

SMAF



#### 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



1. Cathode 2. Anode

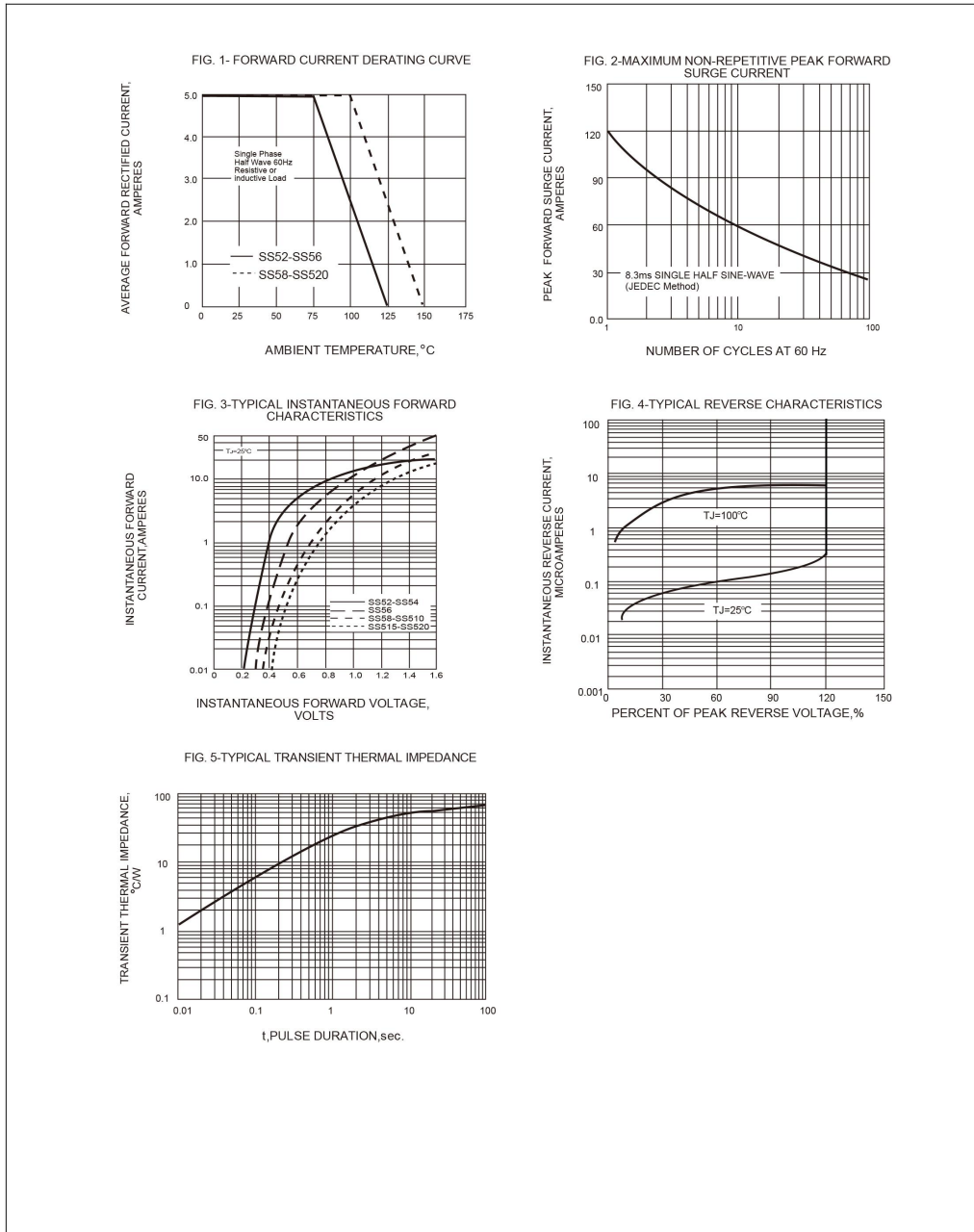
#### Absolute Maximum Ratings\* (TA=25°C Unless otherwise noted)

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	CH52F	CH54F	CH56F	CH58F	CH510F	CH512F	CH510F	CH520F	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	$V_F$	0.52	0.65	0.80				0.90	V	
Maximum DC Reverse Current at Rated DC Reverse Voltage $T_a = 25^\circ\text{C}$ $T_a = 100^\circ\text{C}$	$I_R$	0.3 10		0.2 5			0.1 2		mA	
Typical Junction Capacitance <sup>(1)</sup>	$C_j$	500		300				pF		
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$	45								°C/W
Operating Junction Temperature Range	$T_j$	-55 ~ +125			-55 ~ +150					°C
Storage Temperature Range	$T_{stg}$	-55 ~ +150								°C

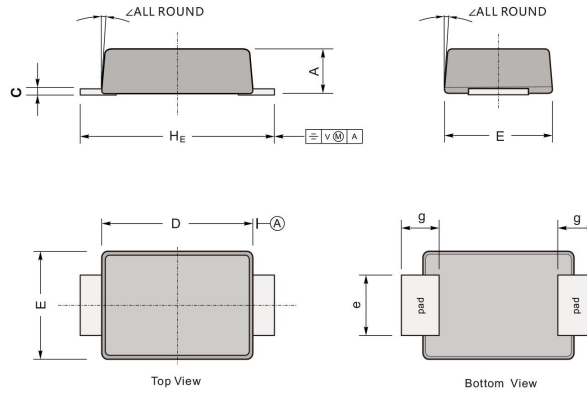
(1) Measured at 1 MHz and applied reverse voltage of 4 V.D.C

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

**Typical Characteristics**


**Package Dimension**
**SMAF**

Unit: mm



UNIT		A	C	D	E	e	g	$H_E$	$\angle$
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**
