AiT Components Inc.
www.ait-components.com

US2AF~US2MF

SURFACE MOUNT ULTRAFAST RECOVERY RECTIFIER
REVERSE VOLTAGE 50V TO 1000V FORWARD CURRENT 2A

DESCRIPTION

The US2AF~US2MF are available in SMAF Package

FEATURES

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- High efficiency
- Available in SMAF Package

ORDERING INFORMATION

Package Type	Part Number
SMAF	US2AF
	US2BF
	US2DF
	US2GF
	US2JF
	US2KF
	US2MF
Note	SPQ: 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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 ambient temperature unless otherwise specified. Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbol	US2AF	US2BF	US2DF	US2GF	US2JF	US2KF	US2MF	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at T_A=65°C	$I_{F(AV)}$	2.0							A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	50							A
Maximum Instantaneous Forward Voltage at 2A	V_F	1.0			1.4	1.7			V
Maximum DC Reverse Current at Rated DC Blocking Voltage T_A=25°C	I_R	5.0							μA
T_A=125°C		100							
Maximum Reverse Recovery Time[NOTE1]	t_{rr}	50				75			ns
Typical Thermal Resistance	$R_{\theta JA}$	50							°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 ~150							°C

NOTE1: Measured with I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A

TYPICAL CHARACTERISTICS

Figure. 1 Forward Current Derating Curve

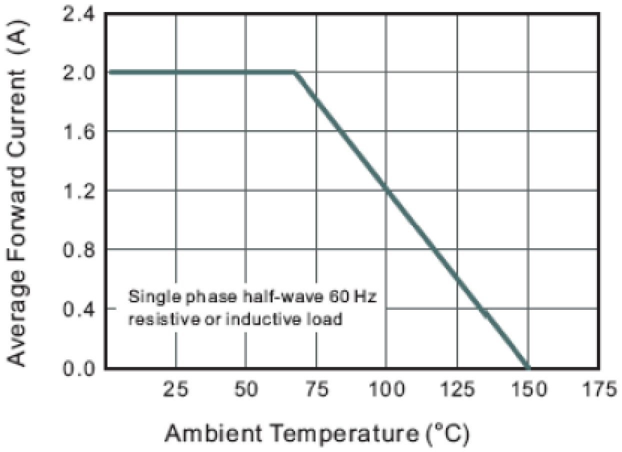


Figure. 2 Typical Reverse Characteristics

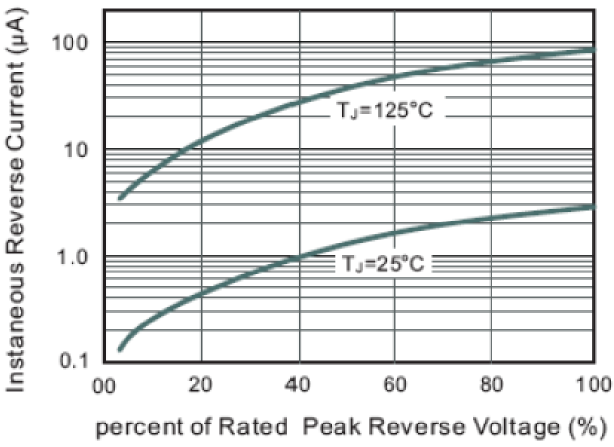


Figure. 3 Typical Instantaneous Forward Characteristics

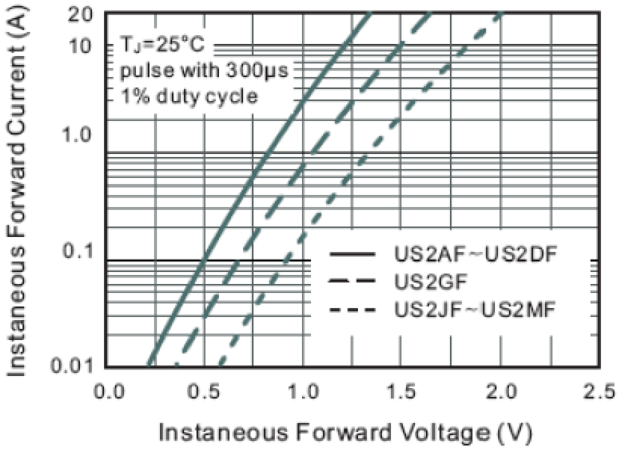
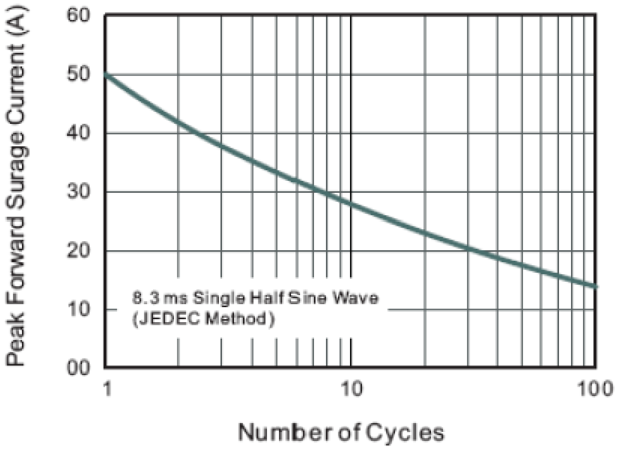


