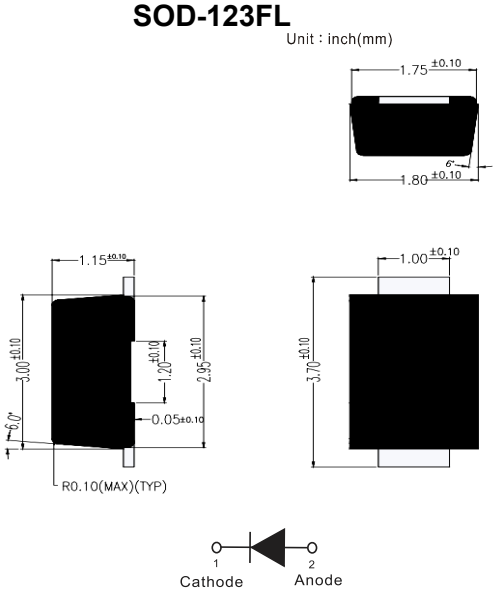
Surface Mount Super Fast Recovery Rectifier Diode

Features

- Glass passi vated junction chip
- Ideal for automated placement
- Low profile package
- Low power loss, high efficiency
- AEC-Q101 qualified
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

SOD-123FL

Unit : inch(mm)



Mechanical Data

- Case: SOD-123FL
- Molding compound meets UL 94 V-0 flammability rating
- Moisture sensitivity level: level 1, per J-STD-020
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test

Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	ES2D FLQ	ES2G FLQ	ES2J FLQ	Unit
Repetitive peak reverse voltage	V_{RRM}	200	400	600	V
Reverse voltage, total rms value	V_{RMS}	140	280	420	V
Maximum DC blocking voltage	V_{DC}	200	400	600	
Forward current	$I_{F(AV)}$	2			A
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode	I_{FSM}	40			A
Junction temperature	T_J	- 55 to +150			℃
Storage temperature	T_{STG}	- 55 to +150			℃

Thermal Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	Typ	Unit
Junction to Lead Thermal Resistance	$R_{\Theta JL}$	81	℃/W
Junction to Ambient Thermal Resistance	$R_{\Theta JA}$	116	℃/W

Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter		Conditions	Symbol	Typ	MAX	Unit
Forward voltage (1)	ES2DFLQ	I_F = 2A, T_J = 25℃	V_F	-	1.0	V
	ES2GFLQ			-	1.3	V
	ES2JFLQ			-	1.7	V
Reverse current @ rated V_R per diode (2)		T_J = 25℃	I_R	-	5	μA
		T_J = 125℃		-	100	μA
Junction capacitance		1 MHz, V_R=4V	C_J	15	-	pF
Reverse recovery time		I_F=0.5A , I_R=1.0A I_{RR}=0.25A	t_{rr}	-	35	nS

