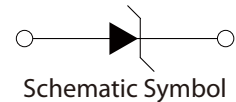


FEATURES

- | Low power loss high efficiency
- | Ideal for automated placement
- | Guard ring for over-voltage protection
- | High surge current capability



SMAF



Schematic Symbol

APPLICATIONS

- | Polarity: Color band denotes cathode end
- | Mounting Position: Any

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

ABSOLUTE MAXIMUM RATINGS (T_A=25°C)

Parameter	Symbol	SS22AF	SS23AF	SS24AF	SS25AF	SS26AF	SS28AF	SS210AF	SS215AF	SS220AF	Unit	
Marking		SS22	SS23	SS24	SS25	SS26	SS28	SS210	SS215	SS220		
Repetitive peak reverse voltage	V _{RRM}	20	30	40	50	60	80	100	150	200	V	
Reverse voltage,total RMS Value	V _{RMS}	14	21	28	35	42	56	70	105	140	V	
Maximum DC blocking voltage	V _{DC}	20	30	40	50	60	80	100	150	200	V	
Maximum average forward rectified current	I _{F(AV)} ⁽¹⁾	2.0									A	
Surge Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	50									A	
Maximum Instantaneous forward voltage I _F =2A,T _a =25°C	V _F	0.55			0.70		0.85		0.95		V	
Maximum DC reverse current at rated DC blocking voltage	T _A =25°C	0.5					0.1				mA	
	T _A =100°C	10					5				mA	
Typical thermal resistance Note 1	R _{θJA}	80									°C/W	
Operating junction temperature range	T _J	-55 to +125					-55 to +150					°C
Storage temperature range	T _{STG}	-55 to +150									°C	

Note1): Mounted on PCB with 5.0x5.0mm copper pads.

