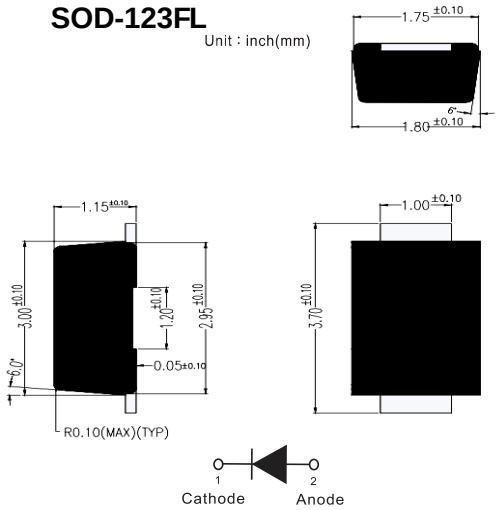
Surface Mount Rectifier Diode

Features

- Glass passivated junction chip
- Ideal for automated placement
- Low forward voltage drop
- High surge current capability
- AEC-Q101 qualified
- Comply with RoHS standard, halogen-free

SOD-123FL

Unit : inch(mm)



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°C unless otherwise noted)

Parameter		Symbol	GS2002 FLQ	GS2004 FLQ	GS2006 FLQ	GS2008 FLQ	GS2010 FLQ	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	°C/W
Junction-to-ambient thermal resistance	$R_{\Theta JA}$	116	°C/W
Junction-to-case thermal resistance	$R_{\Theta JC}$	69	°C/W

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

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

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

Notes: Pulse test with PW=0.3 ms (2) Pulse test with PW=30 ms

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

Fig.1 Forward Current Derating Curve

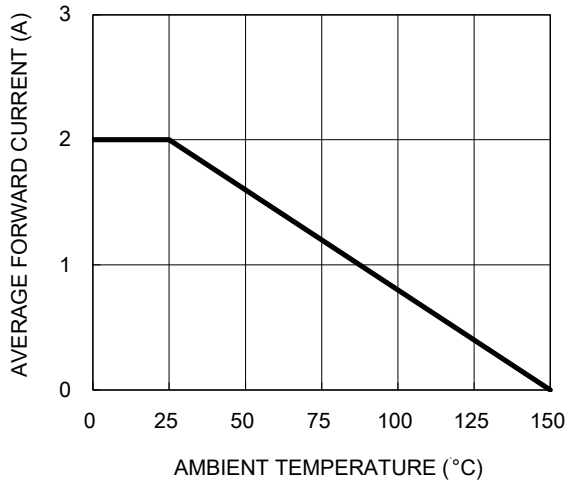


Fig.2 Typical Junction Capacitance

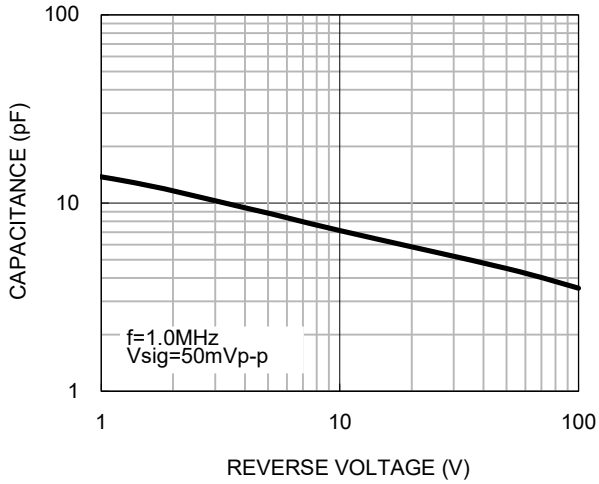


Fig.3 Typical Reverse Characteristics

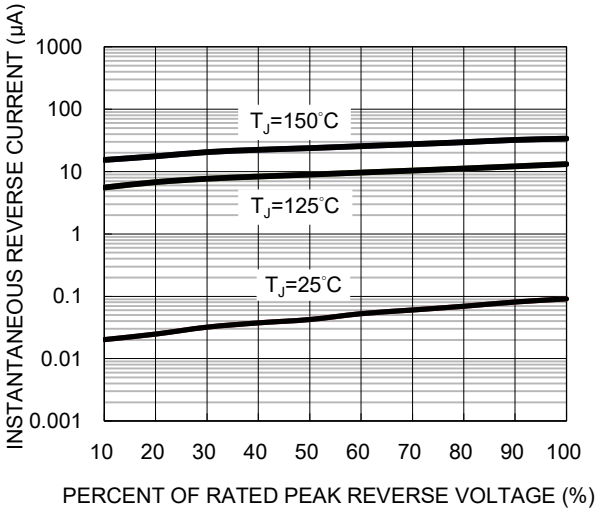


Fig.4 Typical Forward Characteristics

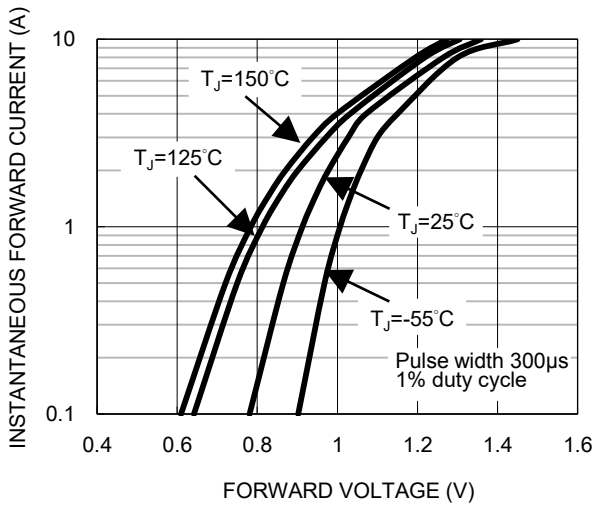


Fig.5 Typical Transient Thermal Impedance