

## 5 Ampere Surface Mount Schottky Barrier Rectifier

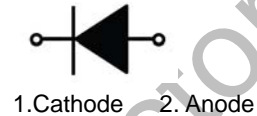


## SS52F-SS520F

## Features:

- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- Fast switching for high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters

SMAF



## Absolute Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

| Parameter                                                                                                       | Symbols         | SS52F      | SS54F | SS56F | SS58F | SS510F | SS512F | SS515F | SS520F | Units |
|-----------------------------------------------------------------------------------------------------------------|-----------------|------------|-------|-------|-------|--------|--------|--------|--------|-------|
| Maximum Repetitive Peak Reverse Voltage                                                                         | $V_{RRM}$       | 20         | 40    | 60    | 80    | 100    | 120    | 150    | 200    | V     |
| Maximum RMS voltage                                                                                             | $V_{RMS}$       | 14         | 28    | 42    | 56    | 70     | 84     | 105    | 140    | V     |
| Maximum DC Blocking Voltage                                                                                     | $V_{DC}$        | 20         | 40    | 60    | 80    | 100    | 120    | 150    | 200    | V     |
| Maximum Average Forward Rectified Current                                                                       | $I_{F(AV)}$     | 5.0        |       |       |       |        |        |        |        | A     |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)               | $I_{FSM}$       | 120        |       |       |       |        |        |        |        | A     |
| Max Instantaneous Forward Voltage at 5 A                                                                        | $V_F$           | 0.55       | 0.70  | 0.85  | 0.95  |        |        |        | V      |       |
| Maximum DC Reverse Current at Rated DC Reverse Voltage<br>$T_a = 25^\circ\text{C}$<br>$T_a = 100^\circ\text{C}$ | $I_R$           | 1.0        |       |       |       | 50     |        |        |        | mA    |
| Typical Junction Capacitance <sup>(1)</sup>                                                                     | $C_j$           | 500        | 300   |       |       |        |        |        | pF     |       |
| Typical Thermal Resistance <sup>(2)</sup>                                                                       | $R_{\theta JA}$ | 60         |       |       |       |        |        |        |        | °C/W  |
| Operating Junction Temperature Range                                                                            | $T_j$           | -55 ~ +125 |       |       |       |        |        |        |        | °C    |
| Storage Temperature Range                                                                                       | $T_{stg}$       | -55 ~ +150 |       |       |       |        |        |        |        | °C    |

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Typical Characteristics

Fig.1 Forward Current Derating Curve

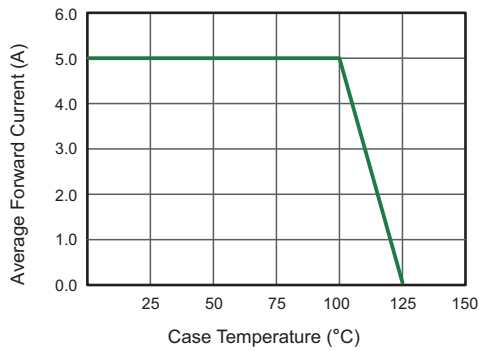


Fig.2 Typical Reverse Characteristics

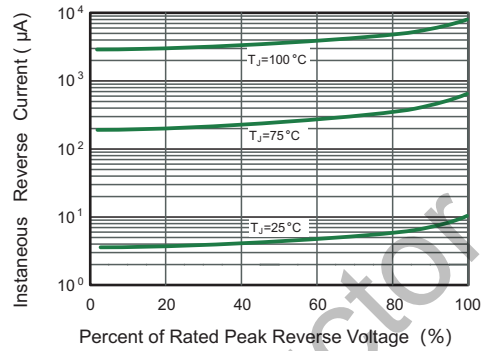


Fig.3 Typical Forward Characteristic

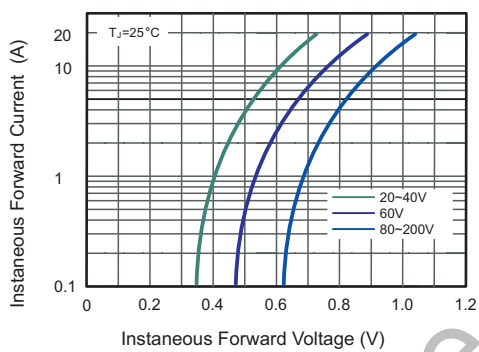


Fig.4 Typical Junction Capacitance

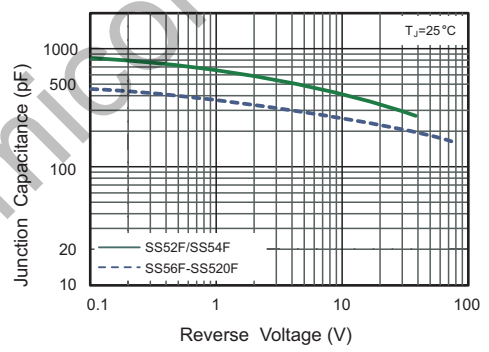


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

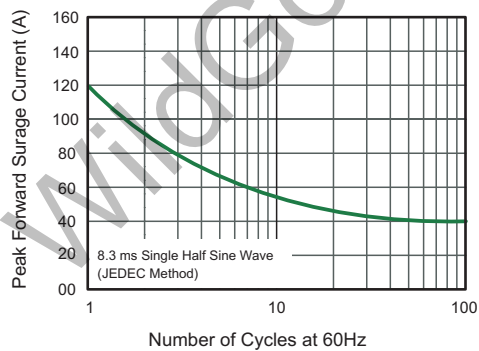
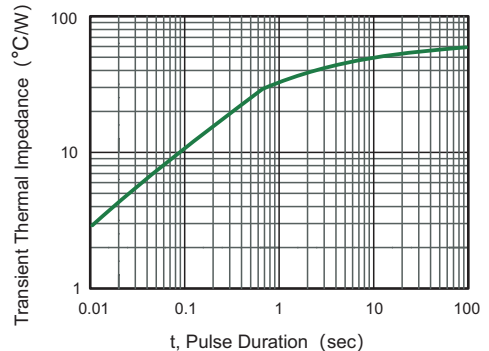


