

# **US1A THRU US1M**

1.0 AMP SURFACE MOUNT SILICON RECTIFIERS

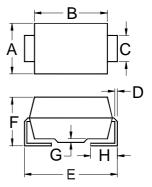
# **FEATURES**

- Ideal for surface mount pick and place application
- Low profile package
- Built-in strain relief
- High surge capability
- · Glass passivated chip
- Ultra fast recovery for high efficiency
- High temperature soldering guaranteed: 260°C/10sec/at terminal

#### **MECHANICAL DATA**

- Terminal: Plated leads solderable per MIL-STD 202E, method 208C
- Case: Molded with UL-94 Class V-O recognized flame retardant epoxy
- Polarity: Color band denotes cathode

## SMA/DO-214AC



	Α	В	С	D					
MAX.	.110(2.79)	.177(4.50)	.058(1.47)	.012(0.305)					
MIN.	.100(2.54)	.157(3.99)	.052(1.32)	.006(0.152)					
	Ė	F	G	Ή					
MAX.	.208(5.28)	.090(2.29)	.008(0.203)	.060(1.52)					
MIN.	.194(4.93)	.078(1.98)	.004(0.102)	.030(0.76)					
Dimensions in inches and (illimeters)									

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Single-phase, half-wave, 60Hz, resistive or inductive load rating at 25°C, unless otherwise stated, for capacitive load, derate current by 20%)

RATINGS	SYMBOL	US 1A	US 1B	US 1D	US 1G	US 1J	US 1K	US 1M	UNITS
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	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> =100°C)	I <sub>F(AV)</sub>	1.0					Α		
Peak Forward Surge Current (8.3ms single half sine-wave superimposed on rated load)	I <sub>FSM</sub>	30					Α		
Maximum Instantaneous Forward Voltage (at rated forward current)	V <sub>F</sub>	1.0 1.4 1.7				V			
Maximum DC Reverse Current T <sub>a</sub> =25°C	I <sub>R</sub>	5.0						μΑ	
(at rated DC blocking voltage) T <sub>a</sub> =100°C		200							μΑ
Maximum Reverse Recovery Time (Note 1)	trr	50			75		nS		
Typical Junction Capacitance (Note 2)	CJ	20 10				pF			
Typical Thermal Resistance (Note 3)	R <sub>θ</sub> (ja)	32					°C/W		
Storage and Operation Junction Temperature	T <sub>STG</sub> ,T <sub>J</sub>	-50 to +150					°C		

#### Note:

- 1.Reverse recovery condition I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A,Irr=0.25A.
- 2.Measured at 1.0 MHz and applied voltage of  $4.0 V_{\text{dc}}$
- 3.Thermal resistance from junction to terminal mounted on 5x5mm copper pad area