



# U1D

## SURFACE MOUNT ULTRAFAST RECTIFIER

**Voltage**

**200 V**

**Current**

**1 A**

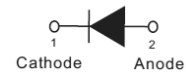
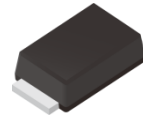
### Features

- Glass passivated chip junction
- Ultrafast reverse recovery time
- Low forward voltage drop
- Low switching losses, high efficiency
- High forward surge capability
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### Mechanical Data

- Case: SMAS Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Approx. Weight: 0.0013 ounces, 0.043 grams

SMAS



### Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	200	V
Maximum Rms Voltage	V <sub>RMS</sub>	140	V
Maximum Dc Blocking Voltage	V <sub>DC</sub>	200	V
Maximum Average Forward Current	I <sub>F(AV)</sub>	1	A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	I <sub>FSM</sub>	30	A
Typical Junction Capacitance Measured at 1 MHZ And Applied V <sub>R</sub> = 4 V	C <sub>J</sub>	18	pF
Typical Thermal Resistance	R <sub>θJA</sub> <sup>(1)</sup>	150	°C/W
	R <sub>θJC</sub> <sup>(2)</sup>	24	
Operating Junction Temperature Range	T <sub>J</sub>	-55~150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~150	°C



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## Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	$V_F$	$I_F = 0.5\text{ A}, T_J = 25^\circ\text{C}$	-	0.83	-	V
		$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	0.89	1	
		$I_F = 0.5\text{ A}, T_J = 125^\circ\text{C}$	-	0.69	-	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.77	-	
Reverse Current	$I_R$	$V_R = V_{RRM}, T_J = 25^\circ\text{C}$	-	-	1	uA
		$V_R = V_{RRM}, T_J = 125^\circ\text{C}$	-	0.51	-	
Reverse Recovery Time	$T_{RR}$	$I_F = 0.5\text{ A}, I_R = 1\text{ A},$ $I_{RR} = 0.25\text{ A}, T_J = 25^\circ\text{C}$	-	-	50	ns

**NOTES:**

1. Mounted on a FR4 PCB, single-sided copper, mini pad.
2. Mounted on a FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area.



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## TYPICAL CHARACTERISTIC CURVES

