

# SU1A THRU SU1M

## SINTERED GLASS JUNCTION SURFACE MOUNTED RECTIFIER

VOLTAGE: 50 TO 1000V

CURRENT: 1.0A



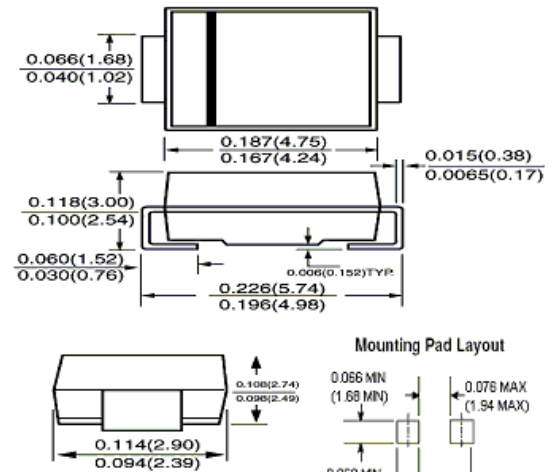
### FEATURE

Ideal for surface mount automotive applications  
High temperature metallurgically bonded construction  
Capability of meeting environmental standard of MIL-S-19500  
Fast switching for high efficiency  
High temperature soldering guaranteed  
450°C/5sec at terminal  
Complete device submersible temperature of 265°C for 10 seconds in solder bath

### MECHANICAL DATA

Terminal: Solder plated, solderable per MIL-STD 202, method 208C  
Case: Molded with UL-94 class V-0 recognized Flame Retardant Epoxy over Glass  
Polarity: color band denotes cathode end  
Mounting position: any

### GF1/DO-214BA



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

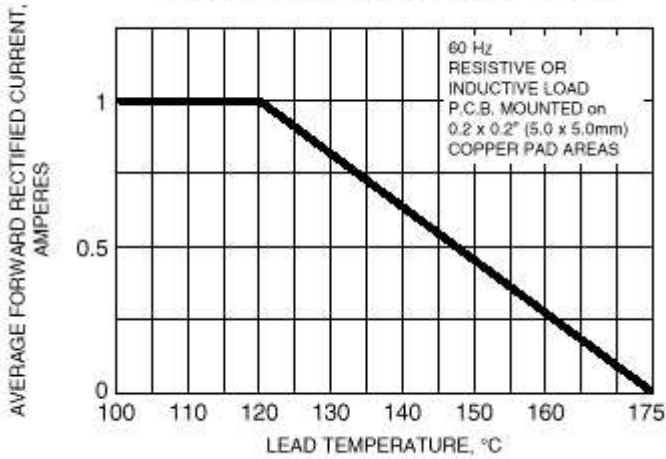
	SYMBOL	SU 1A	SU 1B	SU 1D	SU 1G	SU 1J	SU 1K	SU 1M	Units
Maximum Recurrent Peak Reverse Voltage	V <sub>rrm</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>rms</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking Voltage	V <sub>dc</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified current T <sub>L</sub> = 120°C	I <sub>f(av)</sub>	1.0							A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>fsm</sub>	30.0							A
Maximum Forward Voltage at 1.0A	V <sub>f</sub>	1.0		1.4		1.7		V	
Maximum full load reverse current full cycle average T <sub>a</sub> = 55°C	I <sub>r(av)</sub>	50.0							μ A
Maximum DC Reverse Current T <sub>a</sub> = 25°C at rated DC blocking voltage T <sub>a</sub> = 125°C	I <sub>r</sub>				10.0		50.0		μ A μ A
Maximum Reverse Recovery Time (Note 1)	T <sub>rr</sub>	50			75			nS	
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	8.5							pF
Typical Thermal Resistance (Note 3)	R(-) <sub>JA</sub> R(-) <sub>JL</sub>				85.0		28.0		°C / W
Storage and Operating Junction Temperature Range	T <sub>stg</sub> , T <sub>j</sub>	-65 to +175							°C