Notes:
1. Pulse test with PW=0.3 ms 2. Pulse test with PW=30 ms

Characteristics Curves

Fig1. Forward Current Derating Curve

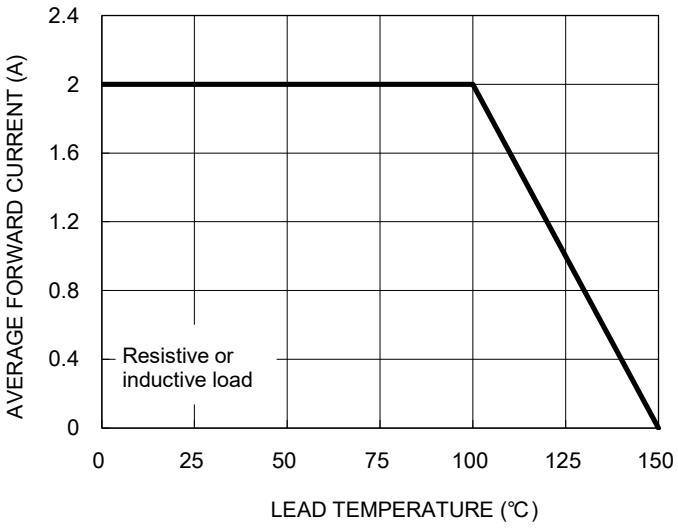


Fig2. Typical Junction Capacitance

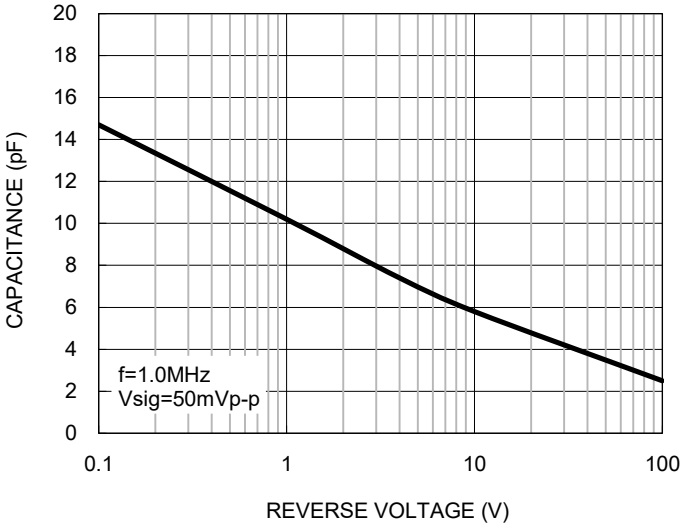


Fig3. Typical Reverse Characteristics

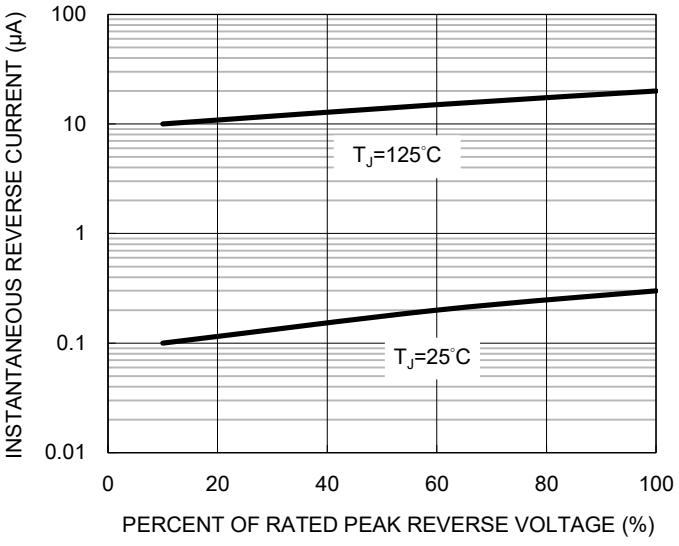


Fig4. Typical Forward Characteristics

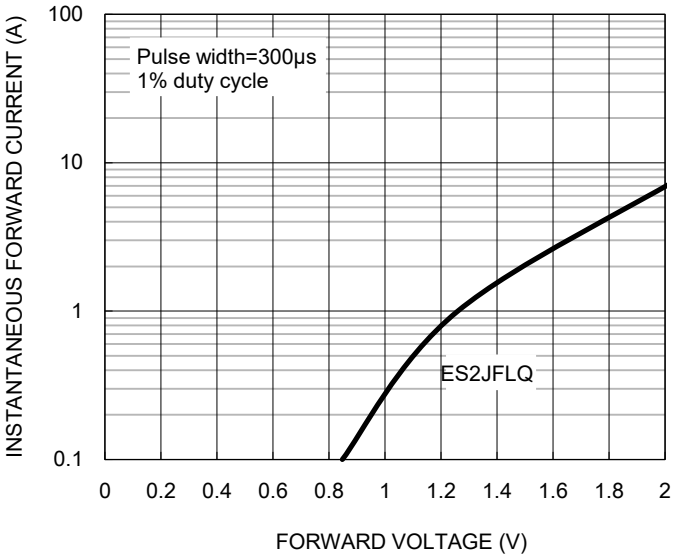


Fig5. Maximum Non-repetitive Forward Surge Current