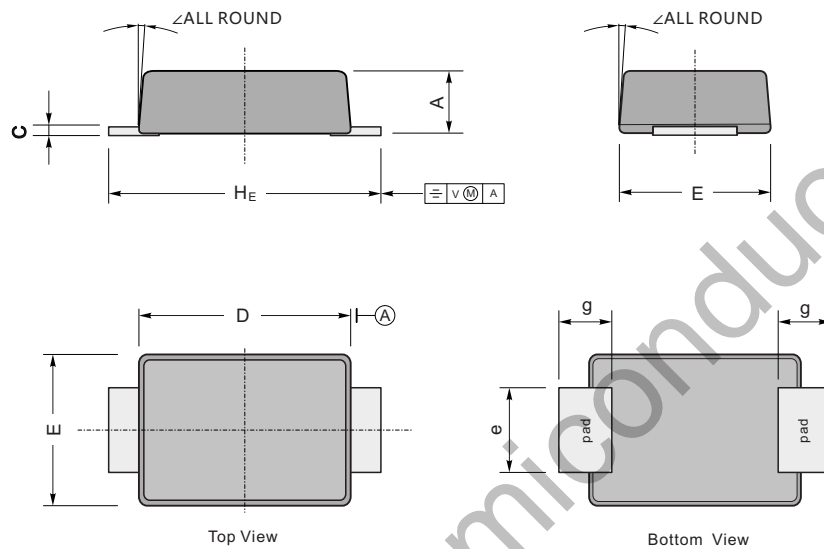
Fig.6 Typical Transient Thermal Impedance



**Package Dimension**

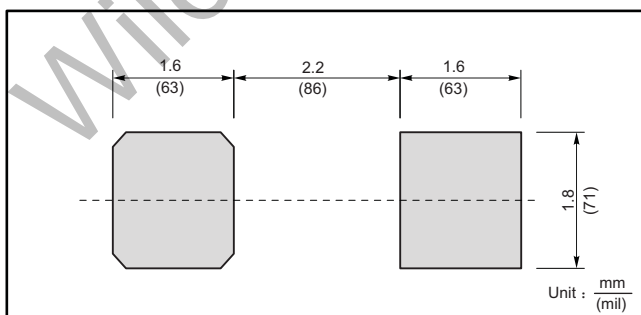
**SMAF**

Unit: mm



| UNIT |     | A   | C    | D   | E   | e   | g   | H <sub>E</sub> | ∠  |
|------|-----|-----|------|-----|-----|-----|-----|----------------|----|
| mm   | max | 1.2 | 0.20 | 3.7 | 2.7 | 1.6 | 1.2 | 4.9            | 7° |
|      | min | 0.9 | 0.12 | 3.3 | 2.4 | 1.3 | 0.8 | 4.4            |    |
| mil  | max | 47  | 7.9  | 146 | 106 | 63  | 47  | 193            |    |
|      | min | 35  | 4.7  | 130 | 94  | 51  | 31  | 173            |    |

**The recommended mounting pad size**



**Marking**

| Type number | Marking code |
|-------------|--------------|
| SS52F       | SS52         |
| SS54F       | SS54         |
| SS56F       | SS56         |
| SS58F       | SS58         |
| SS510F      | SS510        |
| SS512F      | SS512        |
| SS515F      | SS515        |
| SS520F      | SS520        |

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Schottky Diodes & Rectifiers](#) category:*

*Click to view products by [Wild Goose](#) manufacturer:*

Other Similar products are found below :

[MA4E2039](#) [MMBD301M3T5G](#) [RB160M-50TR](#) [D83C](#) [BAS16E6433HTMA1](#) [BAS 3010S-02LRH E6327](#) [BAT 54-02LRH E6327](#)  
[NRVBAF360T3G](#) [NSR05F40QNXT5G](#) [NTE555](#) [JANS1N6640](#) [SS3003CH-TL-E](#) [GA01SHT18](#) [CRS10I30A\(TE85L,QM](#) [MBRA140TRPBF](#)  
[MBRB30H30CT-1G](#) [BAT 15-04R E6152](#) [JANTX1N5712-1](#) [DMJ3940-000](#) [SB007-03C-TB-E](#) [NRVBB20100CTT4G](#) [NRVBM120LT1G](#)  
[NTSB30U100CT-1G](#) [CRG04\(T5L,TEMQ\)](#) [ACDBA1100LR-HF](#) [ACDBA1200-HF](#) [ACDBA240-HF](#) [ACDBA3100-HF](#) [CDBQC0530L-HF](#)  
[ACDBA260LR-HF](#) [ACDBA1100-HF](#) [10BQ015-M3/5BT](#) [NRVBM120ET1G](#) [SDM8M100P5-13](#) [VSSB410S-M3/5BT](#) [1N5819T-G](#)  
[PDS1040Q-13](#) [B160BQ-13-F](#) [SDM05U20CSP-7](#) [BAS 70-07 E6433](#) [B140S1F-7](#) [HSM560Je3/TR13](#) [DDB2265-000](#) [ZHCS506QTA](#)  
[HSM190Je3/TR13](#) [B330AF-13](#) [ACDBUC0230-HF](#) [SDM1U100S1F-7](#) [MBR10200CTF-G1](#) [CDLL5712](#)