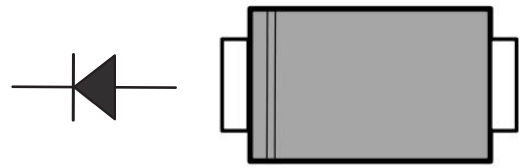


### Surface Mount Ultrafast Recovery Rectifier

Parameter	Value	Unit
$V_{RRM}$	50~1000	V
$I_{F(AV)}$	1.0	A



DO-214AC/SMA

#### Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- High efficiency

#### Applications

- For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer, automotive, and telecommunication.

#### Absolute Maximum Ratings and Characteristics (at $T_J = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	US1A	US1B	US1D	US1G	US1J	US1K	US1M	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_C=125^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	30							A
Maximum Instantaneous Forward Voltage at 1A	$V_F$	1.0		1.3		1.7		V	
Maximum DC Reverse Current $T_a=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_a=125^\circ\text{C}$	$I_R$	5 100							$\mu\text{A}$
Maximum Reverse Recovery Time (1)	$t_{rr}$	50				75			ns
Typical Thermal Resistance (2)	$R_{\theta JA}$	75							$^\circ\text{C/W}$
Typical Junction Capacitance (3)	$C_j$	15							pF
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150							$^\circ\text{C}$

#### Notes:

- (1) Measured with  $I_F = 0.5\text{A}$ ,  $I_R = 1\text{A}$ ,  $I_{rr} = 0.25\text{A}$ .
- (2) P.C.B. mounted with 2.0" X 2.0" (5 X 5cm) copper pad areas.
- (3) Measured at 1 MHz and applied reverse voltage of 4 VD.C

