DESCRIPTION

The SM320AF~SM3200AF is available in SMAF package

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
- Available in SMAF package

ORDERING INFORMATION

Package Type	Part Number
SMAF	SM320AF
	SM340AF
	SM360AF
	SM380AF
	SM3100AF
	SM3120AF
	SM3150AF
	SM3200AF
Note	3,000pcs/Reel
AiT provides all RoHS Compliant Products	

MECHANICAL DATA

Case: SMAF

Terminals: Solderable per MIL-STD-750, Method 2026

Approx. Weight:27mg 0.00086oz

PIN DESCRIPTION



1. CATHODE
2. ANODE

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	Symbol	SM 320AF	SM 340AF	SM 360AF	SM 380AF	SM 3100AF	SM 3120AF	SM 3150AF	SM 3200AF	Unit
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	$I_{F(AV)}$	3.0								A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	80				70				A
Max Instantaneous Forward Voltage at 3A	V_F	0.55		0.70		0.85		0.95		V
Maximum DC Reverse Current at Rated DC Reverse Voltage T_A=25°C T_A=100°C	I_R	0.5 10		0.3 5.0						mA
Typical Junction Capacitance NOTE1	C_J	250		160						pF
Typical Thermal Resistance NOTE2	$R_{\theta JA}$	40								°C/W
Operating Junction Temperature Range	T_J	-55 ~125								°C
Storage Temperature Range	T_{STG}	-55 ~150								°C

NOTE1: Measured at 1MHz and applied reverse voltage of 4V D.C.
NOTE2: P.C.B. mounted with 0.2 X 0.2" (5 X 5 mm) copper pad areas.

