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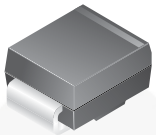
Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.

February 2015

MBRS140
Schottky Rectifier

Features

- Compact Surface Mount with J-bend Leads (SMB)
- 1.5 W Power Dissipation Package
- 1.0 A, Forward Voltage less than 600 mV



SMB (DO-214AA)
Color Band Denote Cathode

Ordering Information

Part Number	Top Mark	Package	Packing Method
MBRS140	B140	DO-214AA (SMB)	Tape and Reel

Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Value	Unit
V_{RRM}	Maximum Repetitive Reverse Voltage	40	V
$I_{F(AV)}$	Average Rectified Forward Current at T_L = 120°C	1.0	A
I_{FSM}	Non-Repetitive Peak Forward Surge Current (8.3 ms, Single Half-Sine-Wave)	40	A
T_{STG}	Storage Temperature Range	-65 to +150	°C
T_J	Operating Junction Temperature	-65 to +125	°C

Thermal Characteristics

Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Value	Unit
$R_{\theta JL}$	Thermal Resistance, Junction-to-Lead	12	°C/W

Electrical Characteristics

Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Conditions	Min.	Max.	Unit
V_F	Forward Voltage	I_F = 1.0 A		600	mV
I_R	Reverse Current	V_R = 40 V		1.0	mA
		V_R = 40 V, T_A = 100°C		10	

Typical Performance Characteristics

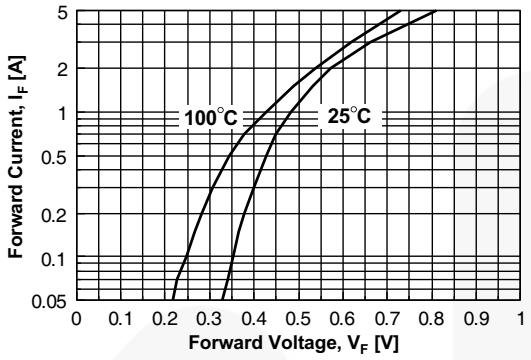


Figure 1. Forward Voltage Characteristics

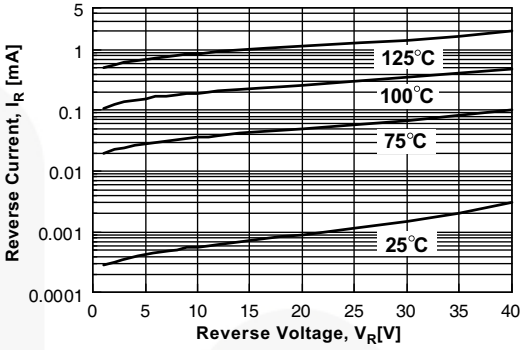


Figure 2. Reverse Current vs. Reverse Voltage

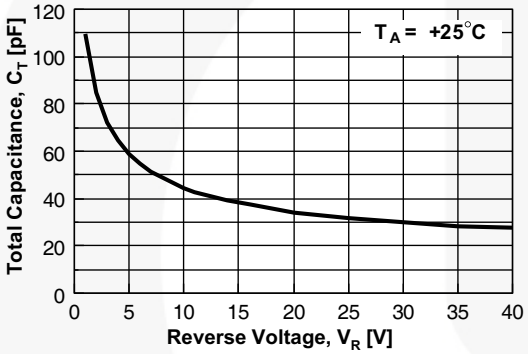
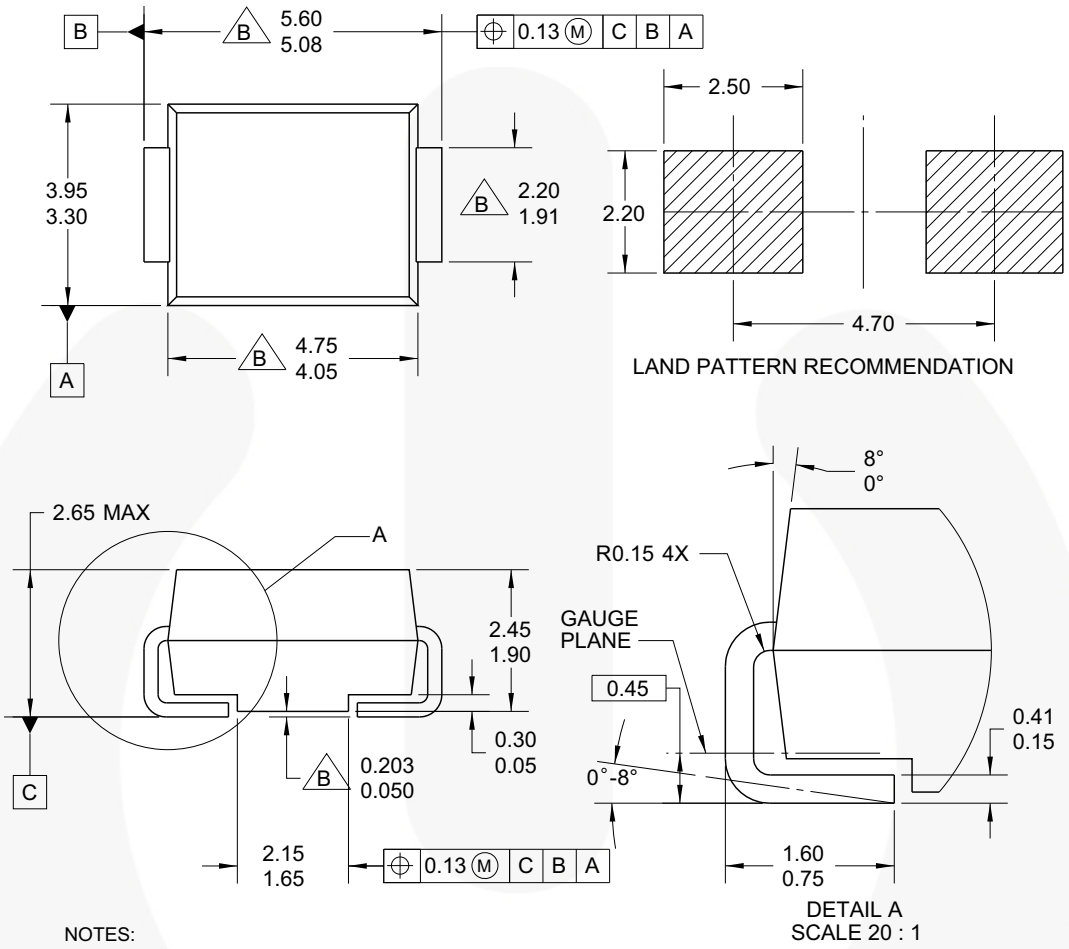


Figure 3. Total Capacitance

Physical Dimension



NOTES:

A. EXCEPT WHERE NOTED CONFORMS TO JEDEC DO214 VARIATION AA.
B DOES NOT COMPLY JEDEC STD. VALUE.
C. ALL DIMENSIONS ARE IN MILLIMETERS.
D. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR PROTRUSIONS.
E. DIMENSION AND TOLERANCE AS PER ASME Y14.5-1994.
F. LAND PATTERN STD. DIOM5336X240M.
G. DRAWING FILE NAME: DO214AAREV1

Figure 4. 2-LEAD, SMB, JEDEC DO-214, VARIATION AA

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Advance Information	Formative / In Design	Datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	Datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
Obsolete	Not In Production	Datasheet contains specifications on a product that is discontinued by Fairchild Semiconductor. The datasheet is for reference information only.

Rev. I73

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