SOCAY

Ultra Super Fast Recovery Diodes

UF1AA~UF1MA DO-214AC(SMA)

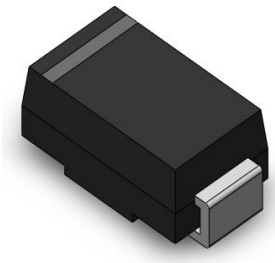
Features

- Glass Passivated Die Construction
- Ultra-Fast Recovery Time for High Efficiency
- Surge Overload Rating to 30A Peak
- High Current Capability
- Ideally Suited for Automated Assembly
- Lead Free Finish/RoHS Compliant.

Mechanical Date

- Case: SMA
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- Weight: 0.064 grams (approximate)

DO-214AC(SMA)



Maximum Ratings and Electrical Characteristics (T_A =25℃ unless otherwise specified)

Single phase, half-wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Ratings	Symbol	UF1AA	UF1BA	UF1DA	UF1GA	UF1JA	UF1KA	UF1MA	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage (Note 4)	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @ T_T = 75℃	I_O	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load	I_{FSM}	30							A
Forward Voltage Drop @ I_F = 1.0A	V_{FM}	1.0			1.3	1.7			V
Peak Reverse Current at Rated DC Blocking Voltage (Note 4) @ T_A = 25℃	I_{RM}	5							μA
Peak Reverse Current at Rated DC Blocking Voltage (Note 4) @ T_A = 100℃	I_{RM}	100							μA
Reverse Recovery Time (Note 1)	t_{rr}	50				75			ns
Typical Total Capacitance (Note 2)	C_T	14~16							pF
Typical Thermal Resistance, Junction to Terminal	$R_{\theta JT}$	30							℃/W
Operating and Storage Temperature Range	T_J,T_{STG}	-65 to +150							℃

Notes: 1. Measured with I_F = 0.5A, I_R = 1.0A, Irr = 0.25A. See figure 5.

2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Unit mounted on PC board with 5.0 mm^2 (0.013 mm thick) copper pad as heat sink.

4. Short duration pulse test used to minimize self-heating effect.

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Rating and Characteristic Curves

