UMW SS22F THRU SS220F

20V-200V 2A

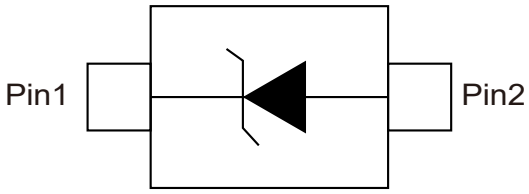
1.Features

- 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

2.Mechanical Data

- Case: SMAF
- Approx. Weight: 27mg 0.00095oz
- Terminals: Solderable per MIL-STD-750 Method 2026

3.Pinning information



SMAF

4.Maximum Ratings And Electrical Characteristics

Parameter		Symbol	SS 22F	SS 24F	SS 26F	SS 28F	SS 210F	SS 212F	SS 215F	SS 220F	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		$I_{F(AV)}$	2								A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)		I_{FSM}	50				40				A
Max Instantaneous Forward Voltage at 2A		V_F	0.55		0.70		0.85		0.95		V
Maximum DC Reverse Current at Rated DC Reverse Voltage	T_A=25°C	I_R	0.5			0.3					mA
	T_A=100°C		5			3					mA
Typical Junction Capacitance (Note1)		C_J	160		80						pF
Typical Thermal Resistance (Note 2)		$R_{\theta JA}$	80								°C/W
Junction Temperature Range		T_J	-55 to 150								°C
Storage Temperature Range		T_{STG}	-55 to 150								°C

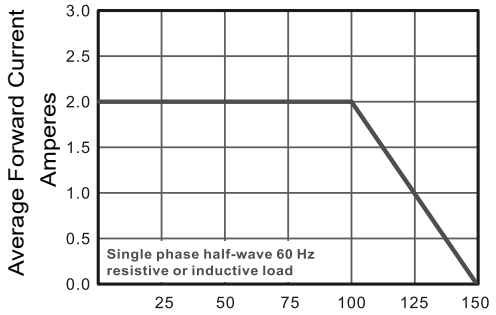
Absolute Maximum Ratings and Electrical characteristics Ratings at ambient temperature unless otherwise specified.Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %.

Notes:

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

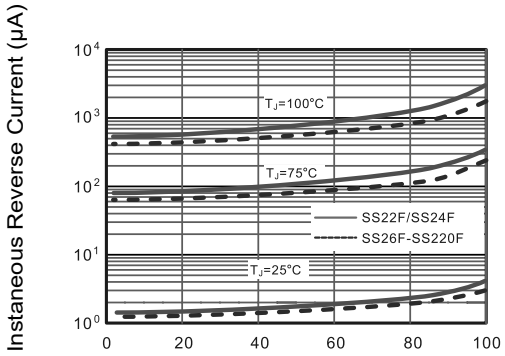
(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

5.Typical characteristic



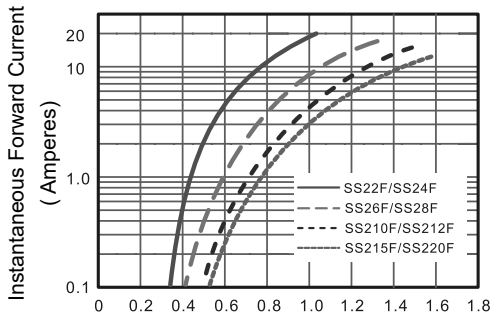
Case Temperature (°C)

Figure 1: Forward Current Derating Curve



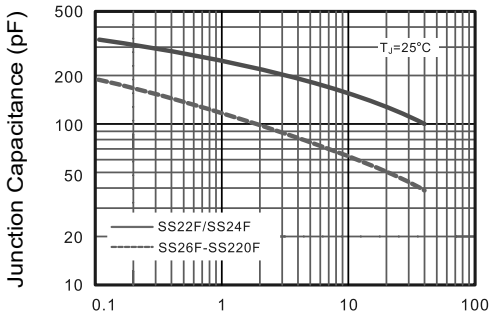
Percent of Rated Peak Reverse Voltage（%）

Figure 2: Typical Reverse Characteristics



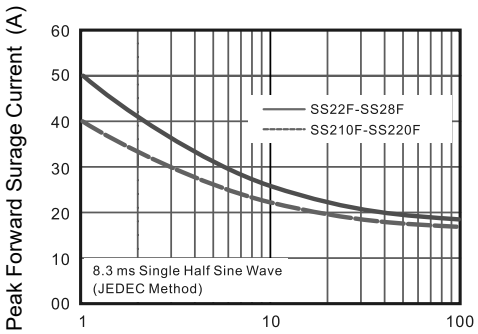
Instantaneous Forward Voltage (Volts)

