FAIRCHILD SEMICONDUCTOR TM

MBRS340

SCHOTTKY POWER RECTIFIER

DISCRETE POWER AND SIGNAL TECHNOLOGIES

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 (SMC).
- 3.0 Watt Power Dissipation package.
- 3.0 Ampere, forward voltage less than 525 mv

Ordering:

- 13 inch reel (330 mm); 16 mm Tape; 3,000 units per reel.

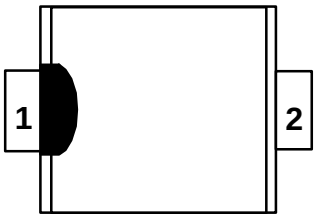
Absolute Maximum Ratings* TA = 25°C unless otherwise noted

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 = 100°C)	3.0	A
(T_L = 90°C)	4.0	A
Surge Non Repetitive Forward Current (Half wave, single phase, 60 Hz)	80	A
Junction to Case for Thermal Resistance ($R_{\Theta JL}$)	11	°C/W

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

SMC Package
(DO-214AB)

Top Mark: B34

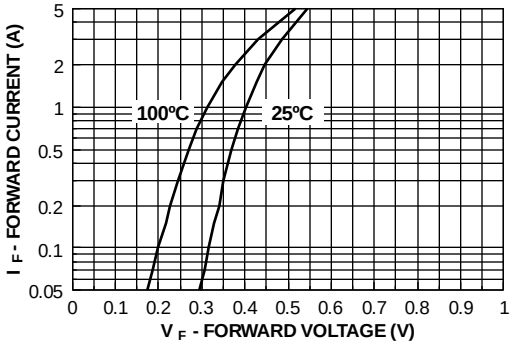


Actual Size

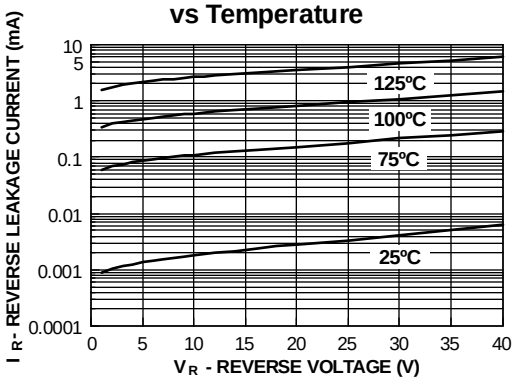
Electrical Characteristics TA = 25°C unless otherwise noted

SYM	CHARACTERISTICS	MIN	MAX	UNITS	TEST CONDITIONS
I_R	Reverse Leakage Current		2.0	mA	V_R = 40 V; Tj = 25°C
	PW 300 us, ≤2% Duty Cycle		20	mA	V_R = 40 V; Tj = 100°C
V_F	Forward Voltage		525	mV	I_F = 3.0 A; Tj = 25°C
	PW 300 us, ≤2% Duty Cycle				

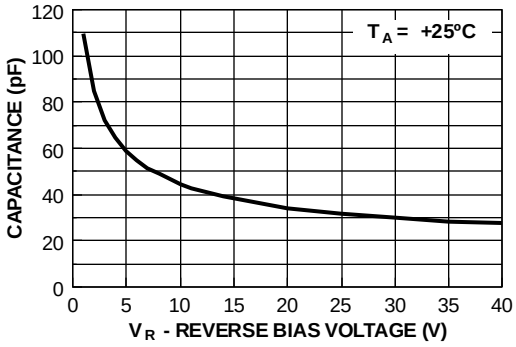
Forward Voltage vs Temperature



Reverse Leakage Current vs Temperature



Capacitance vs. Reverse Bias Voltage



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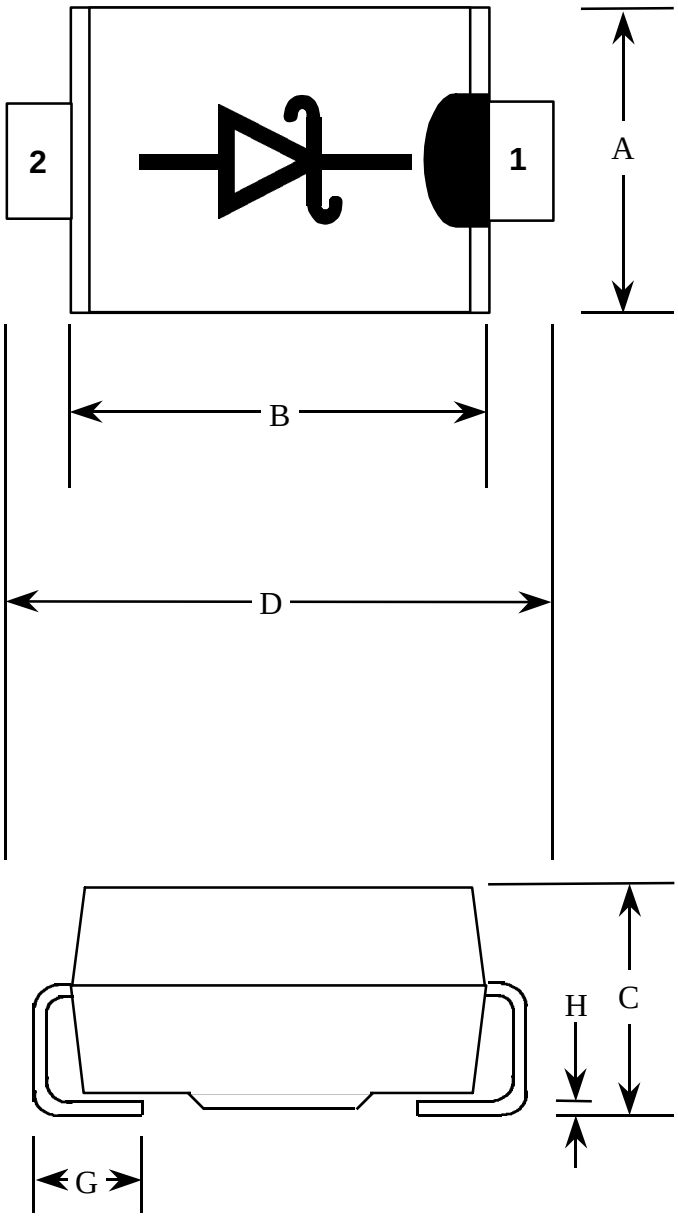

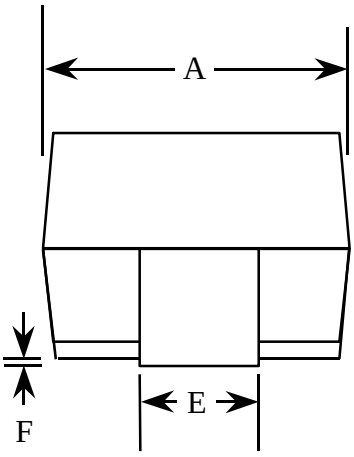

Actual Size DIM	MIN (mils)	MAX (mils)	MIN (mm)	MAX (mm)
A	220	245	5.59	6.22
B	260	280	6.60	7.11
C	79	103	2.00	2.62
D	305	320	7.75	8.13
E	115	125	2.92	3.18
F	4	8	0.10	3.18
G	30	60	0.76	1.52
H	6	12	0.15	0.31

SMC PACKAGE

PACKAGE CODE = (MC)
Fairchild Semiconductor's Criteria