### Typical characteristics

Fig.1 Forward Current Derating Curve

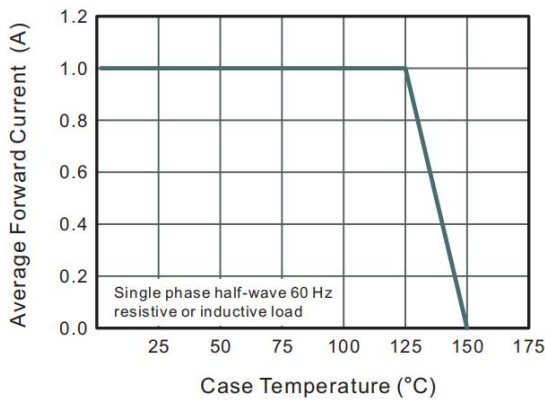


Fig.2 Typical Reverse Characteristics

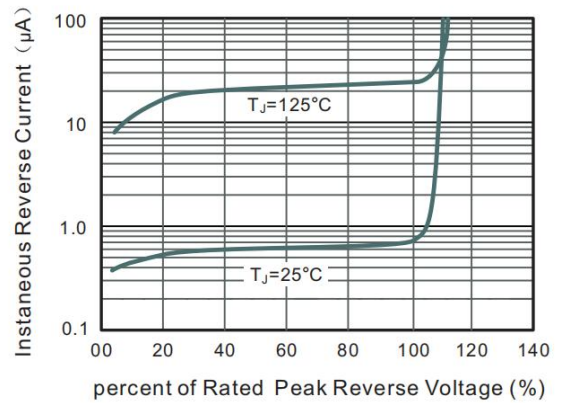


Fig.3 Typical Forward Characteristics

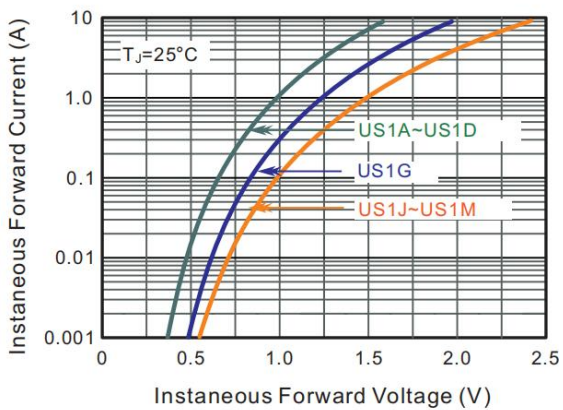


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

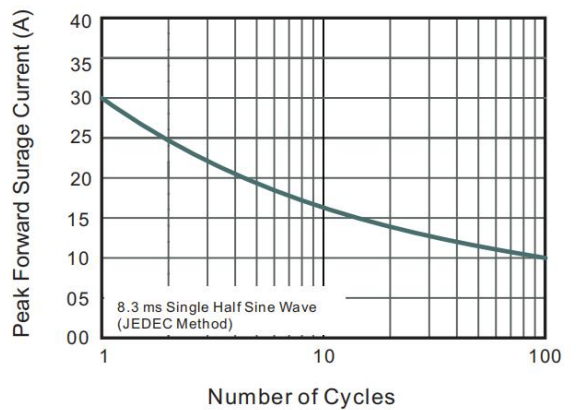


Fig.5- Typical Transient Thermal Impedance

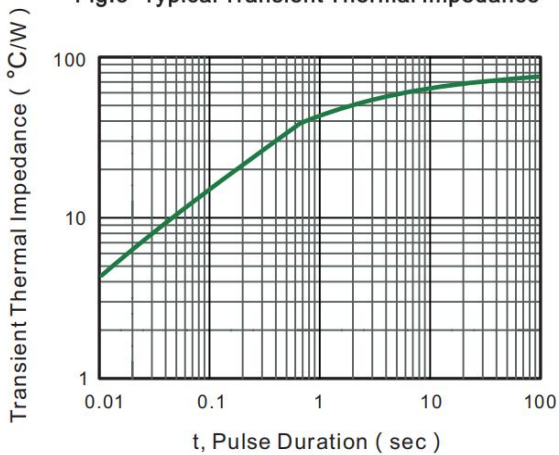
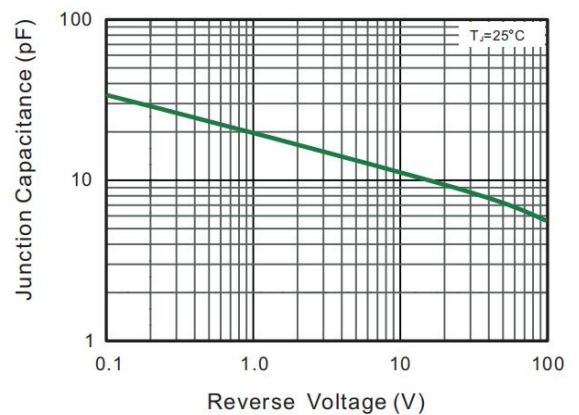
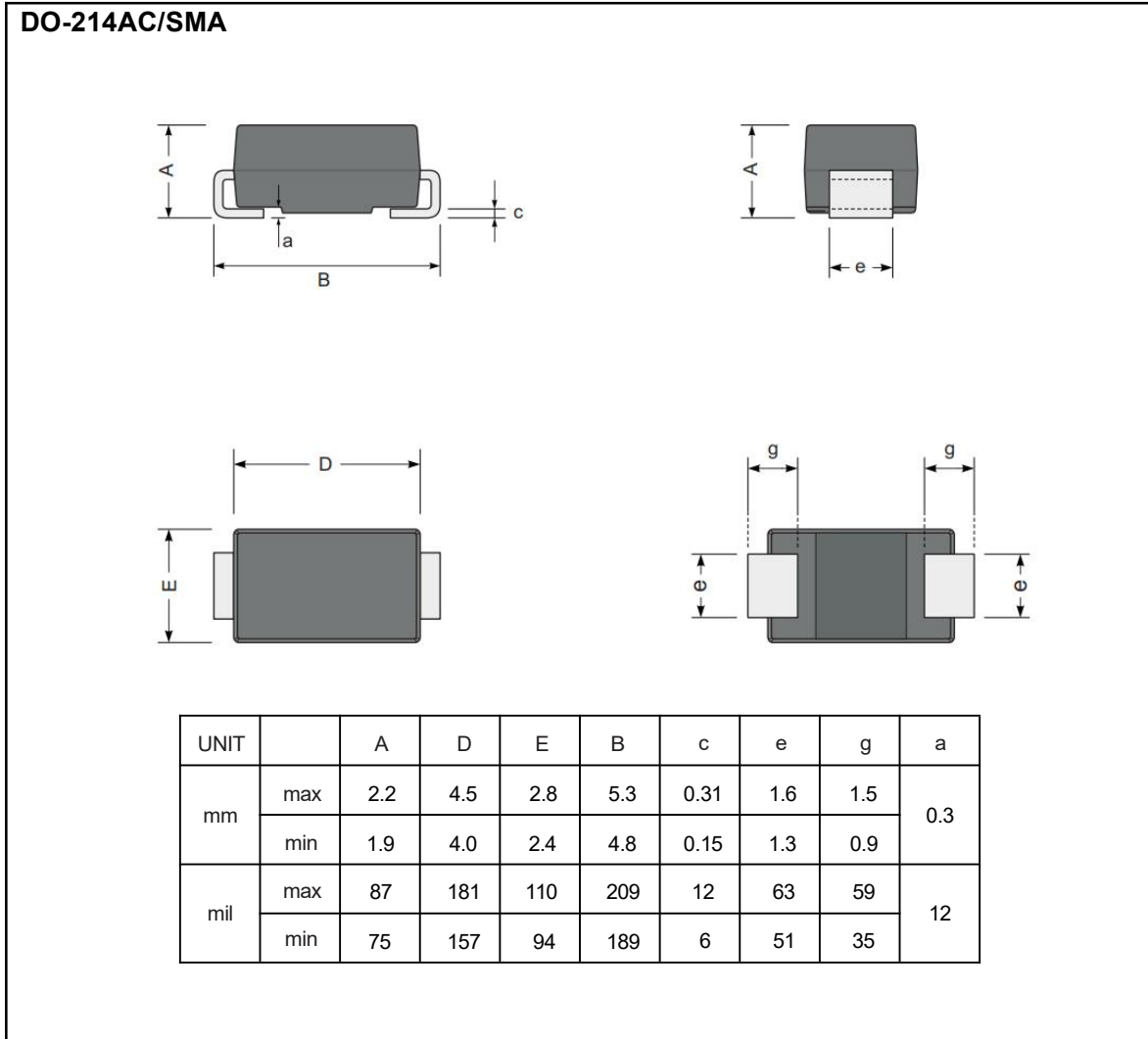


