US1AF THRU US1MF

1.0A Ultra Fast Recovery Rectifier

1. 封裝 Package

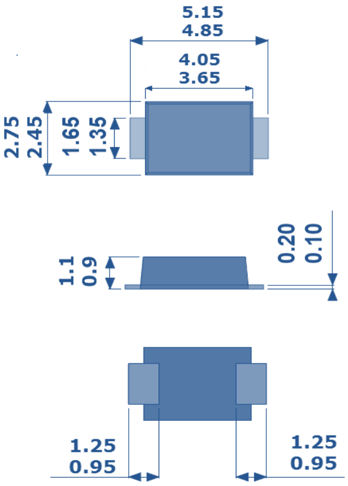
- 封裝方式 Method: SMAF
- 封裝尺寸 Dimension: 如圖示

2. 產品特色 Features

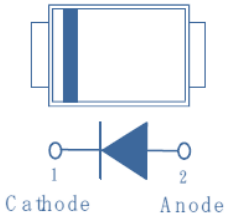
- For surface mounted applications in order to optimize board space
- Easy pick and place
- Ultrafast recovery times for high efficiency
- Glass Passivated junction
- Lead-free & halogen-free parts ,ROHS compliant

3. 機械數據 Mechanical Data

- Epoxy: UL94V-0 rated flame retardant
- Case: Molded plastic over passivated junction
- Terminals: Solder plated solderable per MIL-STD-750 Method 2026
- Polarity: Color band denotes cathode end



單位 Unit: millimeters



4. 極限值與電參數 Maximum Ratings & Electrical Characteristic

Rating at 25^{O}C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

	Symbol	**US1AF**	**US1BF**	**US1DF**	**US1GF**	**US1JF**	**US1KF**	**US1MF**	UNITS
Marking Code	-	US1A	US1B	US1D	US1G	US1J	US1K	US1M	-
Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
DC Blocking Voltage	V_R	50	100	200	400	600	800	1000	Volts
Average Forward Current	$I_{F(AV)}$	1.0							Amps
Peak Forward Surge Current: 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0							Amps
Forward Voltage at 1.0A	V_F	1			1.4	1.7			Volts
DC Reverse Current at Rated DC Blocking Voltage T_J=25°C	I_R	3							μA
Typical Thermal Resistance ,Junction to Lead (NOTE 1) Junction to ambient (NOTE 2)	$R_{ΘJL}$ $R_{ΘJA}$	22 150							℃/W
Reverse recovery time (I_F=0.5A,I_R=1.0A,I_{rr}=0.25A)	T_{rr}	50				75			ns
Operating junction temperature and storage temperature range	T_J,T_{STG}	-55~+150							℃

Notes:

(1) Mounted on an FR4 PCB, single-sided copper, with 10cm x 10cm copper pad area.

(2) Mounted on an FR4 PCB, single-sided copper, mini pad.

