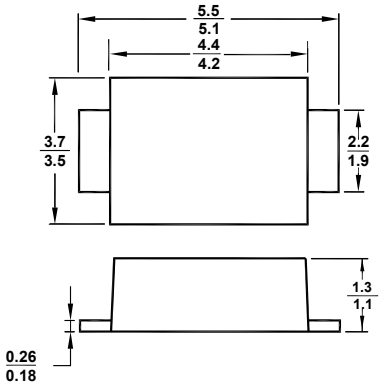
SDS52BF THRU SDS520BF

Surface Mount Schottky Barrier Rectifier

Reverse Voltage - 20 to 200 V
Forward Current - 5 A

SMBF



All Dimensions in mm

Features

- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

Maximum Ratings and Electrical Characteristics

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

Parameter	Symbols	SDS52BF	SDS54BF	SDS56BF	SDS58BF	SDS510BF	SDS512BF	SDS515BF	SDS520BF	Unit
	Marking	S52B	S54B	S56B	S58B	S510B	S512B	S515B	S520B	-
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								A
Peak Forward Surge Current 8.3 ms Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150								A
Maximum Instantaneous Forward Voltage at 5 A	V_F	0.55		0.7		0.85				V
Maximum DC Reverse Current at T_a = 25℃ Rated DC Blocking Voltage T_a = 100℃	I_R	1 50								mA
Typical Junction Capacitance [1]	C_j	800		500						pF
Typical Thermal Resistance [2]	$R_{\theta JA}$	45								℃/W
Operating Junction Temperature Range	T_j	- 55 to + 125								℃
Storage Temperature Range	T_{stg}	- 55 to + 150								℃

[1] Measured at 1MHz and applied reverse voltage of 4 V D.C.

[2] P.C.B. mounted with 0.5 X 0.5" (12.7 X 12.7 mm) copper pad areas.

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Fig.1 Forward Current Derating Curve

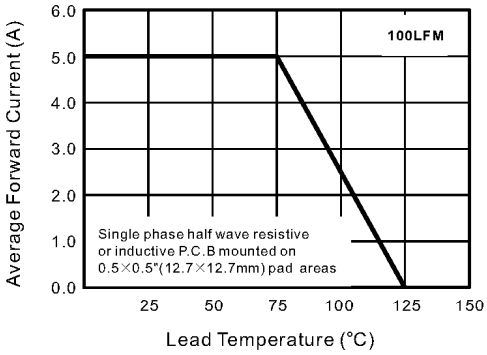

Fig.2 Typical Reverse Characteristics

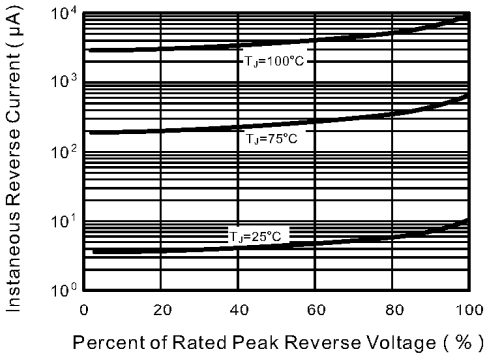

Fig.3 Typical Forward Characteristic

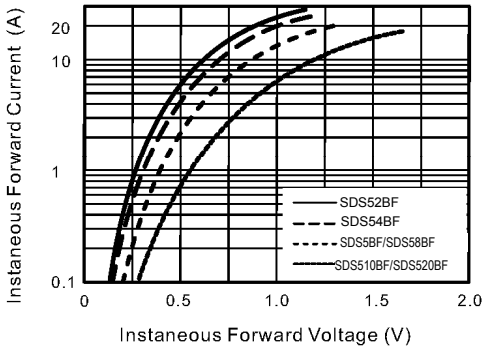

Fig.4 Typical Junction Capacitance

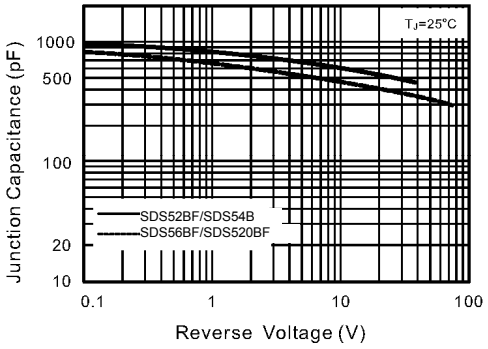

Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

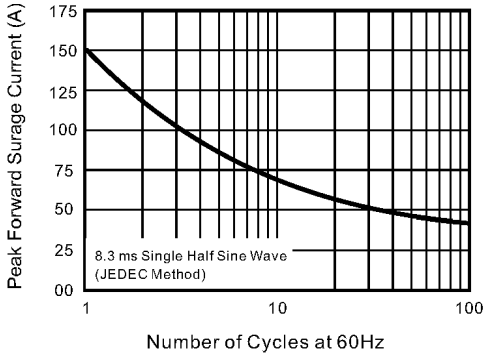

Fig.6- Typical Transient Thermal Impedance