

## SURFACE MOUNT FAST RECOVERY RECTIFIER

FR1A THRU FR1M

VOLTAGE RANGE  
CURRENT

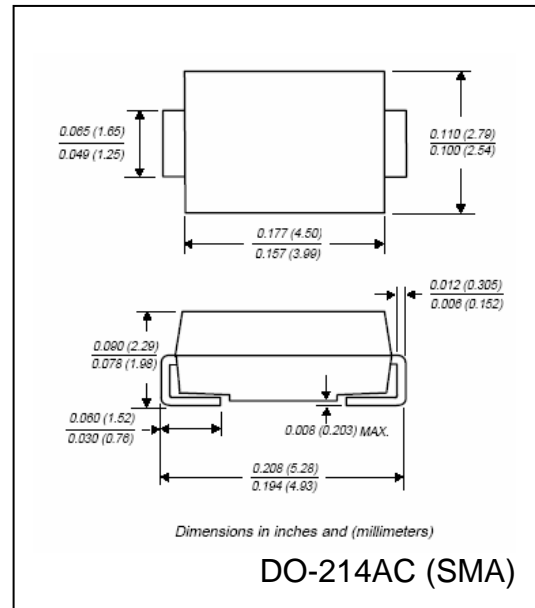
50 to 1000 Volts  
1.0 Ampere

### FEATURES

- Plastic package has UL flammability classification 94V-0
- Glass passivated chip junction
- Built in strain relief
- Fast switching speed for high efficiency
- High temperature Soldering guaranteed: 250°C/10 seconds at terminals

### MECHANICAL DATA

- Case: JEDEC DO-214AC transfer molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750 method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.002 ounce, 0.064 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOLS	FR1A	FR1B	FR1D	FR1G	FR1J	FR1K	FR1M	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current, At $T_L = 100^\circ\text{C}$	$I_{(AV)}$	1.0							Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30							Amps
Maximum Instantaneous Forward Voltage @ 1.0A	$V_F$	1.3							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element	$I_R$	5.0							$\mu\text{A}$
$T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$		50							
Maximum Reverse Recovery Time Test conditions $I_F = 0.5\text{A}$ , $I_R = 1.0\text{A}$ , $I_{RR} = 0.25\text{A}$	$t_{rr}$	150				250	500		nS
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	$C_J$	10					7		pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	105							$^\circ\text{C/W}$
	$R_{\theta JL}$	32							
Operating Junction Temperature Range	$T_J$	(-55 to +150)							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	(-55 to +150)							$^\circ\text{C}$

### Notes:

1. Thermal resistance from junction to ambient and from junction to lead mounted on PCB with 0.2" x 0.2" (5.0mm x 5.0mm) copper pad areas.

# RATINGS AND CHARACTERISTIC CURVES FR1A THRU FR1M

