FAIRCHILD SEMICONDUCTOR TM

FMKA140

SCHOTTKY POWER RECTIFIER

General Description:

Schottky Barrier Diodes make use of the rectification effect of a metal to silicon barrier. They are ideally suited for high frequency rectification in switching regulators & converters. This device offers a low forward voltage performance in a power surface mount package in applications where size and weight are critical.

Features:

- Compact surface mount package with J-bend leads (SMA).
- 1.2 Watt Power Dissipation package.
- 1.0 Ampere, forward voltage less than 600 mv

Ordering:

- 13 inch reel (330 mm); 12 mm Tape; 5,000 units per reel.

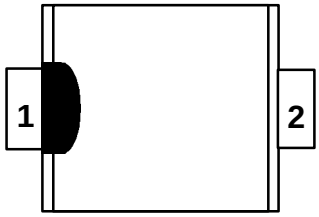
Absolute Maximum Ratings* TA = 25°C unless otherwise noted

Parameter	Value	Units
Storage Temperature	-65 to +150	°C
Maximum Junction Temperature	-65 to +125	°C
Repetitive Peak Reverse Voltage (V_{RRM})	40	V
Average Rectified Forward Current (T_L = 120°C)	1.0	A
Surge Non Repetitive Forward Current	30	A
(Half wave, single phase, 60 Hz) Junction to Case for Thermal Resistance ($R_{ØJL}$)	9.6	°C/W

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

SMA Package
(DO-214AC)

Top Mark: A140

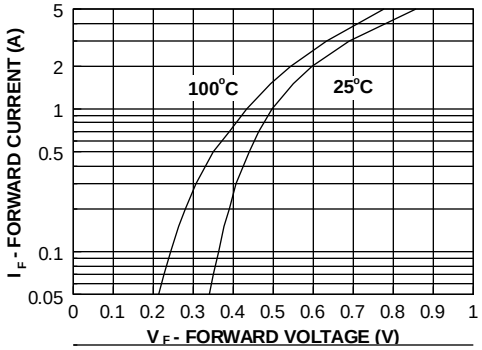


Actual Size

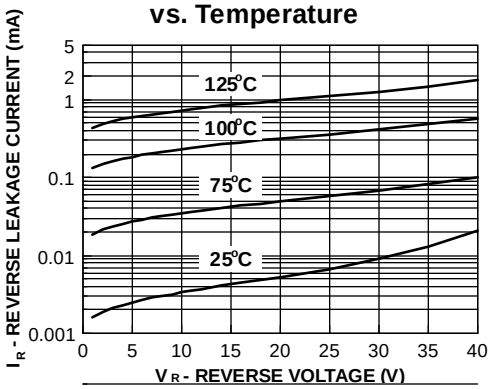
Electrical Characteristics TA = 25°C unless otherwise noted

SYM	CHARACTERISTICS	MIN	MAX	UNITS	TEST CONDITIONS
I_R	Reverse Leakage Current PW 300 us, ≤2% Duty Cycle		1.0 10	mA mA	V_R = 40 V; Tj = 25°C V_R = 40 V; Tj = 100°C
V_F	Forward Voltage PW 300 us, ≤2% Duty Cycle		600	mV	I_F = 1.0 A; Tj = 25°C

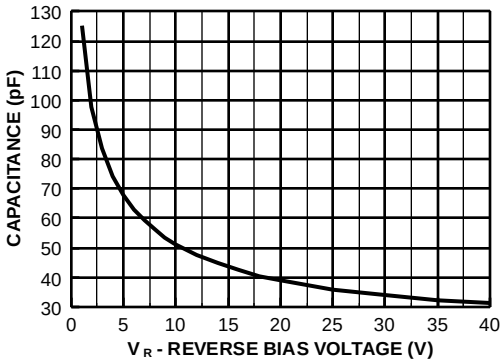
Forward Voltage vs. Temperature



Reverse Leakage Current vs. Temperature



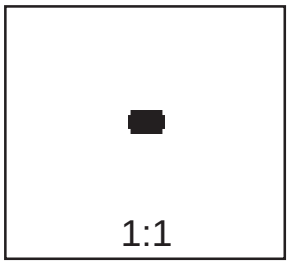
Capacitance vs. Reverse Bias Voltage



SMA/DO-214AC Package Dimensions

FAIRCHILD SEMICONDUCTOR™

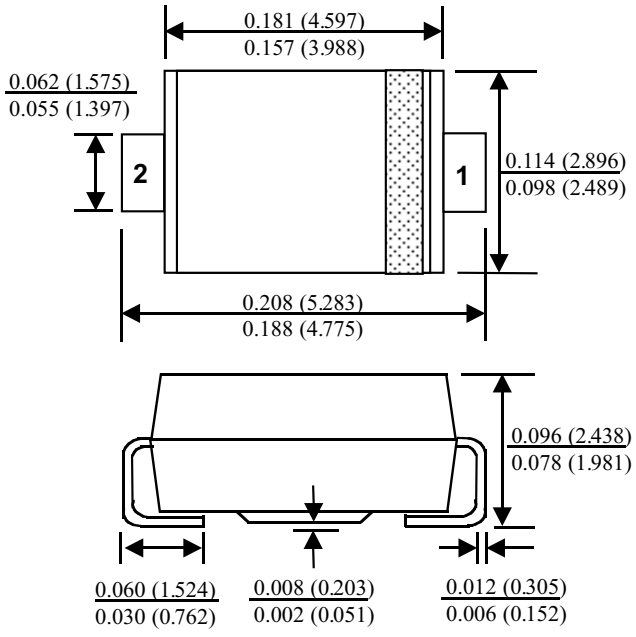
SMA/DO-214AC (FS PKG Code P5)

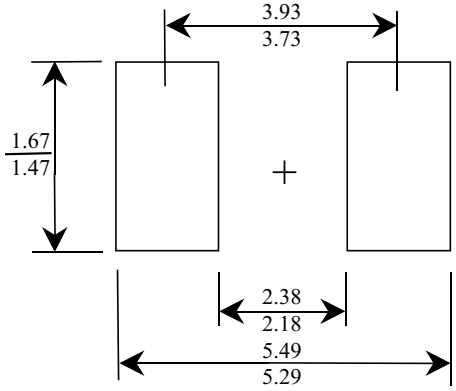


Scale 1:1 on letter size paper

Dimensions shown below are in:
inches [millimeters]

Part Weight per unit (gram): 0.064





Minimum Recommended
Land Pattern

August 1999, Rev. A

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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.
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