



3DFR1A THRU 3DFR1M

Surface Mount Glass Passivated Fast Recovery Rectifier

Reverse Voltage -50~1000 V

Forward Current - 1.0A

FEATURES

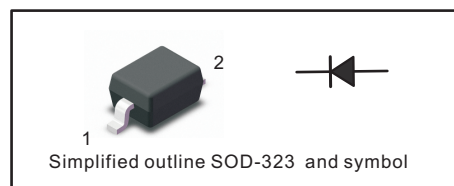
- Low forward voltage drop
- Low leakage current
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- Case: SOD-323
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 5.48mg / 0.00019oz

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

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

Parameter	Symbols	3DFR1A	3DFR1B	3DFR1D	3DFR1G	3DFR1J	3DFR1K	3DFR1M	Units
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	I _{F(AV)}	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I _{FSM}	15							A
Maximum Instantaneous Forward Voltage at 1 A	V _F	1.3							V
Maximum DC Reverse Current T _a = 25 °C at Rated DC Blocking Voltage T _a =125 °C	I _R	5 50							μA
Typical reverse recovery time ⁽²⁾	trr	150				250	500		ns
Typical junction capacitance ⁽³⁾	C _j	5							pF
Operating and Storage Temperature Range	T _j , T _{stg}	-55 ~ +150							°C

(1) P.C.B. mounted with 0.2" X 0.2" (5 X 5 mm) copper pad areas.

(2) Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $t_{rr}=0.25\text{A}$

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



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Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