CHARACTERISTIC CURVES

Fig. 1- Forward Current Derating Curve

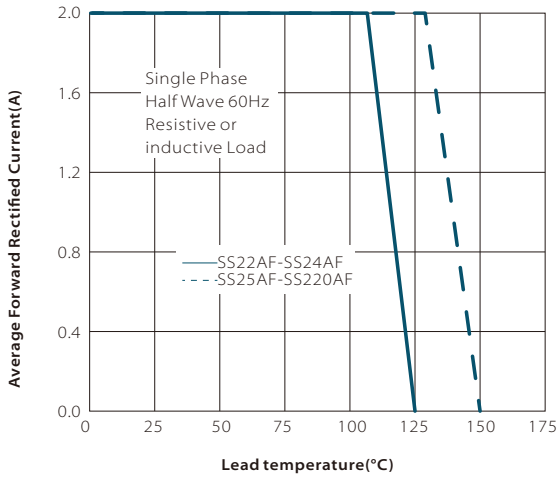


Fig. 2-Maximum Non-Repetitive Peak Forward Surge Current

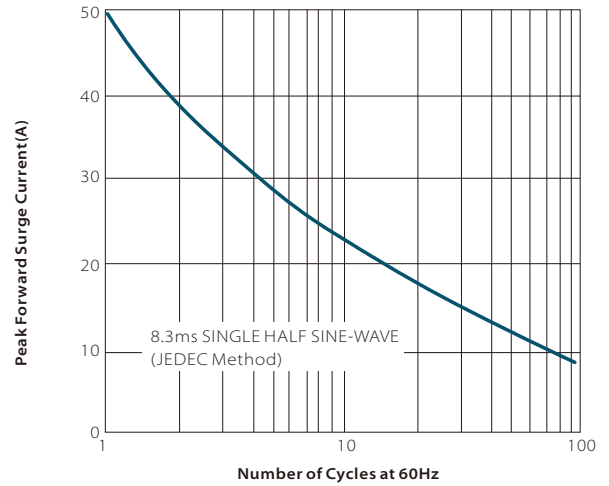


Fig. 3-Typical Reverse Characteristics

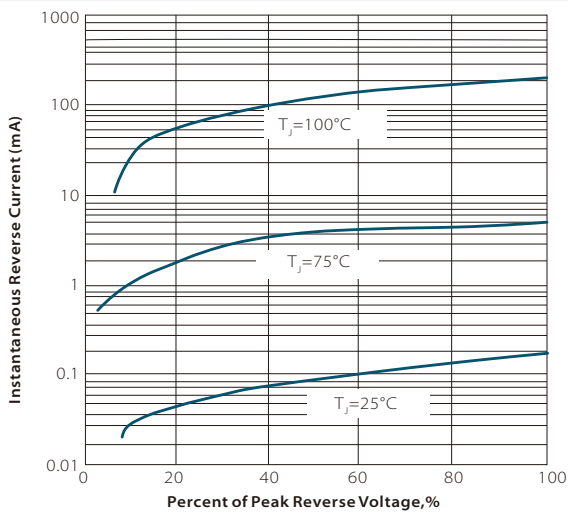


Fig. 4-Typical Instantaneous Forward Characteristics

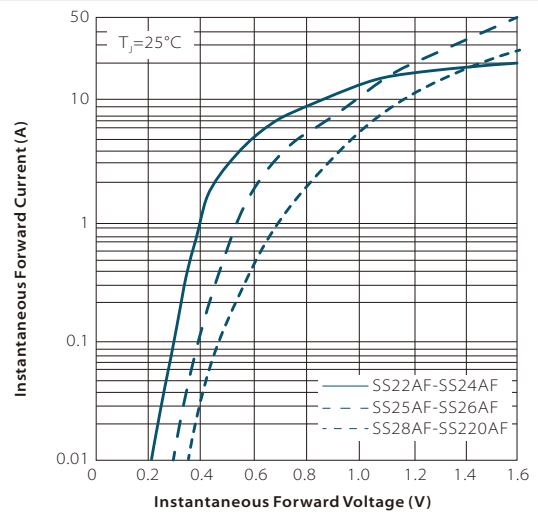
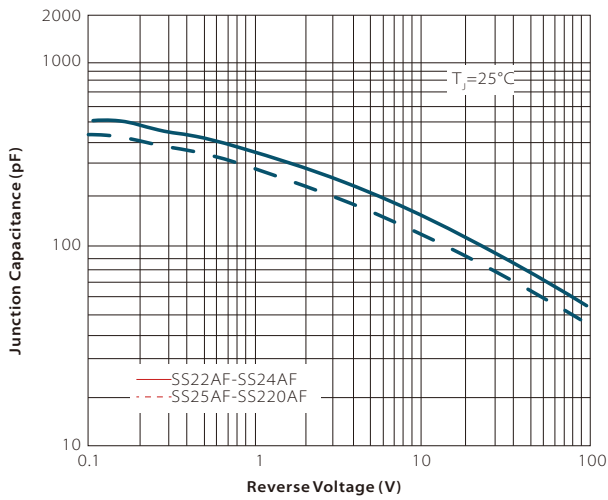
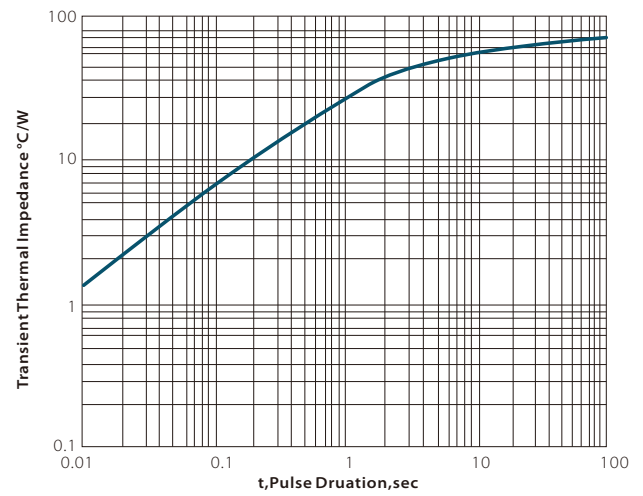
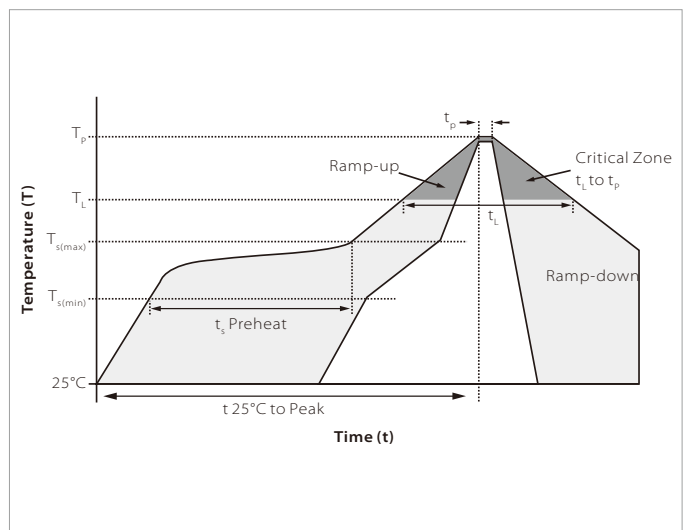