Figure 3: Typical Forward Characteristic



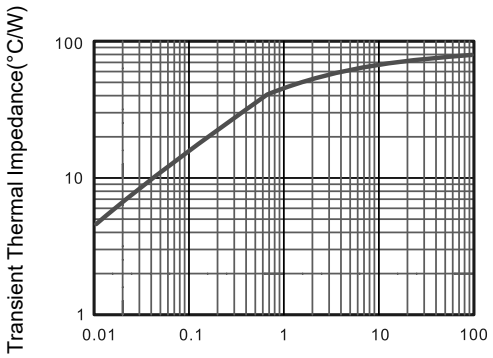
Reverse Voltage (V)

Figure 4: Typical Junction Capacitance



Number of Cycles at 60Hz

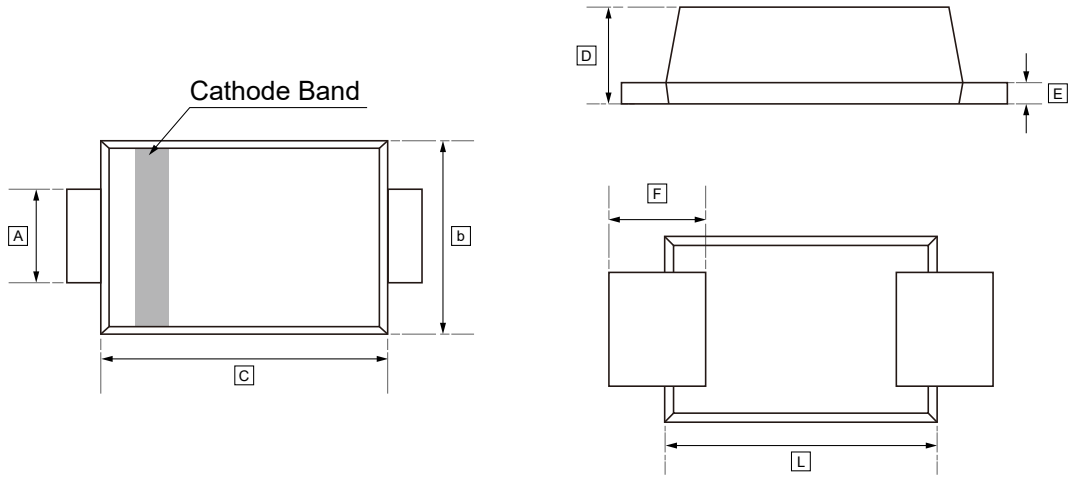
Figure 5: Maximum Non-Repetitive Peak Forward Surage Current



t, Pulse Duration(sec)

Figure 6: Typical Transient Thermal Impedance

6.SMAF Package Outline Dimensions



DIMENSIONS (mm are the original dimensions)

Symbol	A	b	C	D	E	F	L
Min	1.30	2.40	3.3	1.10	0.18	1.0	4.40
Max	1.60	2.70	3.7	1.30	0.23	1.30	4.90

7 .Ordering information

Order Code	Marking	Package	Base QTY	Delivery Mode
UMW SS22F	SS22	SMAF	3000	Tape and reel
UMW SS24F	SS24	SMAF	3000	Tape and reel
UMW SS26F	SS26	SMAF	3000	Tape and reel
UMW SS28F	SS28	SMAF	3000	Tape and reel
UMW SS210F	SS210	SMAF	3000	Tape and reel
UMW SS212F	SS212	SMAF	3000	Tape and reel
UMW SS215F	SS215	SMAF	3000	Tape and reel
UMW SS220F	SS220	SMAF	3000	Tape and reel

8.Disclaimer

UMW reserves the right to make changes to all products, specifications. Customers should obtain the latest version of product documentation and verify the completeness and currency of the information before placing an order.

When applying our products, please do not exceed the maximum rated values, as this may affect the reliability of the entire system. Under certain conditions, any semiconductor product may experience faults or failures. Buyers are responsible for adhering to safety standards and implementing safety measures during system design, prototyping, and manufacturing when using our products to prevent potential failure risks that could lead to personal injury or property damage.

Unless explicitly stated in writing, UMW products are not intended for use in medical, life-saving, or life-sustaining applications, nor for any other applications where product failure could result in personal injury or death. If customers use or sell the product for such applications without explicit authorization, they assume all associated risks.

When reselling, applying, or exporting, please comply with export control laws and regulations of China, the United States, the United Kingdom, the European Union, and other relevant countries, regions, and international organizations.

This document and any actions by UMW do not grant any intellectual property rights, whether express or implied, by estoppel or otherwise. The product names and marks mentioned herein may be trademarks of their respective owners.