FAIRCHILD
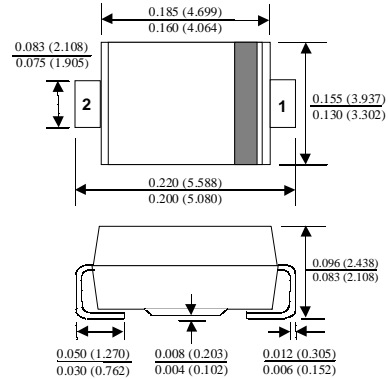SEMICONDUCTOR ™

Discrete POWER & Signal Technologies

S2A - S2M

Features

- Easy pick and place.

- Low forward Voltage Drop.

- High Current Capability.

- High Surge Current Capability.

SMB/DO-214AA
COLOR BAND DENOTES CATHODE

0.185 (4.699) / 0.160 (4.064)
0.083 (2.108) / 0.075 (1.905)
0.155 (3.937) / 0.130 (3.302)
0.220 (5.588) / 0.200 (5.080)
0.096 (2.438) / 0.083 (2.108)
0.050 (1.270) / 0.030 (0.762)
0.008 (0.203) / 0.004 (0.102)
0.012 (0.305) / 0.006 (0.152)

1.5 Ampere Glass Passivated Rectifiers

Absolute Maximum Ratings* $T_A = 25°C$ unless otherwise noted

Symbol	Parameter	Value	Units
I_O	Average Rectified Current @ $T_A = 100°C$	1.5	A
$i_{f(surge)}$	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	50	A
P_D	Total Device Dissipation Derate above 25°C	2.35 18.8	W mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to Case **	16	°C/W
T_{stg}	Storage Temperature Range	-65 to +150	°C
T_J	Operating Junction Temperature	-65 to +150	°C

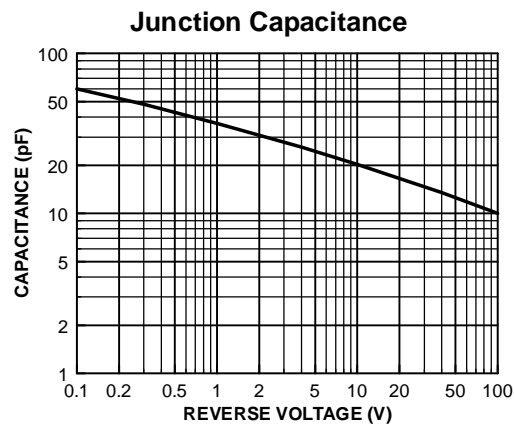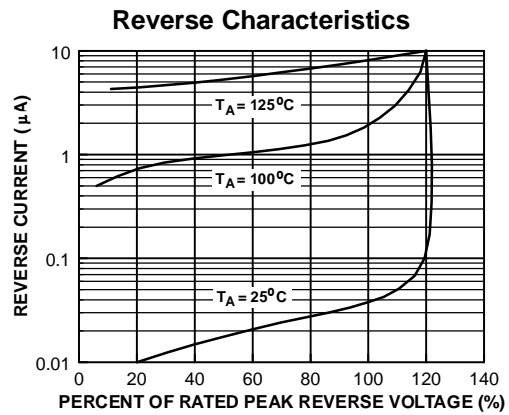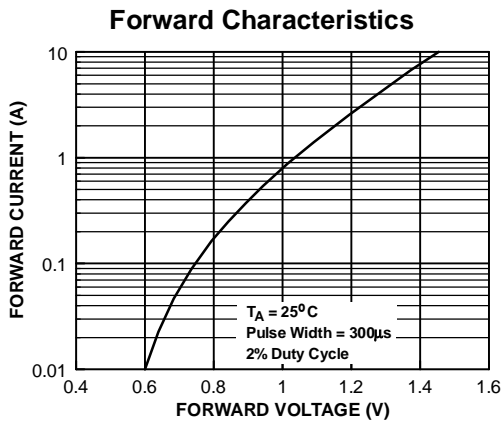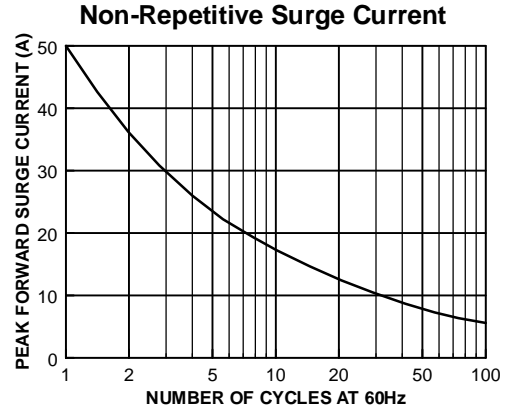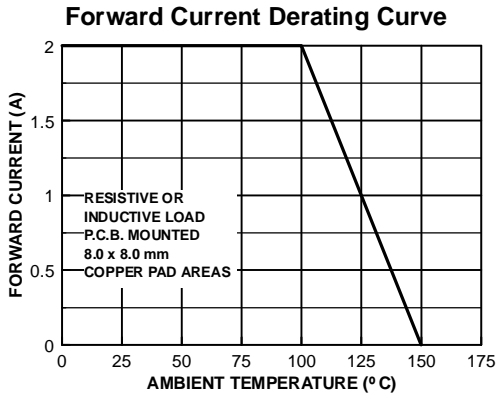*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

**Device mounted on FR-4 PCB 0.013 mm.

Electrical Characteristics $T_A = 25°C$ unless otherwise noted

Parameter	Device							Units
	2A	2B	2D	2G	2J	2K	2M	
Peak Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
DC Reverse Voltage (Rated V_R)	50	100	200	400	600	800	1000	V
Maximum Reverse Current @ rated V_R $T_A = 25°C$ $T_A = 125°C$	1.0 125							μA μA
Maximum Forward Voltage @ 1.5 A	1.15							V
Maximum Reverse Recovery Time $I_F = 0.5\ A,\ I_R = 1.0\ A,\ I_{rr} = 0.25\ A$	2.0							μS
Typical Junction Capacitance $V_R = 4.0\ V,\ f = 1.0\ MHz$	30							pF

Typical Characteristics

Forward Current Derating Curve

FORWARD CURRENT (A) vs AMBIENT TEMPERATURE (º C)

RESISTIVE OR
INDUCTIVE LOAD
P.C.B. MOUNTED
8.0 x 8.0 mm
COPPER PAD AREAS

Non-Repetitive Surge Current

PEAK FORWARD SURGE CURRENT (A) vs NUMBER OF CYCLES AT 60Hz

Forward Characteristics

FORWARD CURRENT (A) vs FORWARD VOLTAGE (V)

$T_A = 25^0C$
Pulse Width = 300μs
2% Duty Cycle

Reverse Characteristics

REVERSE CURRENT (μA) vs PERCENT OF RATED PEAK REVERSE VOLTAGE (%)

$T_A = 125^0C$
$T_A = 100^0C$
$T_A = 25^0C$

Junction Capacitance

CAPACITANCE (pF) vs REVERSE VOLTAGE (V)

TRADEMARKS

DISCLAIMER

LIFE SUPPORT POLICY

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.