

### REVERSE VOLTGE 50V~1000V

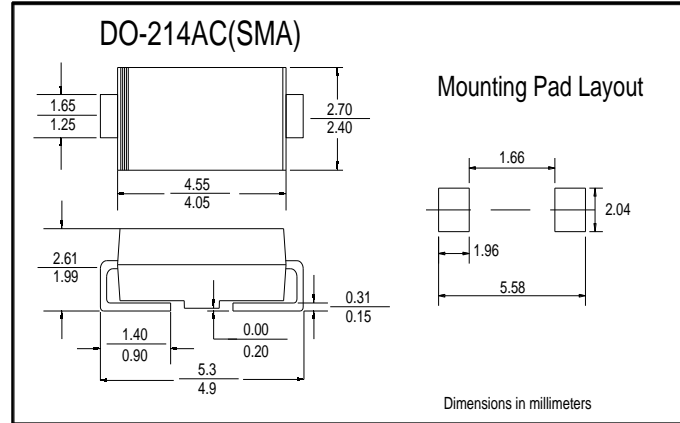
### FORWARD CURRENT 1.0AMP ULTRA-FAST RECTIFIER

#### Features

- ◆ For surface mounted application
- ◆ Low forward voltage drop
- ◆ Low profile package
- ◆ Built-in stain relief, ideal for automatic placement
- ◆ Fast switching for high efficiency
- ◆ High temperature soldering:  
250°C/10 seconds at terminals
- ◆ Plastic material used carries Underwriters Laboratory  
Classification 94V-O

#### Mechanical Data

- ◆ Cases: Molded plastic
- ◆ Terminals: Solder plated
- ◆ Polarity: Indicated by cathode band
- ◆ Weight: 0.002 ounce, 0.064 gram