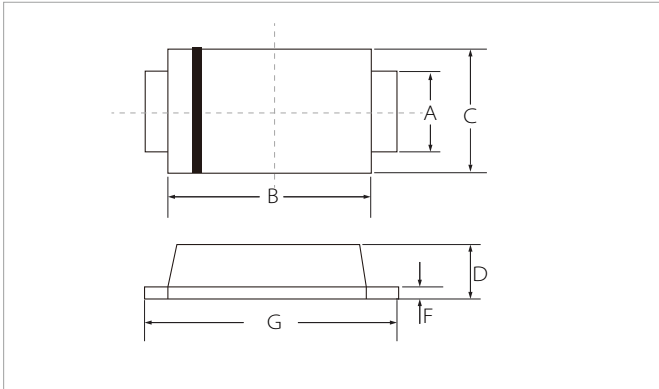
Fig. 5-Typical Junction Capacitance

Fig. 6-Typical Transient Thermal Impedance


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(\text{min})}$)	150 $^\circ\text{C}$
	Temperature Max ($T_{s(\text{max})}$)	200 $^\circ\text{C}$
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3 $^\circ\text{C}/\text{second}$ max
$T_{s(\text{max})}$ to T_L - Ramp-up Rate		3 $^\circ\text{C}/\text{second}$ max
Reflow	Temperature (T_L) (Liquidus)	217 $^\circ\text{C}$
	Time (min to max) (t_r)	60 – 150 seconds
Peak Temperature (T_p)		260 $^\circ\text{C}$
Time within 5 $^\circ\text{C}$ of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6 $^\circ\text{C}/\text{second}$ max
Time 25 $^\circ\text{C}$ to peak Temperature (T_p)		8 minutes max.
Do not exceed		260 $^\circ\text{C}$

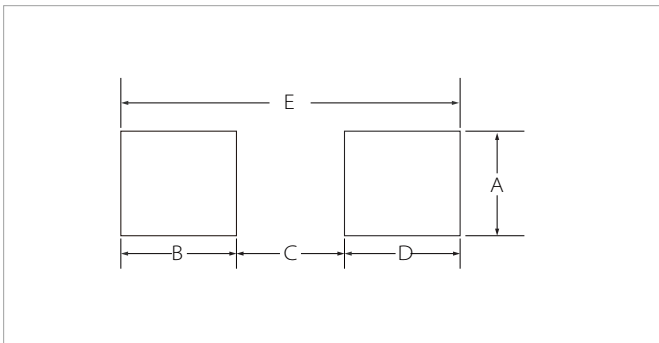


SMAF PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min	Max	Min	Max
A	1.35	1.45	0.053	0.057
B	3.40	3.80	0.134	0.145
C	2.40	2.80	0.094	0.110
D	0.95	1.45	0.037	0.057
F	0.15	0.22	0.006	0.009
G	4.40	4.80	0.173	0.189

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min	Max	Min	Max
A	1.70	-	0.067	-
B	2.50	-	0.098	-
C	-	1.5	-	0.059
D	2.50	-	0.098	-
E	6.50REF		0.256REF	

ORDERING INFORMATION

Part Number	Package	QTY/Reel	Reel Size
SS22AF-220AF	SMAF	5000PCS	13"

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