



DESCRIPTION

The SM520AF~SM5200AF are available in SMAF Package.

MECHANICAL DATA

- Case: SMAF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 27mg (0.00086oz)

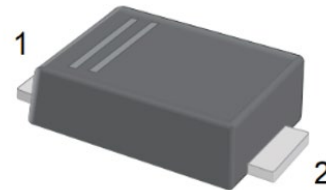
ORDERING INFORMATION

Package Type	Part Number
SMAF	SM520AF
	SM540AF
	SM560AF
	SM580AF
	SM5100AF
	SM5120AF
	SM5150AF
	SM5200AF
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

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

PIN DESCRIPTION



SMAF



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	SM	SM	SM	SM	SM	SM	Unit	
			520AF	540AF	560AF	580AF	5100AF	5120AF	5150AF		5200AF
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}	150							A	
Max Instantaneous Forward Voltage at 5A		V _F	0.45	0.55		0.70		0.85		V	
Maximum DC Reverse Current at Rated DC Reverse Voltage	T _A =25°C	I _R	1.0							mA	
	T _A =100°C		50								
Typical Junction Capacitance ⁽¹⁾		C _j	800			500			pF		
Typical Thermal Resistance ⁽²⁾		R _{θJA}	55							°C/W	
Operating Junction Temperature Range		T _J	-55 ~ +125							°C	
Storage Temperature Range		T _{STG}	-55 ~ +150							°C	

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

(2). P.C.B. mounted with 0.2 X 0.2" (5 X 5 mm) copper pad areas.



