a product for detailed qualification data

Product
MBR0520L
MBR0520L_F065
MBR0520L_NF065
MBR0520L_NL

back to top