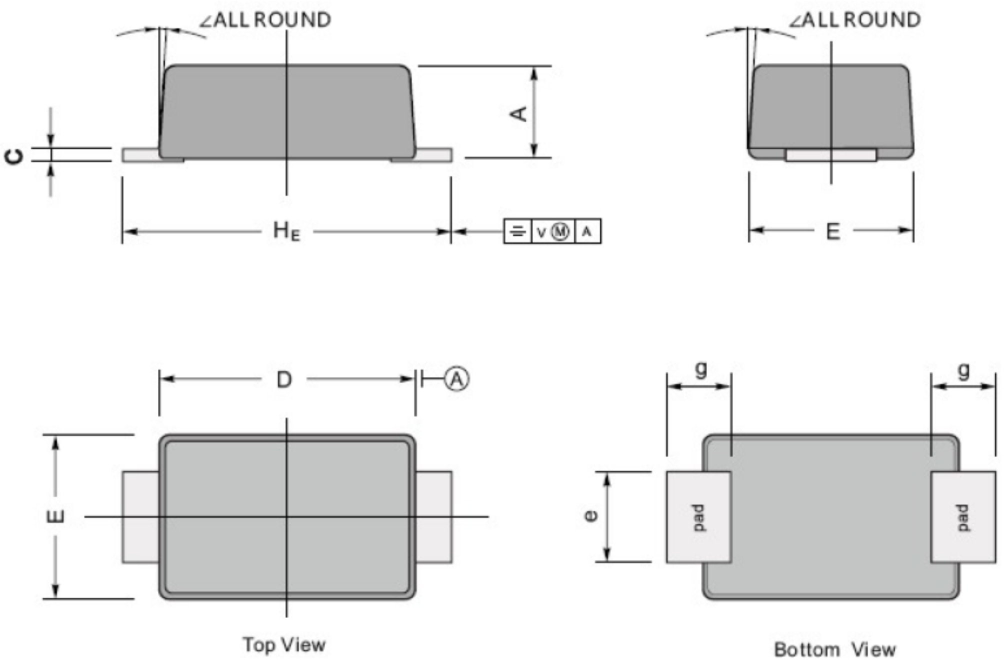
Figure. 4 Maximum Non-Repetitive Peak Forward Surge Current



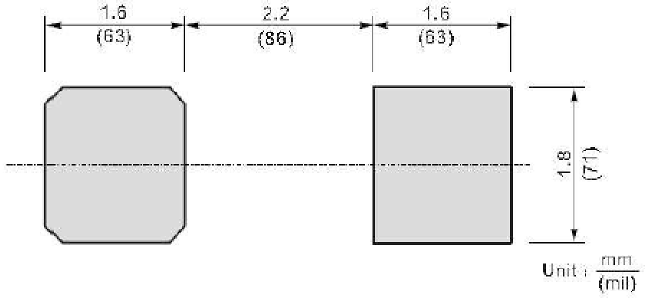
PACKAGE INFORMATION

Dimension in SMAF (Unit: mm)

Plastic surface mounted package; 2 leads



The recommended mounting pad size



UNIT		A	c	D	E	e	g	HE	∠
mm	Max	1.1	0.20	3.7	2.7	1.6	1.2	4.9	7°
	Min	0.9	0.12	3.3	2.4	1.3	0.8	4.4	
mil	Max	43	7.9	146	106	63	47	193	
	Min	35	4.7	130	94	51	31	173	

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