Fig1. Forward Current Derating Curve

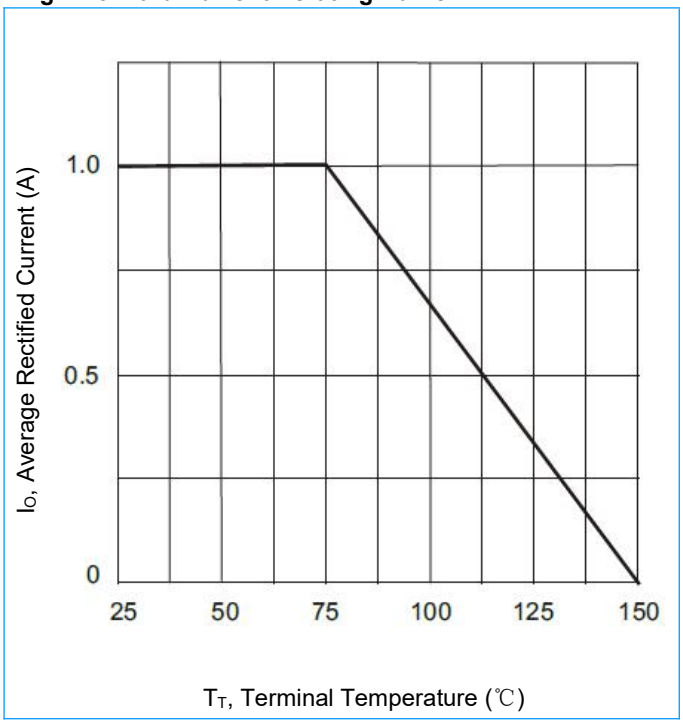


Fig2. Typical Forward Characteristics

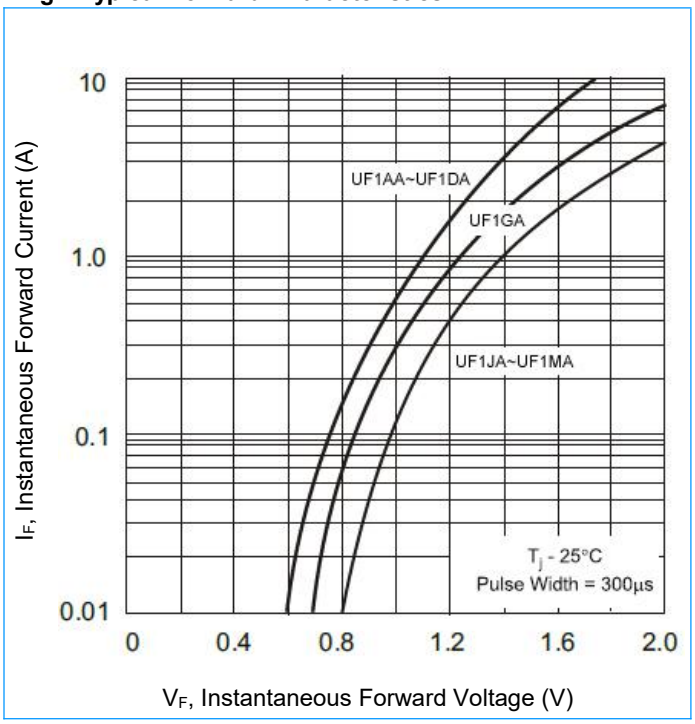


Fig3. Forward Surge Current Derating Curve

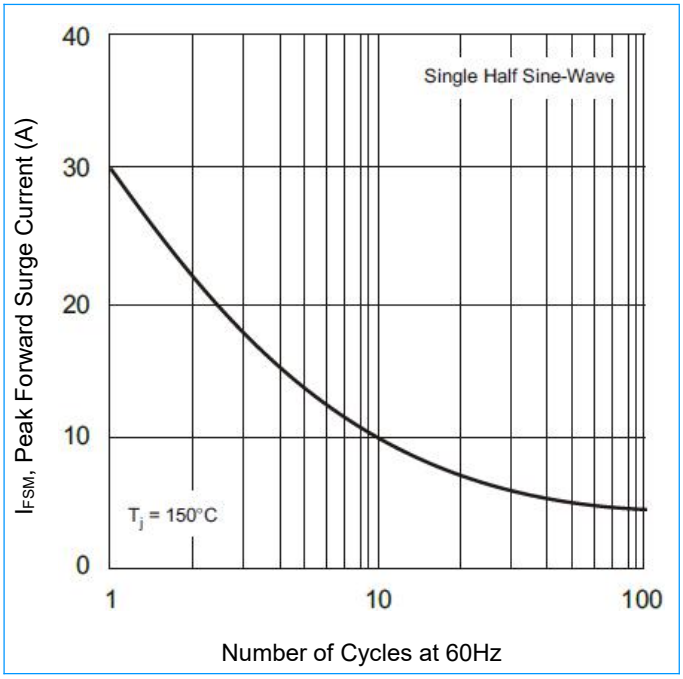
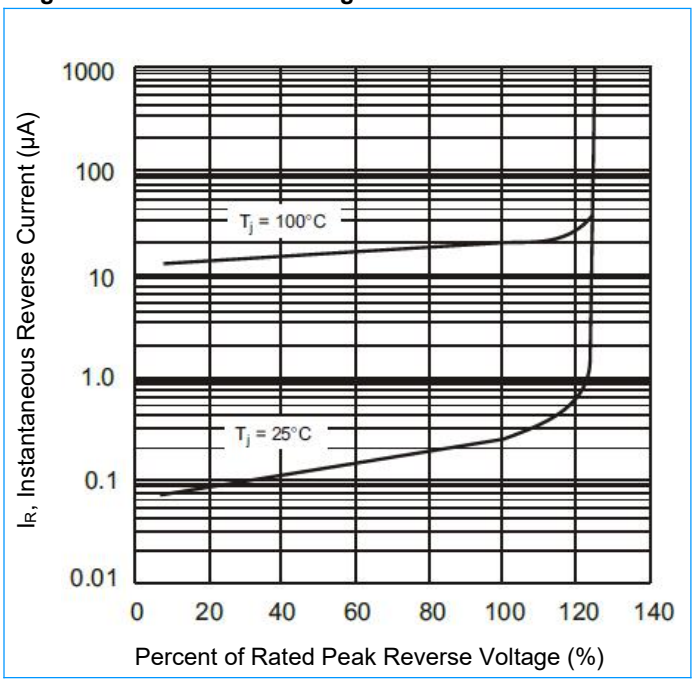