### Note:

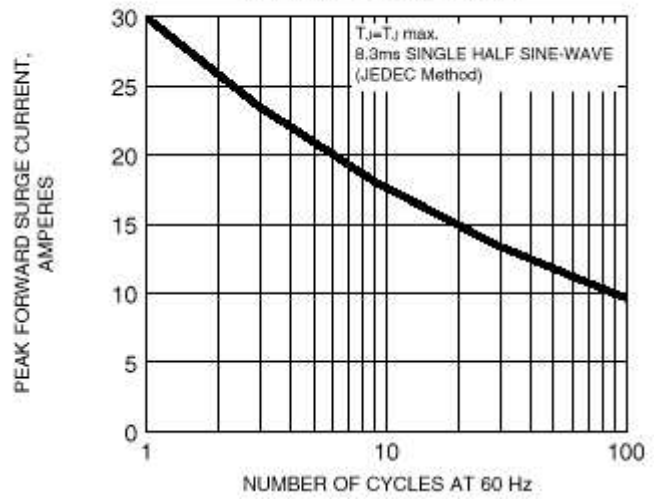
- Reverse Recovery Condition I<sub>f</sub> = 0.5A, I<sub>r</sub> = 1.0A, I<sub>rr</sub> = 0.25A
- Measured at 1.0 MHz and applied V<sub>r</sub> = 4.0V
- Thermal Resistance from Junction to Ambient and from junction to lead, P.C.B. Mounted on 0.2×0.2" (5.0×5.0mm) copper pad areas<sup>1</sup>

# RATINGS AND CHARACTERISTIC CURVES SU1A THRU SU1M

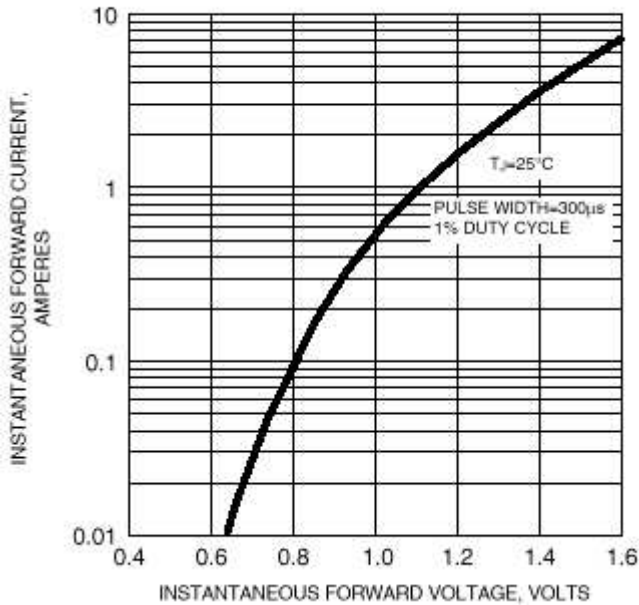
**FIG. 1 - FORWARD CURRENT DERATING CURVE**



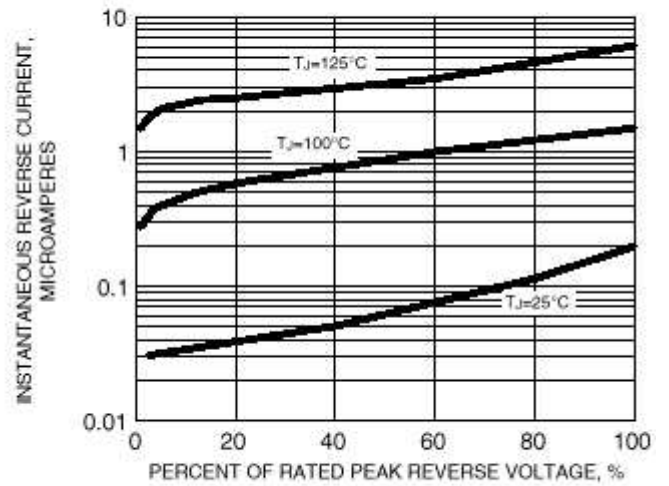
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