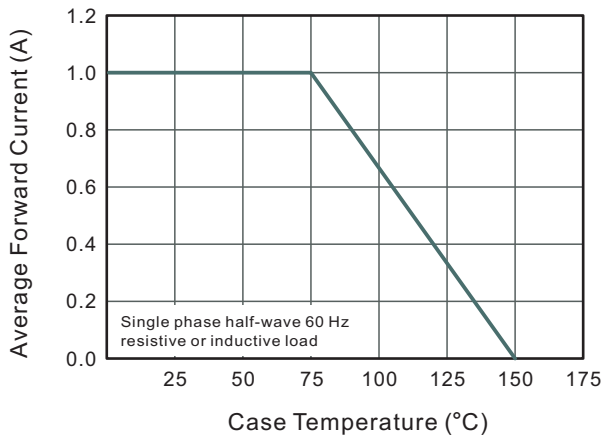


Fig.2 Typical Instantaneous Reverse Characteristics

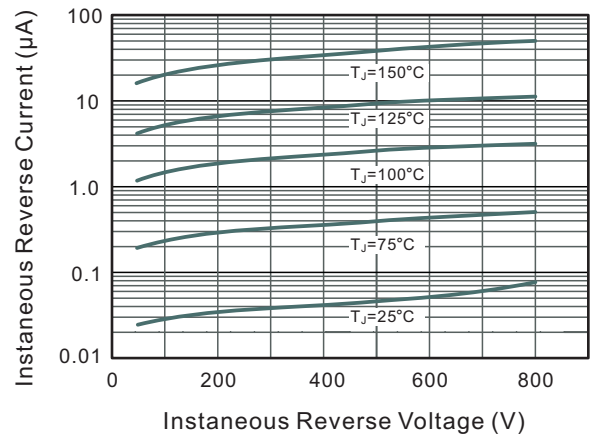


Fig.3 Typical Forward Characteristic

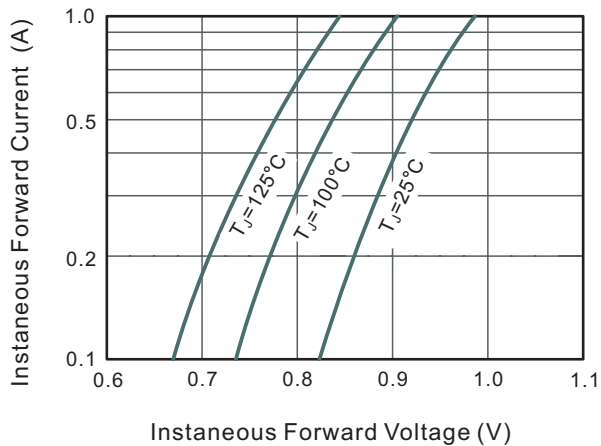


Fig.4 Typical Junction Capacitance

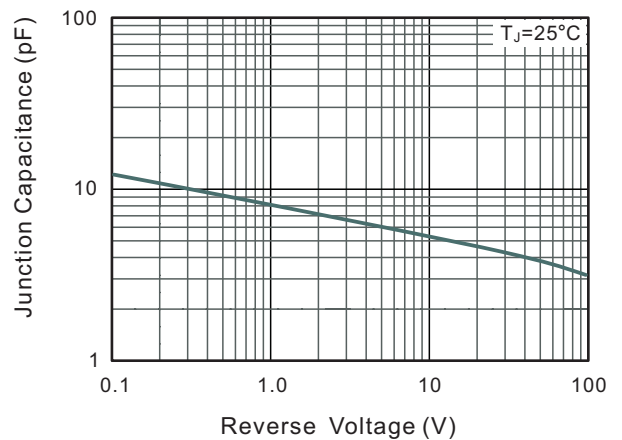
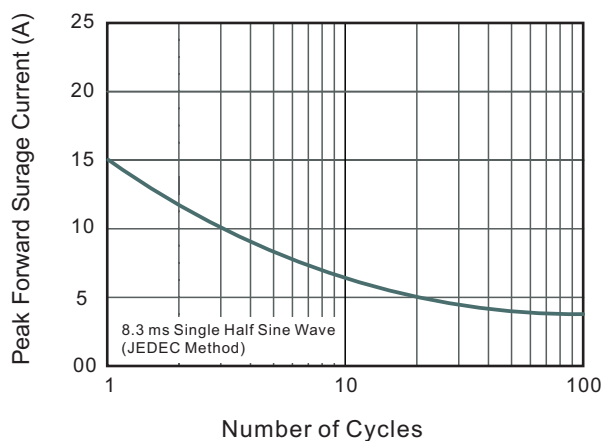


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current





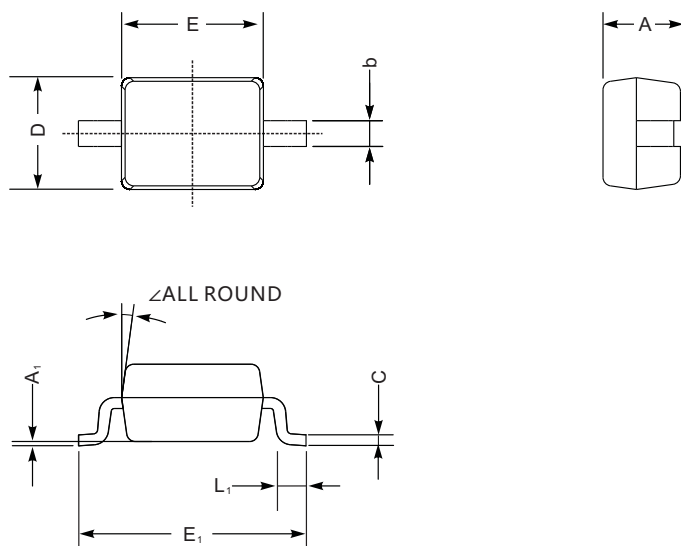
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PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

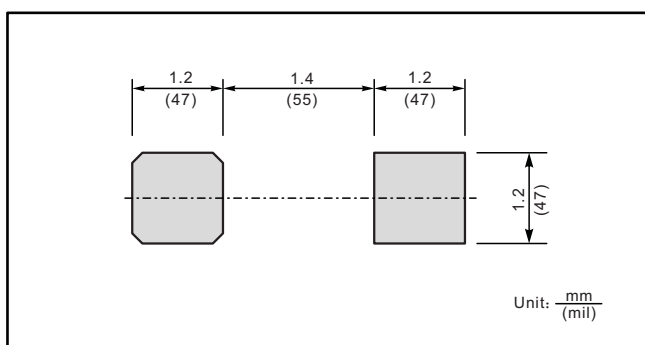
SOD-323



SOD-323 mechanical data

UNIT		A	C	D	E	E ₁	b	L ₁	A ₁	∠
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2	9°
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—	
mil	max	43	5.9	55	70	108	16	16	8	
	min	32	3.1	47	63	100	9.8	7.9	—	

The recommended mounting pad size



Marking

Type number	Marking code
3DFR1A	1R
3DFR1B	2R
3DFR1D	3R
3DFR1G	4R
3DFR1J	5R
3DFR1K	6R
3DFR1M	R7