Fig.6 Typical Junction Capacitance

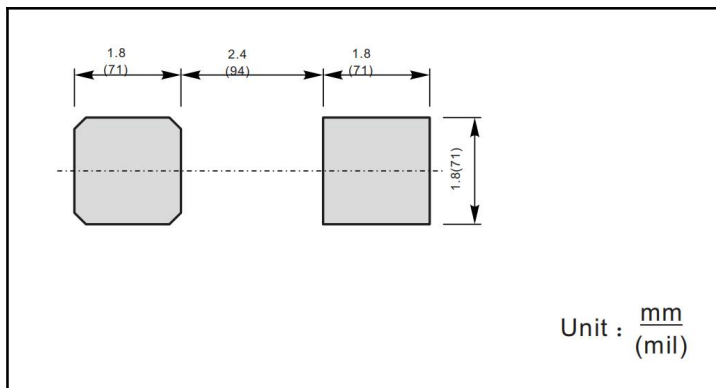


**Package outlines**

Plastic surface mounted package; 2 leads



**The recommended mounting pad size**



**Marking**

Type number	Marking code
US1A	US1A
US1B	US1B
US1D	US1D
US1G	US1G
US1J	US1J
US1K	US1K
US1M	US1M

**\*Important Usage Information and Disclaimer**

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