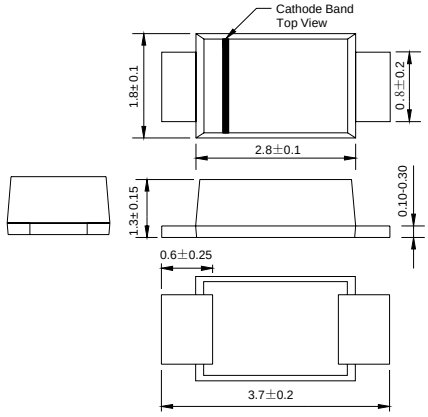
DAYA SEMICONDUCTOR

RoHS COMPLIANCE

F1A - F1M



Dimensions in millimeters SOD-123FL

Features

- Glass passivated junction.
- For surface mounted applications.
- Built in strain relief, ideal for automated placement.

1.0 Ampere Fast Recovery Rectifiers

Absolute Maximum Ratings*

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
I_O	Average Rectified Current @ T_A = 100°C	1.0	A
$i_{f(surge)}$	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	30	A
P_D	Total Device Dissipation Derate above 25°C	1.19 9.5	W mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient **	105	°C/W
$R_{\theta JC}$	Thermal Resistance, Junction to Case **	32	°C/W
T_{stg}	Storage Temperature Range	-55 to +150	°C
T_J	Operating Junction Temperature	-55 to +150	°C

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

**Device mounted on FR-4 PCB 0.013 mm.

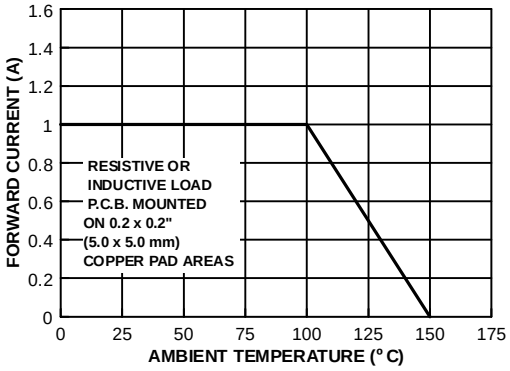
Electrical Characteristics

T_A = 25°C unless otherwise noted

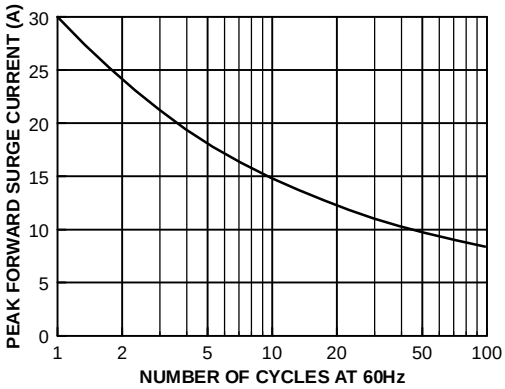
Parameter	Device							Units
	F1A	F1B	F1C	F1D	F1J	F1K	F1M	
Peak Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
DC Reverse Voltage (Rated V_R)	50	100	200	400	600	800	1000	V
Maximum Reverse Current @ rated V_R T_A = 25°C T_A = 125°C	5.0 50							µA µA
Maximum Forward Voltage @ 1.0 A	1.3							V
Maximum Reverse Recovery Time I_F = 0.5 A, I_R = 1.0 A, I_{rr} = 0.25 A	150				250	500		nS
Typical Junction Capacitance V_R = 4.0 V, f = 1.0 MHz	10							pF

Typical Characteristics

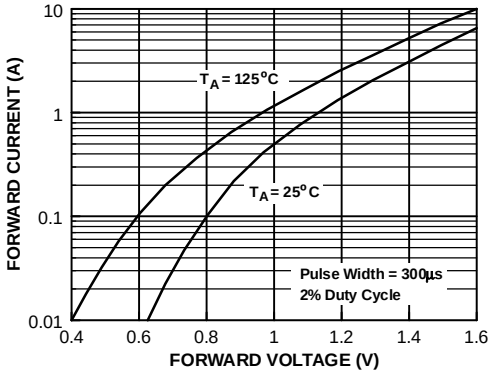
Forward Current Derating Curve



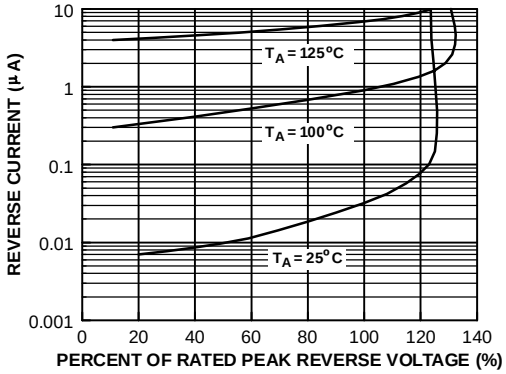
Non-Repetitive Surge Current



Forward Characteristics



Reverse Characteristics



Junction Capacitance