



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**FR03AFL  
THRU  
FR03MFL**

**TECHNICAL SPECIFICATIONS OF FAST RECOVERY RECTIFIER**

**VOLTAGE RANGE - 50 to 1000 Volts**

**CURRENT - 0.3 Ampere**

**FEATURES**

- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Low profile space
- \* Low forward voltage drop
- \* High forward surge capability
- \* Glass passivated junction

**MECHANICAL DATA**

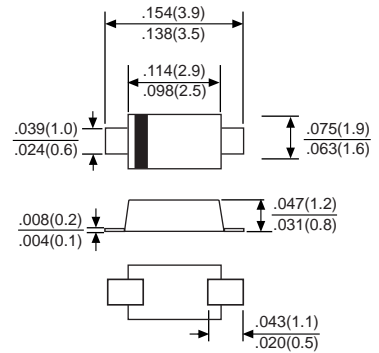
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 0.017 gram

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.



**SOD-123FL**



Dimensions in inches and (millimeters)

	SYMBOL	FR03AFL	FR03BFL	FR03DFL	FR03GFL	FR03JFL	FR03KFL	FR03MFL	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current	I <sub>O</sub>	0.3							Amps
Peak Forward Surge Current I <sub>FSM</sub> (surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	10							Amps
Maximum Forward Voltage at 0.3A DC	V <sub>F</sub>	1.3							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ T <sub>A</sub> = 25°C	5.0							uAmps
	@ T <sub>A</sub> = 125°C	50							
Maximum reverse recovery time at I <sub>F</sub> = 0.5A , I <sub>R</sub> = 1.0A , I <sub>rr</sub> = 0.25A	t <sub>r</sub>	150				250	500		nS
Typical thermal resistance	R <sub>θJA</sub>	60							°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to + 150							°C

NOTES :1. Mounted on FR-4 P.C.B. with 0.9X1.5 mm copper pads areas.

# RATING AND CHARACTERISTIC CURVES (FR03AFL THRU FR03MFL)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

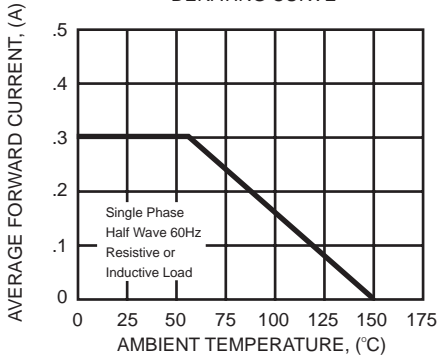


FIG. 2 - MAXIMUM NON-REPETITIVE FOREARD SURGE CURRENT

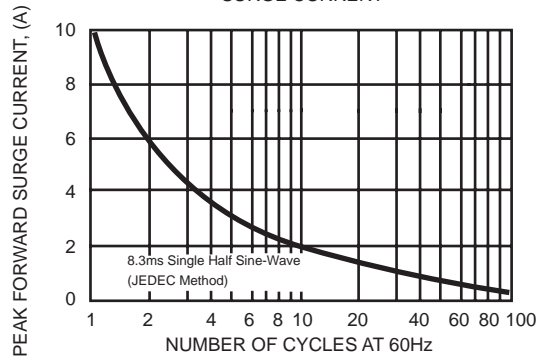


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

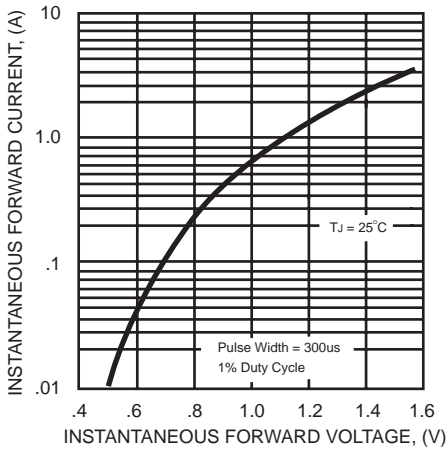
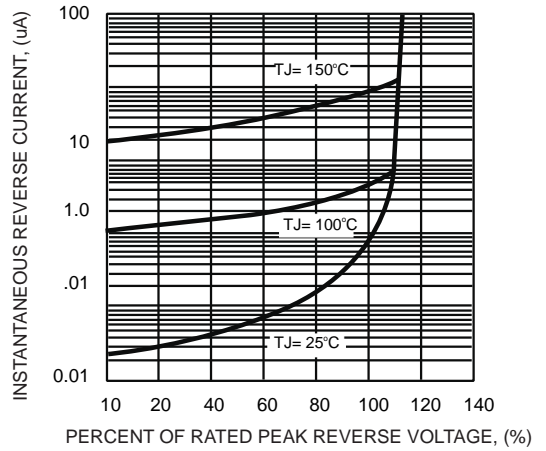


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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