SAMYANG ELECTRONICS

SS12F - SS120F

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE: 20 --- 200V
CURRENT: 1.0 A

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

MECHANICAL DATA

- Case: SMAF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 27mg 0. 00086oz

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Marking Code: SS12 — SS120
Simplified outline SMAF and symbol

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	Symbols	SS12F	SS14F	SS16F	SS18F	SS110F	SS112F	SS115F	SS120F	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	$I_{F(AV)}$	1.0								A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	40				30				A
Max Instantaneous Forward Voltage at 1 A	V_F	0.55		0.70		0.85		0.90		V
Maximum DC Reverse Current T_a = 25°C at Rated DC Reverse Voltage T_a =100°C	I_R	0.3 10				0.2 5		0.1 2		mA
Typical Junction Capacitance 1)	C_j	110		80						pF
Typical Thermal Resistance 2)	$R_{\theta JA}$	115								°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.

Fig.1 Forward Current Derating Curve

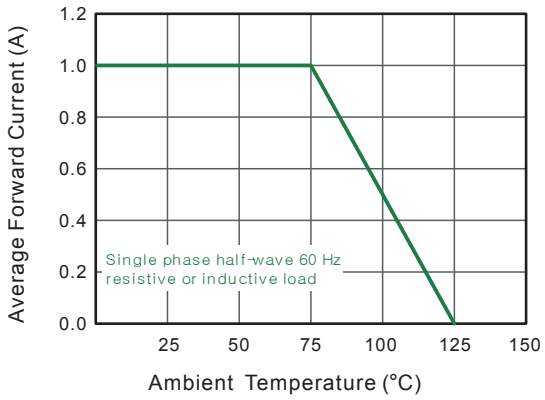


Fig.2 Typical Reverse Characteristics

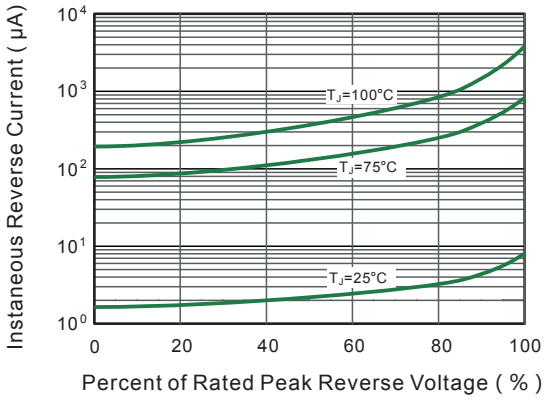


Fig.3 Typical Forward Characteristic

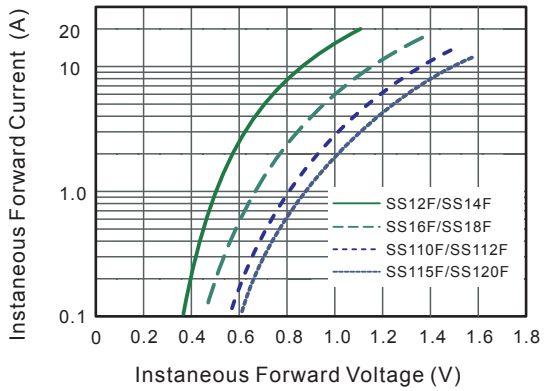


Fig.4 Typical Junction Capacitance

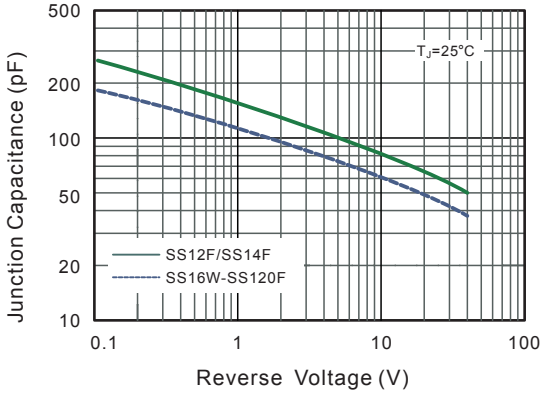


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

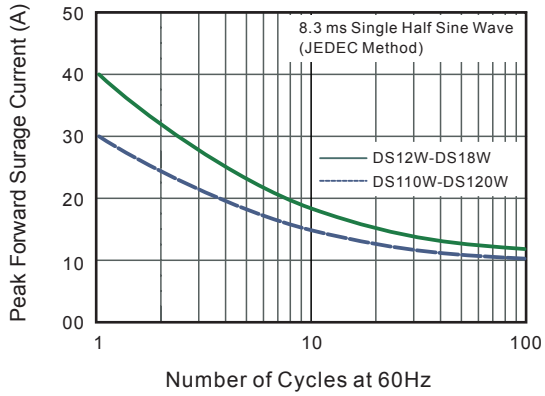
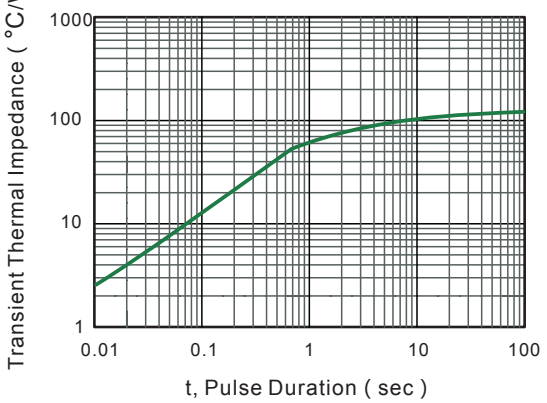
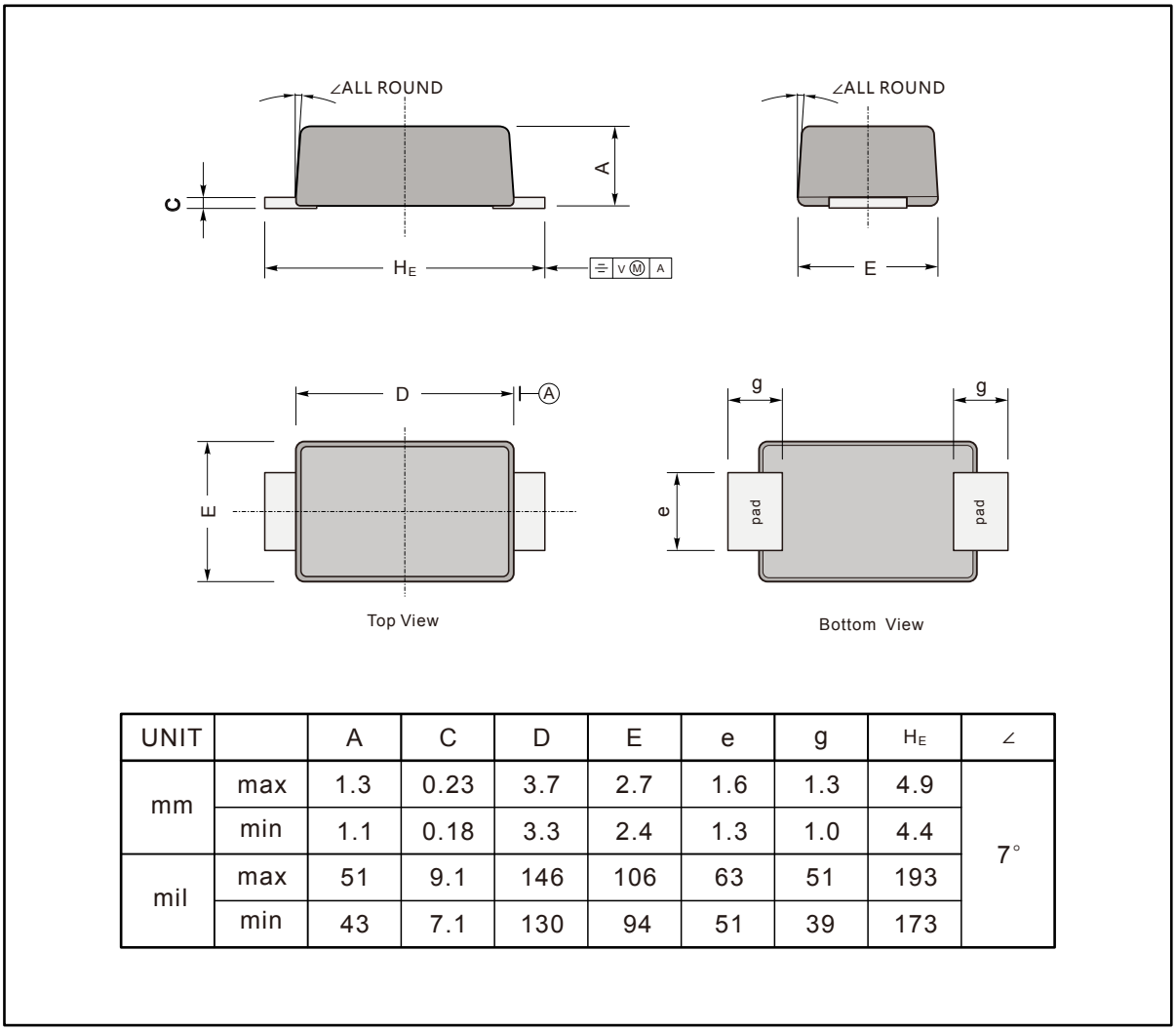


Fig.6- Typical Transient Thermal Impedance



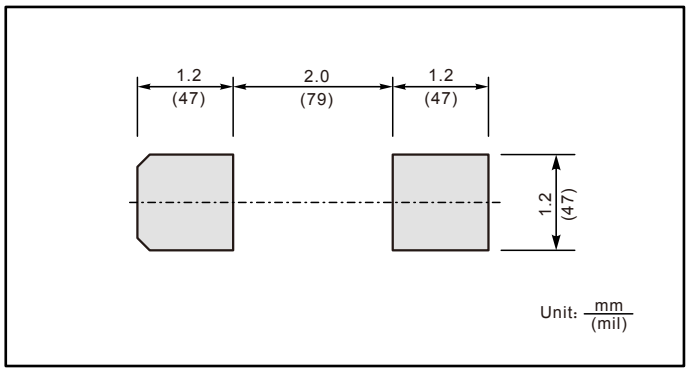
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads SMAF



UNIT		A	C	D	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	

The recommended mounting pad size



Marking

Type number	Marking code
SS12F	SS12
SS14F	SS14
SS16F	SS16
SS18F	SS18
SS110F	SS110
SS112F	SS112
SS115F	SS115
SS120F	SS120