TYPICAL PERFORMANCE CHARACTERISTICS

Fig 1. Forward Current Derating Curve

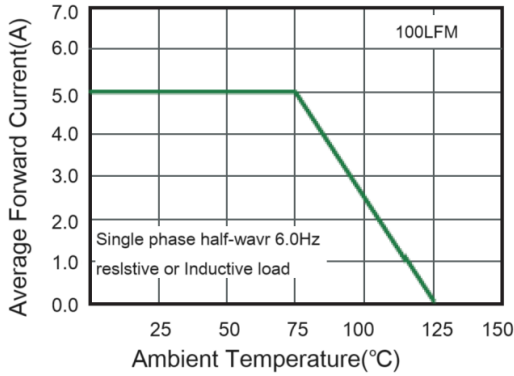


Fig 2. Typical Reverse Characteristics

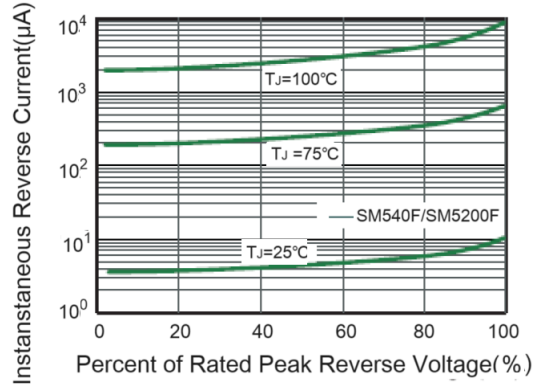


Fig 3. Typical Forward Characteristic

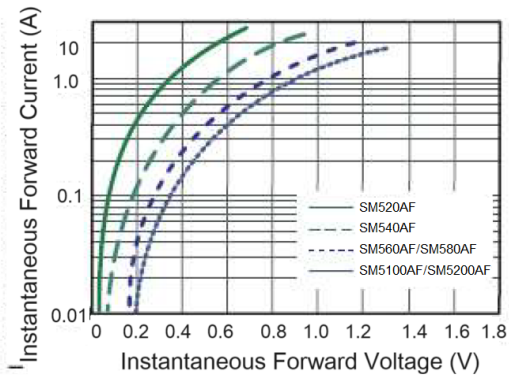


Fig 4. Typical Junction Capacitance

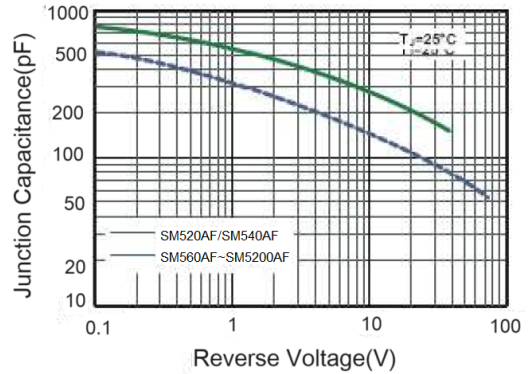


Fig5. Maximum Non-repetitive Peak Forward Surge Current

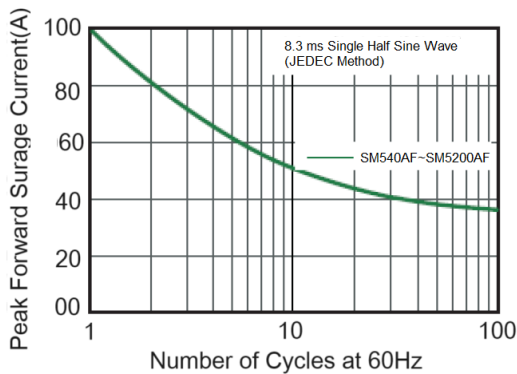
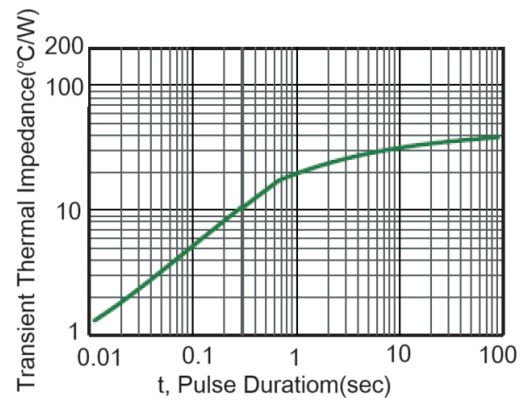


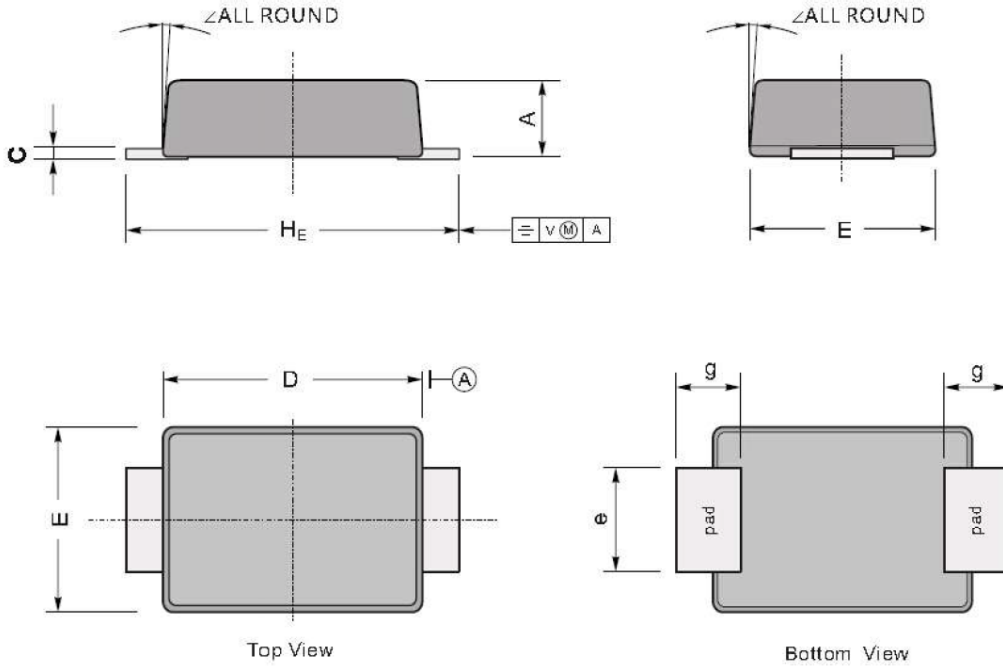
Fig 6. Typical Transient Thermal Impedance



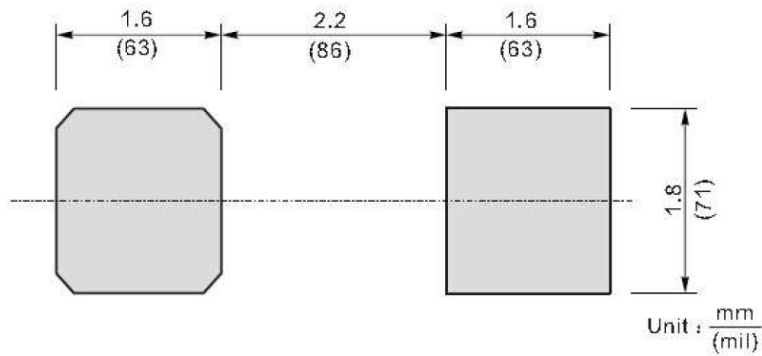


PACKAGE INFORMATION

Dimension in SMAF Package (Unit: mm)



The recommended mounting pad size



UNIT		A	C	D	E	e	g	H _E	\sphericalangle
mm	Max	1.100	0.2000	3.700	2.700	1.600	1.200	4.900	7°
	Min	0.900	0.120	3.300	2.400	1.300	0.800	4.400	
mil	Max	43	7.9	146	106	63	47	193	
	Min	35	4.7	130	94	51	31	173	



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