

# DFR1A~DFR1M



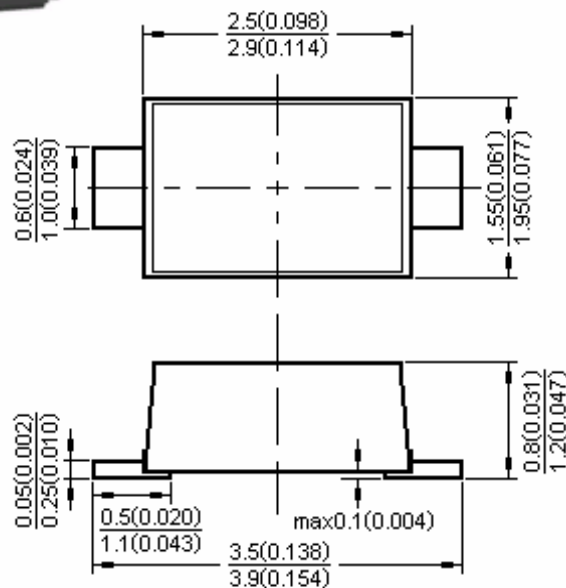
## Surface Mount Fast Recovery Rectifiers

### Features

- Low profile space
- Ideal for automated placement
- Glass passivated chip junctions
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering:  
260°C/10 seconds at terminals
- Component in accordance to  
RoHS 2002/95/1 and WEEE 2002/96/EC



SOD-123FL



Dimensions in millimeters and (inches)

### Mechanical Data

- **Case:** JEDEC SOD-123FL molded plastic body over glass passivated chip
- **Terminals:** Solder plated, solderable per J-STD-002B and JESD22-B102D
- **Polarity:** Laser band denotes cathode end

### Maximum Ratings & Thermal Characteristics & Electrical Characteristics

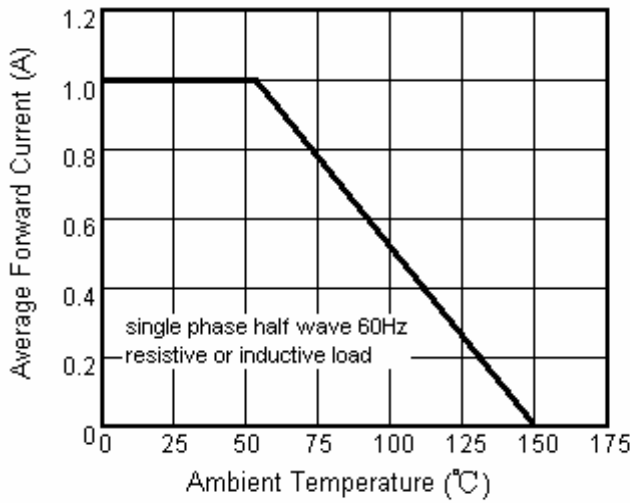
(TA = 25 °C unless otherwise noted)

	Symbol	DFR1A	DFR1B	DFR1D	DFR1G	DFR1J	DFR1K	DFR1M	UNIT
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	$I_{F(AV)}$	1							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	25							A
Maximum instantaneous forward voltage at 1.0A	$V_F$	1.3							V
Maximum DC reverse current at Rated DC blocking voltage	$I_R$	5.0 50							$\mu$ A
Maximum reverse recovery time at $I_F = 0.5$ A , $I_R = 1.0$ A , $I_{rr} = 0.25$ A	$t_{rr}$	150				250	500		nS
Typical junction capacitance at 4.0 V ,1MHz	$C_J$	15							p F
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150							°C

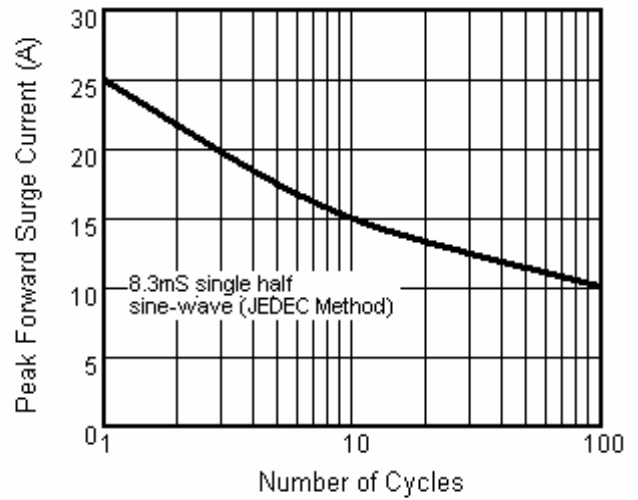
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Characteristic Curves ( $T_A=25^\circ\text{C}$  unless otherwise noted)

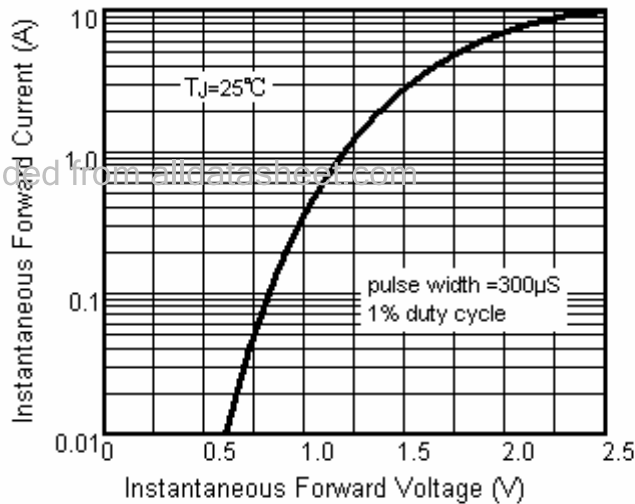
**Fig.1 Forward Current Derating Curve**



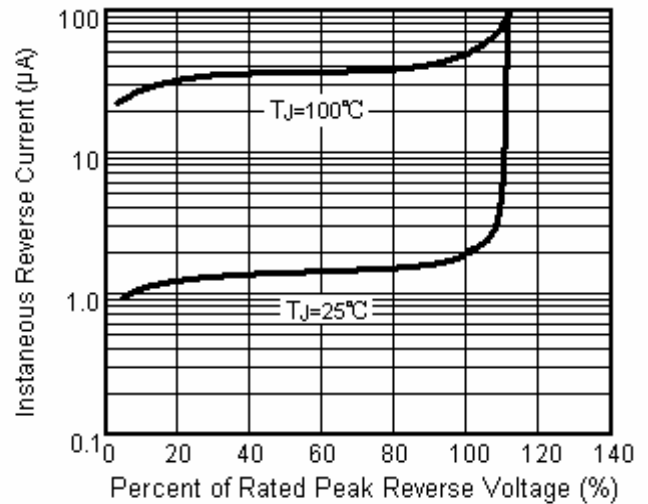
**Fig.2 Maximum Non-Repetitive Peak Forward Surge Current**



**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Reverse Characteristics**



**Fig.5 Typical Junction Capacitance**

