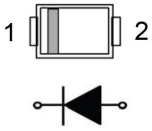
CH52BF-CH510BF
5Ampere Surface Mount Schottky Barrier Rectifier

RoHS COMPLIANT

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

SMBF



1.Cathode 2. Anode

Absolute Maximum Ratings* (TA=25℃ Unless otherwise noted)

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	CH52BF	CH54BF	CH56BF	CH58BF	CH510BF	CH512BF	CH515BF	CH520BF	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 5A	V_F	0.55		0.70	0.85			0.95		V
Maximum DC Reverse Current T_a = 25°C at Rated DC Reverse Voltage T_a =100°C	I_R	0.5 5			0.5 5			0.5 5		mA
Typical Junction Capacitance (1)	C_j	500		300						pF
Typical Thermal Resistance (2)	$R_{\theta JA}$	45								°C/W
Operating Junction Temperature Range	T_j	-55 ~ +125			-55 ~ +150					°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.

Fig.1 Forward Current Derating Curve

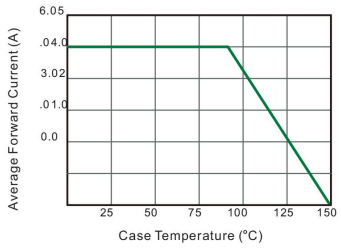


Fig.2 Typical Reverse Characteristics

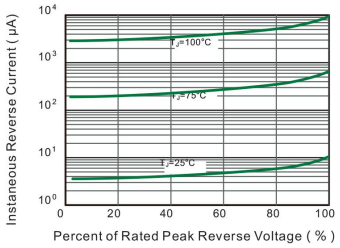


Fig.3 Typical Forward Characteristic

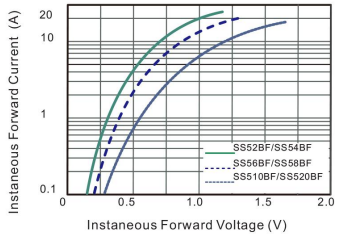


Fig.4 Typical Junction Capacitance

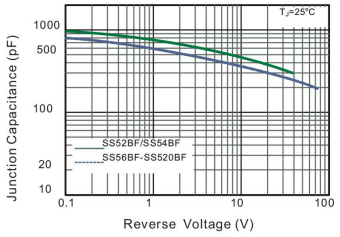


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

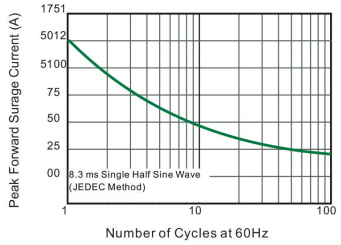
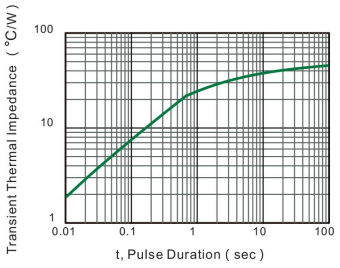
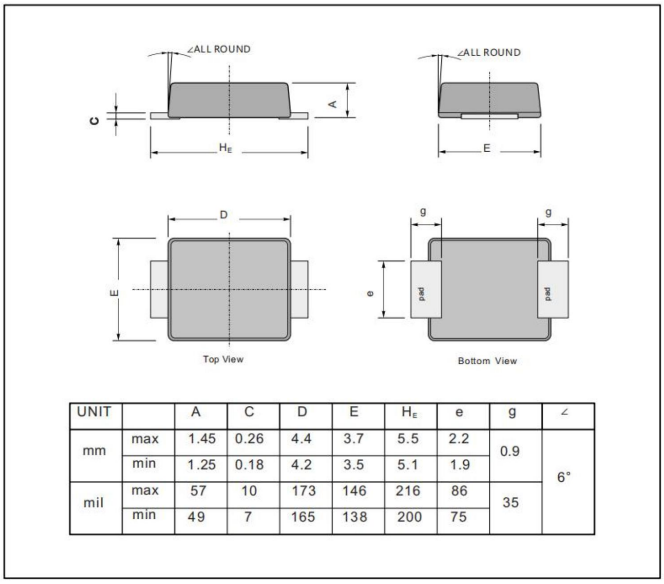


Fig.6- Typical Transient Thermal Impedance



Package Dimension

SMBF



UNIT		A	C	D	E	H_E	e	g	∠
mm	max	1.45	0.26	4.4	3.7	5.5	2.2	0.9	6°
	min	1.25	0.18	4.2	3.5	5.1	1.9		
mil	max	57	10	173	146	216	86	35	
	min	49	7	165	138	200	75		

The recommended mounting pad size