Fig4. Maximum Forward Surge Current



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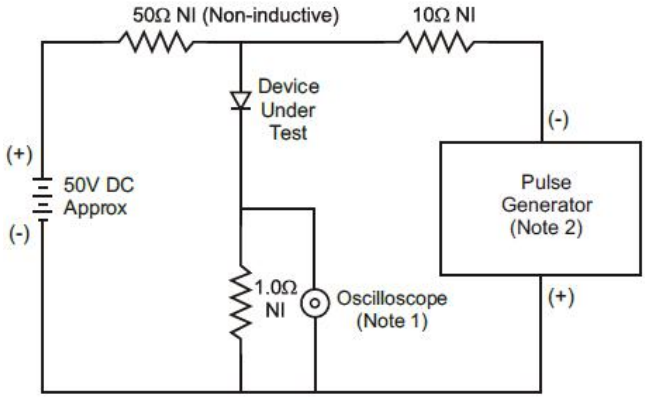
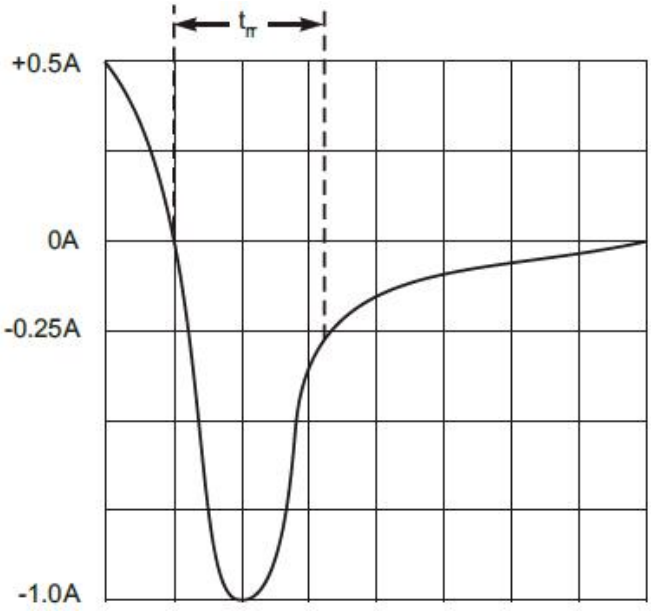
Rating and Characteristic Curves (Continue)

Fig5. Reverse Recovery Time Characteristic and Test Circuit





Notes:

1. Rise Time=7.0ns max. Input Impedance=1.0MΩ,22pF.
2. Rise Time=10ns max. Input Impedance=50Ω.

Set Time Base for 50/100 ns/cm

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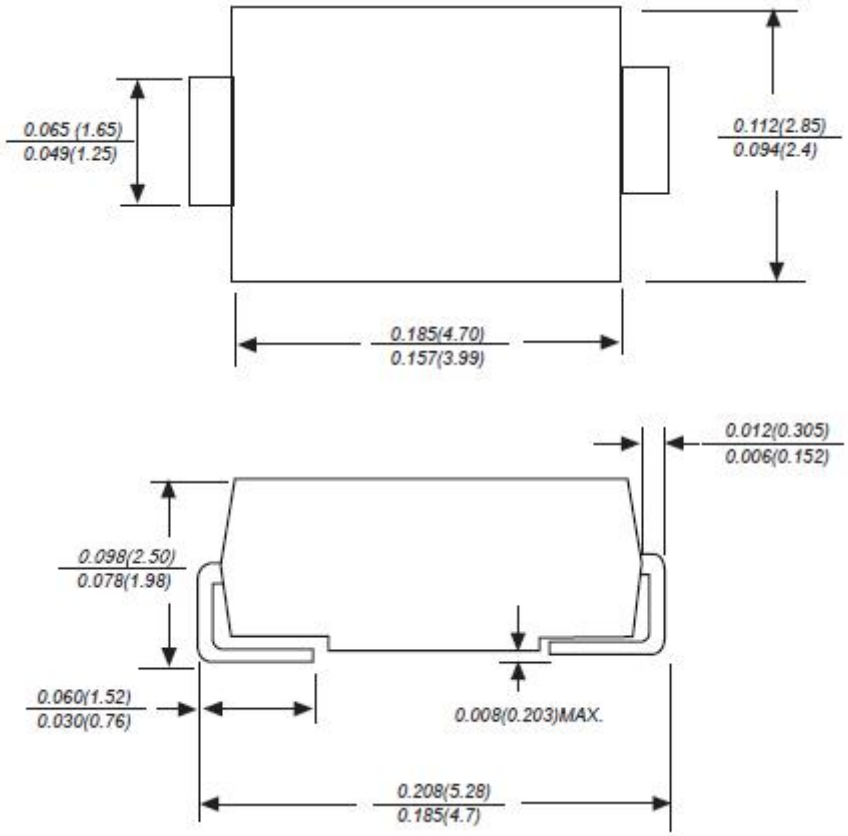
Package Outline (Unit: mm)

DO-214AC(SMA)



Dimensions in inches (millimeters)

Packaging Information

Part Number	Component Package	Quantity
UF1AA~UF1MA	DO-214AC(SMA)	5000 PCS/REEL

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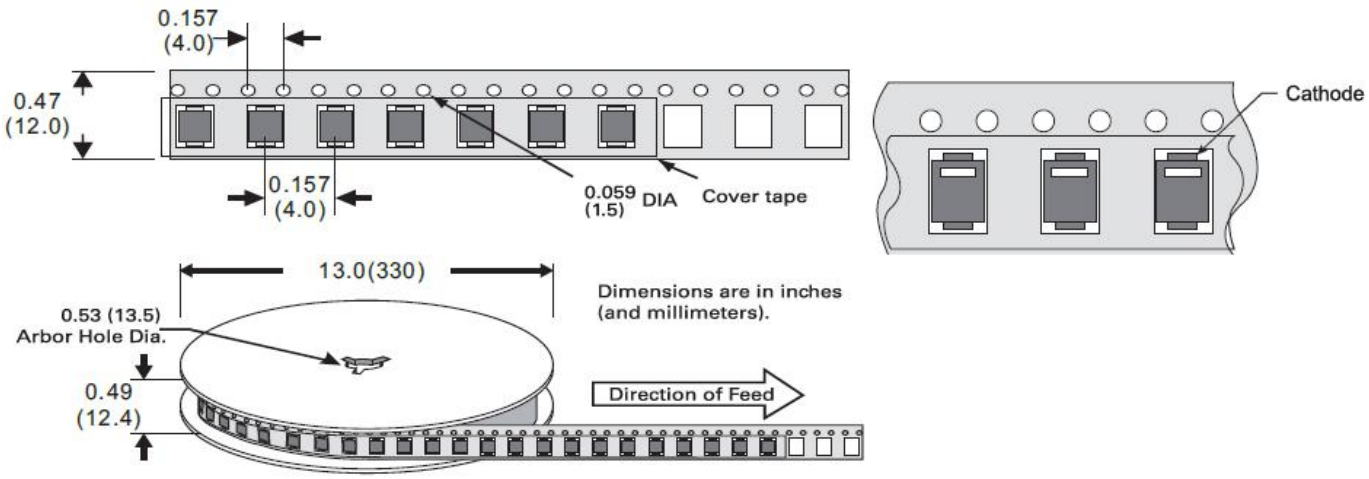
Tape and Reel Specification



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