

FR101W THRU FR107W

Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Fast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

Mechanical Data

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 15mg 0.00053



Pinning

PIN	DESCRIPTION
1	Cathode
2	Anode

Absolute Maximum Ratings And Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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

Parameter	Symbols	FR101W	FR102W	FR103W	FR104W	FR105W	FR106W	FR107W	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 at $T_c = 125^\circ C$	$I_{F(AV)}$	1						A			
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	30						A			
Maximum Forward Voltage at 1 A	V_F	1.3						V			
Maximum DC Reverse Current $T_a = 25^\circ C$ at Rated DC Blocking Voltage $T_a = 125^\circ C$	I_R	5 100						μA			
Typical Junction Capacitance at $V_R=4V$ $f=1M$	C_J	15						pF			
Maximum Reverse Recovery Time ⁽¹⁾	t_{rr}	150			250		500		ns		
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$	85						$^\circ C/W$			
Operating and Storage Temperature Range	T_J, T_{stg}	-55 ~ +150						$^\circ C$			

(1) Measured with $I_F = 0.5 A$, $I_R = 1 A$, $I_{rr} = 0.25 A$

(2) .P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Rating And Characteristic Curves

Fig.1 Forward Current Derating Curve

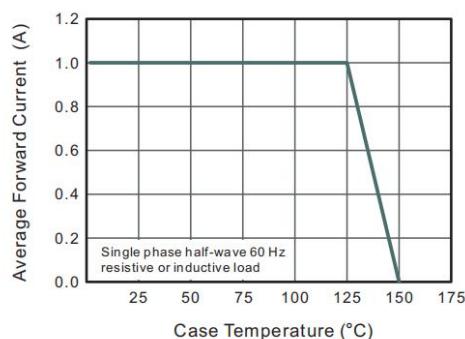


Fig.2 Typical Reverse Characteristics

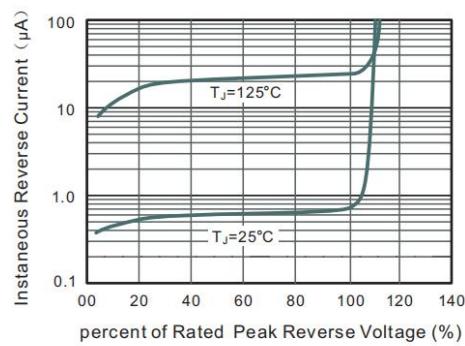


Fig.3 Typical Instantaneous Forward Characteristics

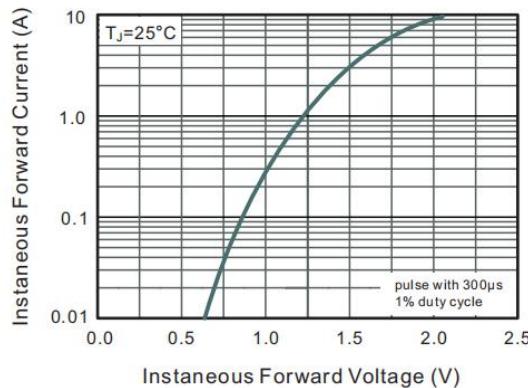


Fig.4 Typical Junction Capacitance

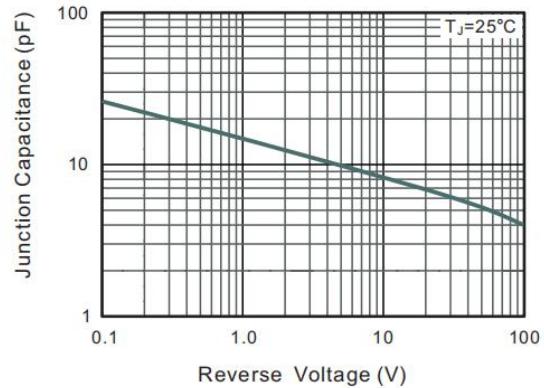


Fig.5 Maximum Non-Repetitive Peak

Forward Surge Current