5. 特性曲線 Rating & Characteristic Curves

Fig. 1 Forward Current Derating Curve

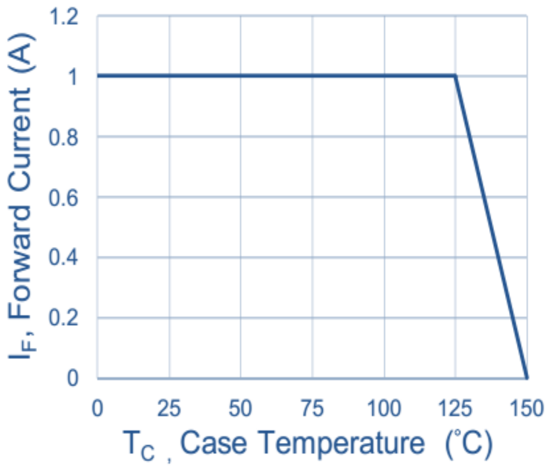


Fig. 2 Typical Reverse Characteristics

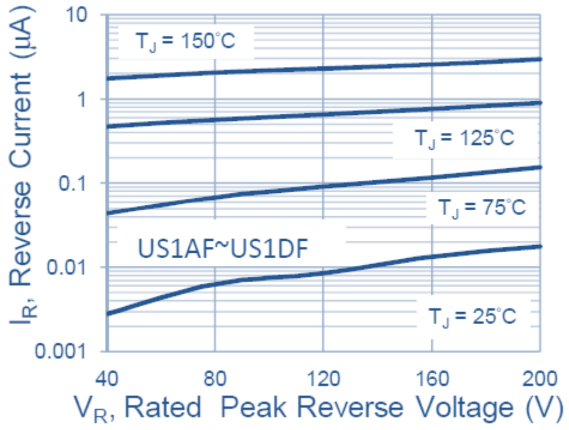


Fig. 3 Typical Reverse Characteristics

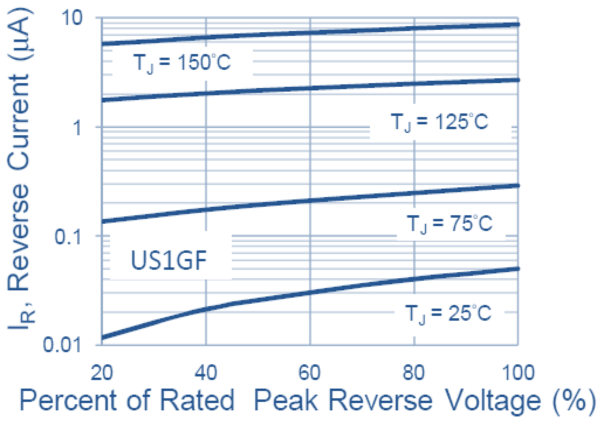


Fig. 4 Typical Reverse Characteristics

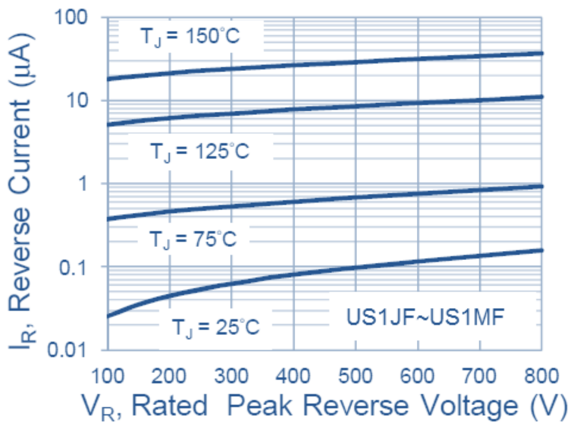


Fig. 5 Typical Forward Characteristics

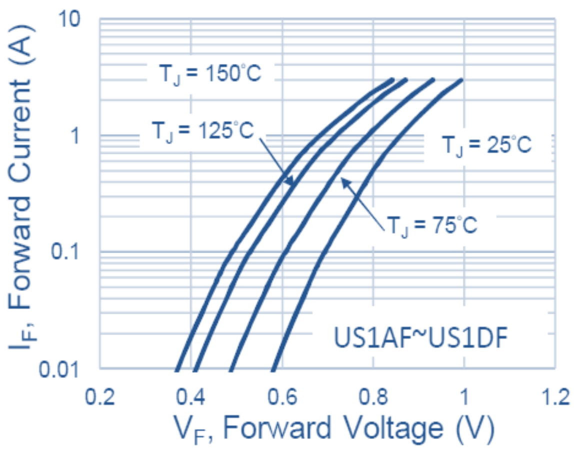


Fig. 6 Forward Current Derating Curve

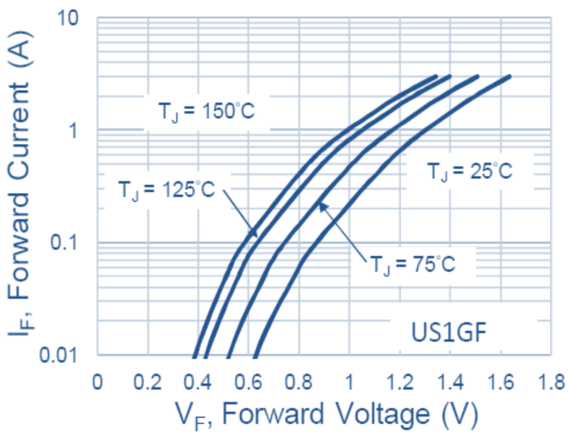
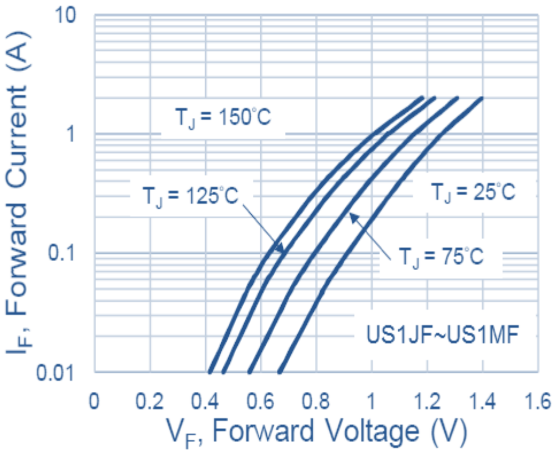
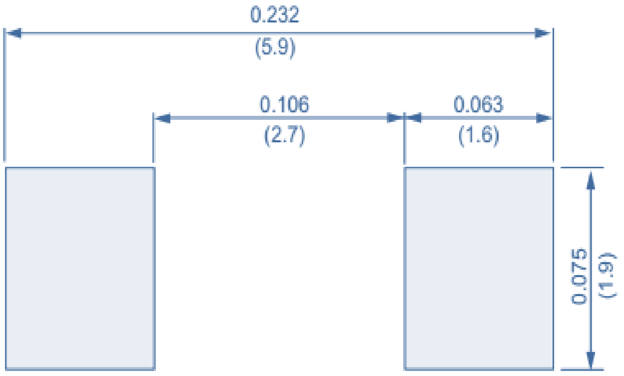


Fig. 7 Typical Junction Capacitance



Pad Layout



Unit: inch (mm)