TYPICAL CHARACTERISTICS

Figure. 1 Forward Current Derating Curve

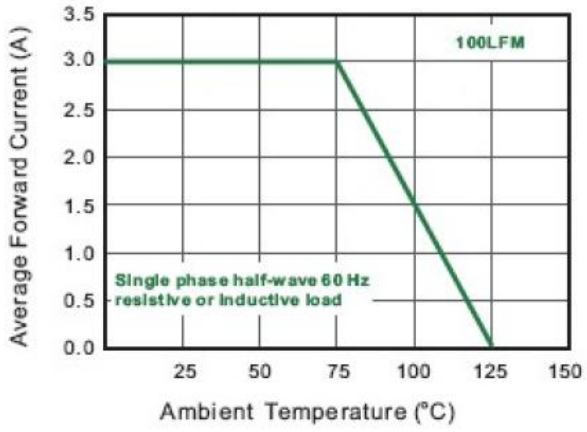


Figure. 2 Typical Reverse Characteristics

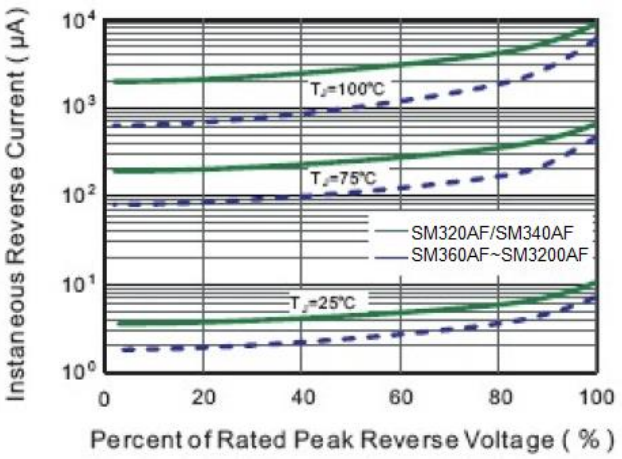


Figure. 3 Typical Forward Characteristic

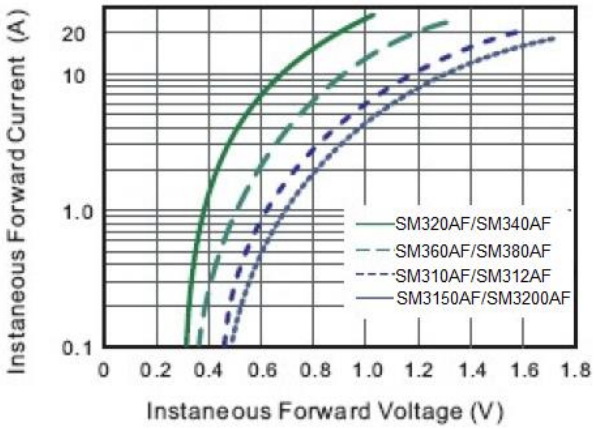


Figure. 4 Typical Junction Capacitance

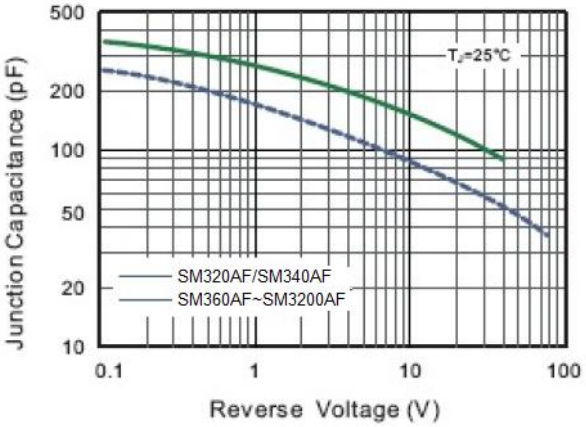


Figure. 5 Maximum Non-Repetitive Peak Forward Surge Current

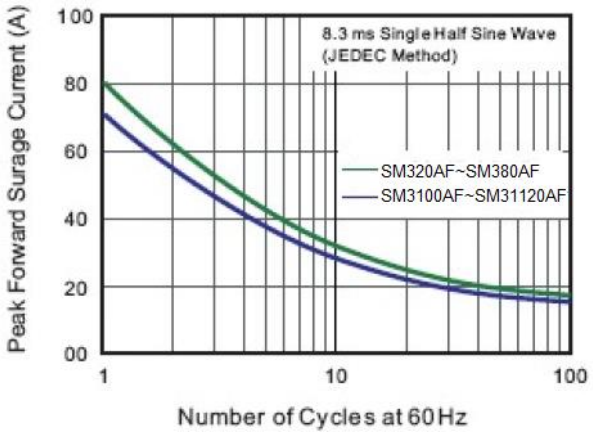
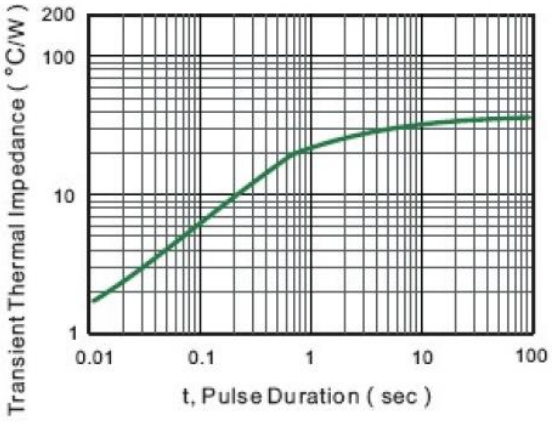


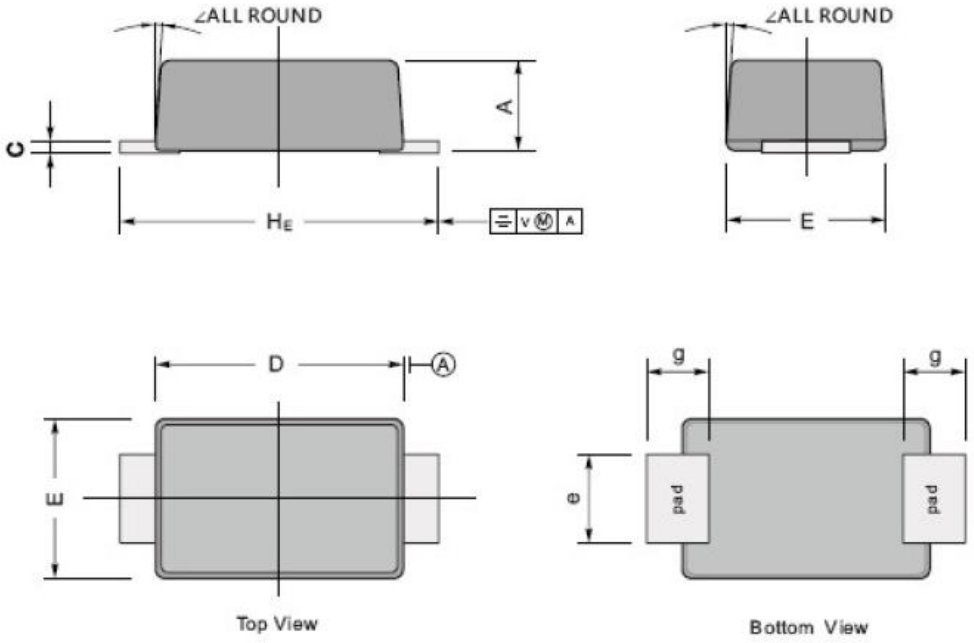
Figure. 6 Typical Transient Thermal Impedance



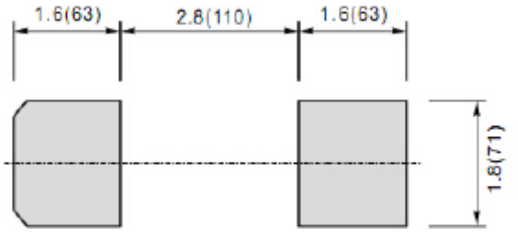
PACKAGE INFORMATION

Dimension in SMAF (Unit: mm)

Plastic surface mounted package; 2 leads



The recommended mounting pad size



Unit: mm(mil)

UNIT		A	B	C	E	e	g	H_E	∠
mm	Max	1.3	0.23	3.7	2.7	1.6	1.3	4.9	7°
	Min	1.1	0.18	3.3	2.4	1.3	1.0	4.4	
mil	Max	51	9.1	146	106	63	51	193	
	Min	43	7.1	130	94	51	39	173	

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