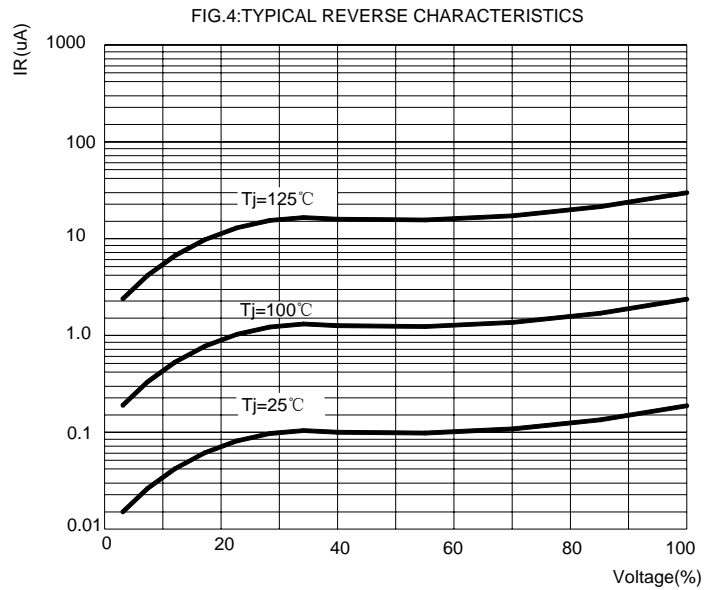
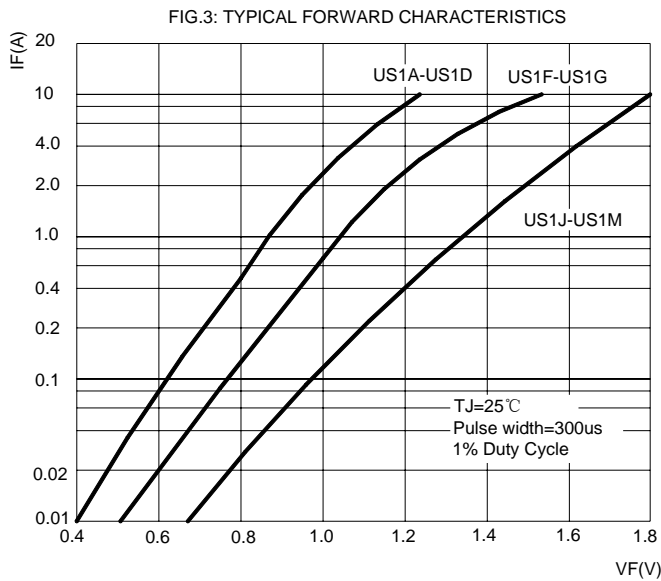
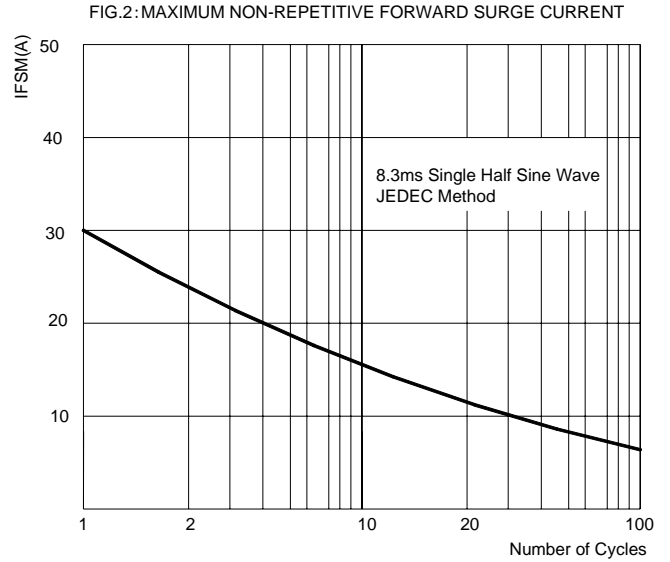
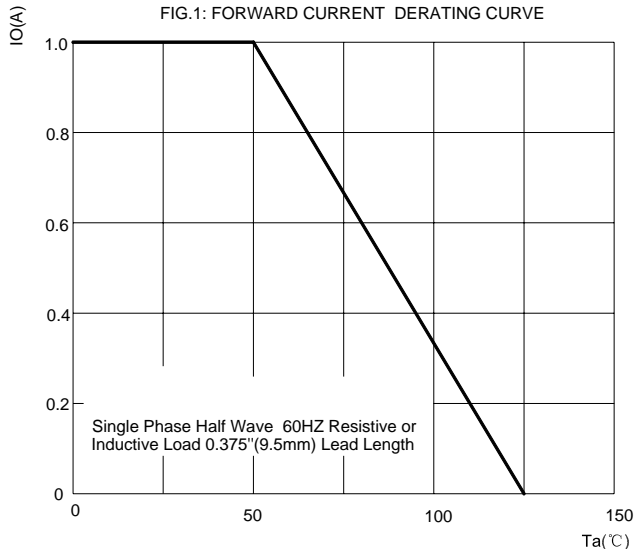
#### Maximum Ratings and Electrical Characteristics

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%

Parameter	Symbols	US1A	US1B	US1D	US1F	US1G	US1J	US1K	US1M	Units	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	300	400	600	800	1000	Volts	
Maximum RMS voltage	$V_{RMS}$	35	70	140	210	280	420	560	700	Volts	
Maximum DC blocking voltage	$V_{DC}$	50	100	200	300	400	600	800	1000	Volts	
Maximum average forward rectified current See Fig.2	$I_{(AV)}$	1.0								Amp	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30.0								Amps	
Maximum instantaneous forward voltage @ 1.0A	$V_F$	1.0				1.3		1.7		Volts	
Maximum DC reverse current at rated DC blocking voltage	$I_R$	5.0 50								$\mu$ A $\mu$ A	
Maximum reverse recovery time (Note 1)	$t_{rr}$	50					75				nS
Typical junction capacitance (Note 2)	$C_J$	20					15				pF
Operating junction temperature range	$T_J$	-55 to +150								°C	
Storage temperature range	$T_{STG}$	-55 to +150								°C	

**Notes:** 1. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$   
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

## RATINGS AND CHARACTERISTIC CURVES



**FIG.5: Diagram of circuit and Testing wave form of reverse recovery time**