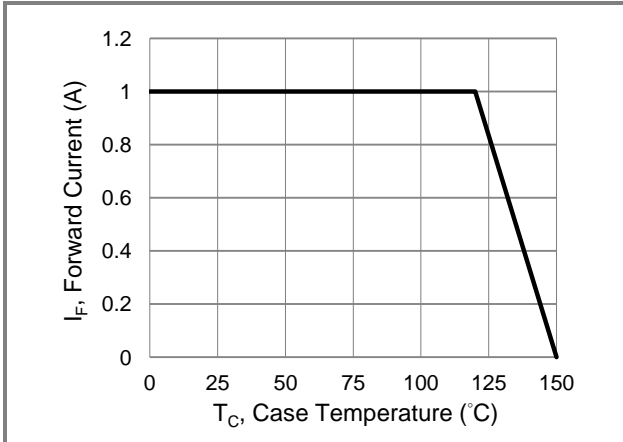


Fig.1 Forward Current Derating Curve

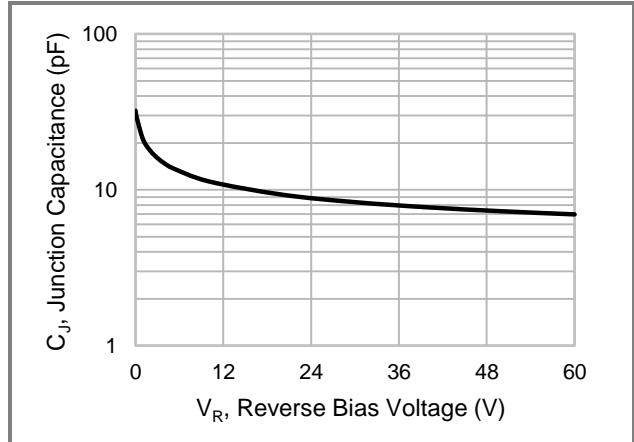


Fig.2 Typical Junction Capacitance

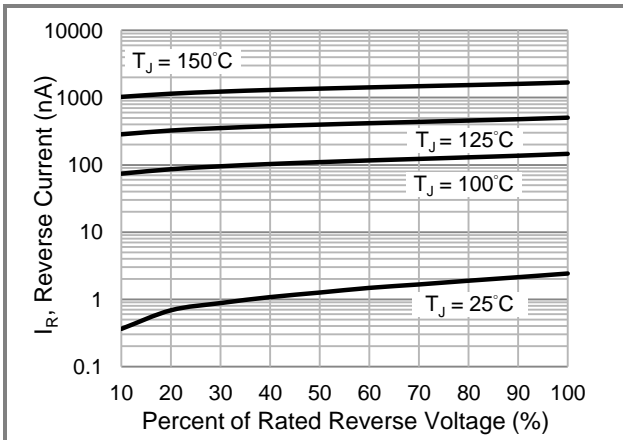


Fig.3 Typical Reverse Characteristics

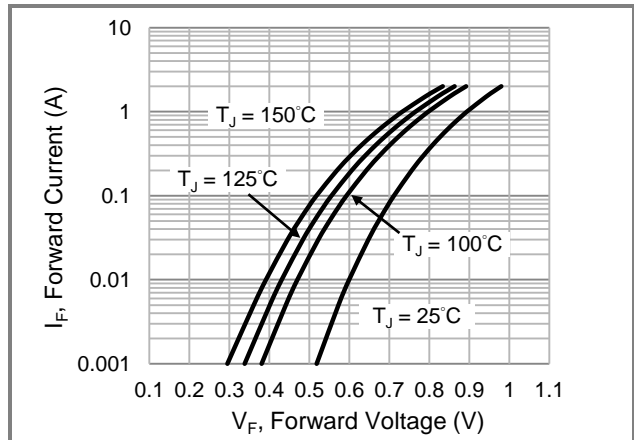


Fig.4 Typical Forward Characteristics

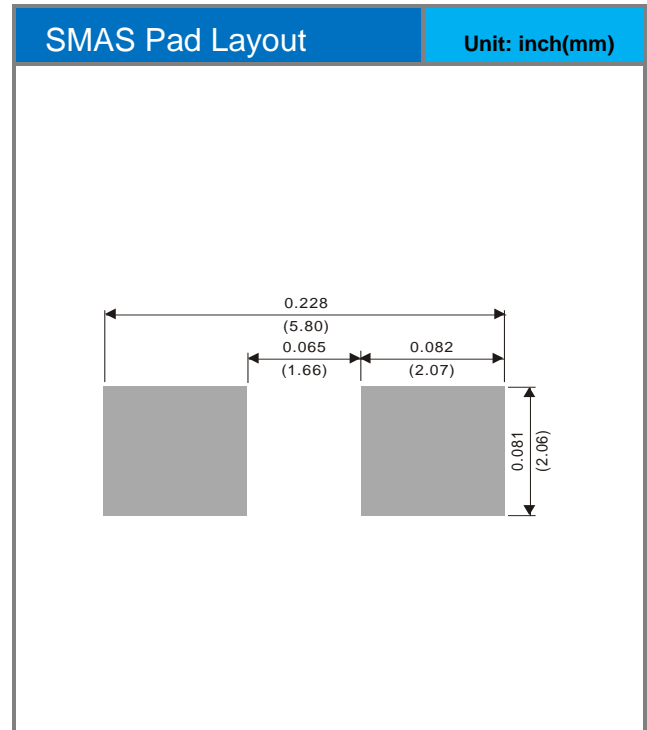
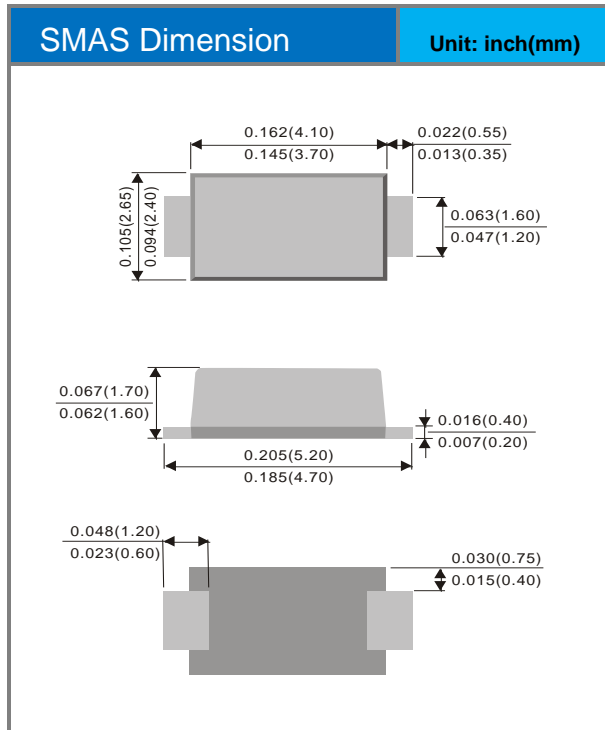


# U1D

## Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
U1D_R2_00001	SMAS	9.5K / 13" Reel	U1D	Halogen free

## Packaging Information & Mounting Pad Layout





## U1D

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