

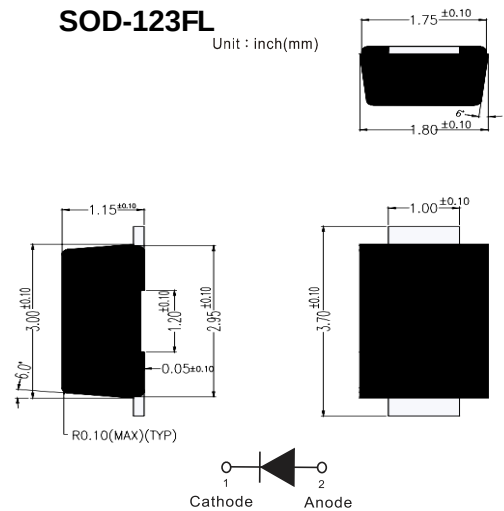
Surface Mount Rectifier Diode

Features

- Glass passivated junction chip
- Ideal for automated placement
- Low forward voltage drop
- High surge current capability
- Comply with RoHS standard, halogen-free

Mechanical Data

- package: SOD-123FL
- Polarity: Indicated by cathode band
- Epoxy: UL 94V-0 rate flame retardant
- Mounting Position : Any



Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter		Symbol	GS2002 FL	GS2004 FL	GS2006 FL	GS2008 FL	GS2010 FL	Unit
Repetitive peak reverse voltage		V _{RRM}	200	400	600	800	1000	V
Reverse voltage, total rms value		V _{R(RMS)}	140	280	420	560	700	V
DC blocking voltage		V _{DC}	200	400	600	800	1000	V
Forward current		I _F	2					A
Surge peak forward current single half sine- wave superimposed on rated load	8.3 ms at T _A = 25°C	I _{FSM}	40					A
	1.0 ms at T _A = 25°C		100					A
Junction temperature		T _J	-55 to +150					°C
Storage temperature		T _{STG}	-55 to +150					°C

Thermal Performance

Parameter	Symbol	Typ	Unit
Junction-to-lead thermal resistance	$R_{\theta JL}$	81	$^\circ\text{C/W}$
Junction-to-ambient thermal resistance	$R_{\theta JA}$	116	$^\circ\text{C/W}$
Junction-to-case thermal resistance	$R_{\theta JC}$	69	$^\circ\text{C/W}$

Thermal Performance Note: Units mounted on PCB (5mm x 5mm Cu pad test board)

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

Parameter	Conditions	Symbol	Typ	Max	Unit
Forward voltage ⁽¹⁾	$I_F = 1\text{A}, T_J = 25^\circ\text{C}$	V_F	0.90	-	V
	$I_F = 2\text{A}, T_J = 25^\circ\text{C}$		0.97	1.1	V
	$I_F = 1\text{A}, T_J = 125^\circ\text{C}$		0.81	-	V
	$I_F = 2\text{A}, T_J = 125^\circ\text{C}$		0.90	1.0	V
Reverse current @ rated V_R ⁽²⁾	$T_J = 25^\circ\text{C}$	I_R	-	5	μA
	$T_J = 125^\circ\text{C}$		-	100	μA
Junction capacitance	1 MHz, $V_R=4.0\text{V}$	C_J	10	-	pF

Notes: Pulse test with $PW=0.3\text{ ms}$ (2) Pulse test with $PW=30\text{ ms}$

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

Fig.1 Forward Current Derating Curve

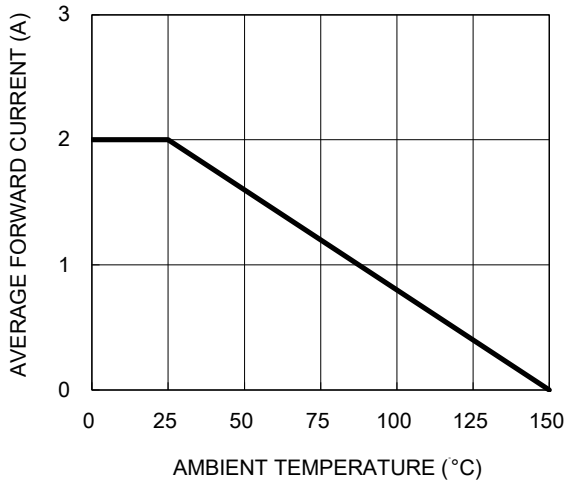


Fig.2 Typical Junction Capacitance

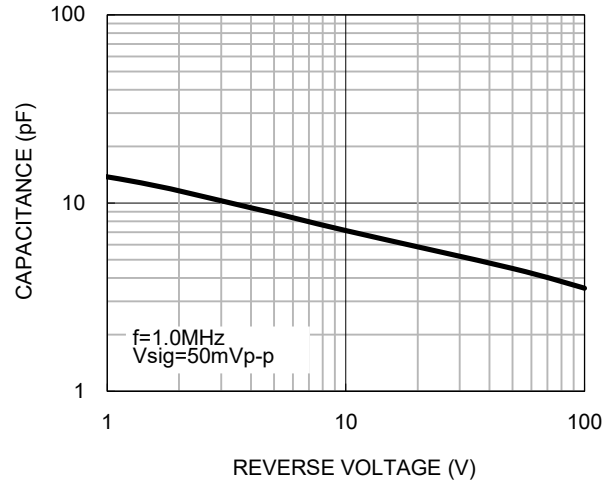


Fig.3 Typical Reverse Characteristics

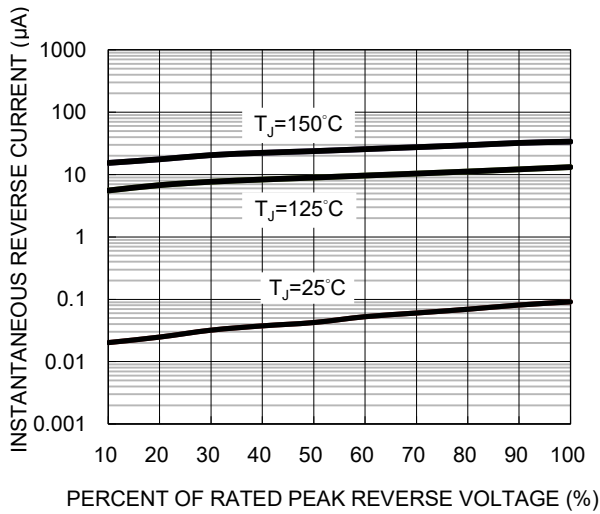


Fig.4 Typical Forward Characteristics

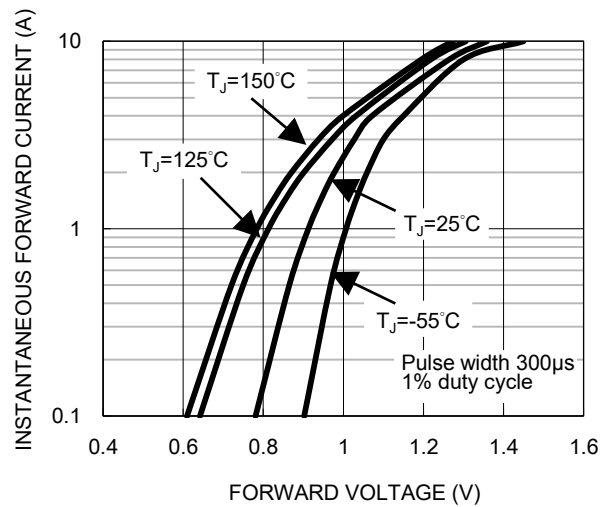


Fig.5 Typical Transient Thermal Impedance

