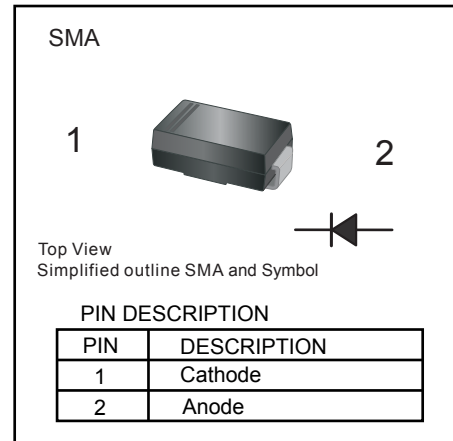


## Fast Recovery Rectifier

## FR101 ~ FR107

## ■ Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Fast switching for high efficiency
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed:  
250°C/10 seconds at terminals

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$  unless otherwise specified

Parameter	Symbol	FR 101	FR 102	FR 103	FR 104	FR 105	FR 106	FR 107	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Surge Peak Reverse Voltage	$V_{RSM}$	35	70	140	280	420	560	700	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	
Instantaneous Forward Voltage at $I_F=1\text{A}$	$V_F$	1.3							
Averaged Forward Current at $T_L=75^\circ\text{C}$	$I_{FAV}$	1							
Peak forward surge current	$I_{FSM}$	30							A
Maximum DC Reverse Current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$	5							$\mu\text{A}$
		50							
Reverse Recovery Time *1	$t_{rr}$	150			250	500			ns
Typical Junction Capacitance *2	$C_j$	15							pF
Typical thermal resistance *3	$R_{thJA}$	50							$^\circ\text{C}/\text{W}$
Junction Temperature	$T_j$	150							$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to 150							

\* 1 Reverse recovery condition  $I_F = 0.5\text{ A}$ ,  $I_R = 1\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$

\* 2 Measured at 1MHz and applied reverse voltage of 4V D.C

\* 3 P.C.B. mounted with 0.2×0.2" (5×5mm) copper pad areas

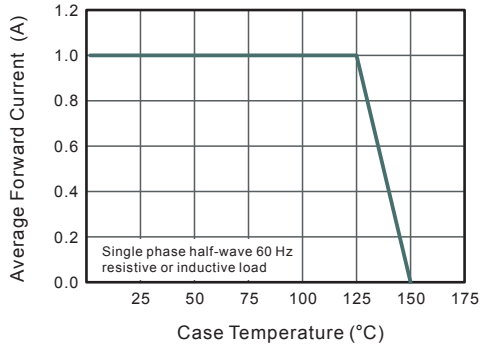
## ■ Marking

NO.	FR101	FR102	FR103	FR104	FR105	FR106	FR107
Marking	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M

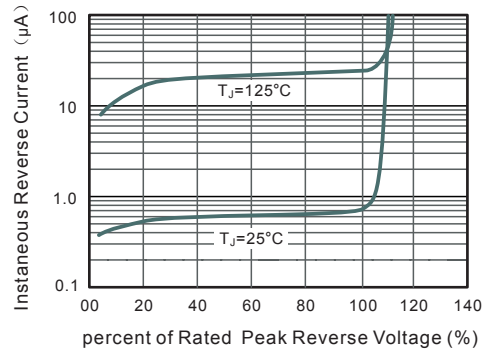
## Fast Recovery Rectifier FR101 ~ FR107

■ Typical Characteristics

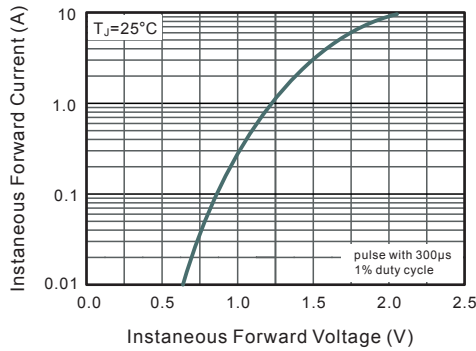
**Fig.1 Forward Current Derating Curve**



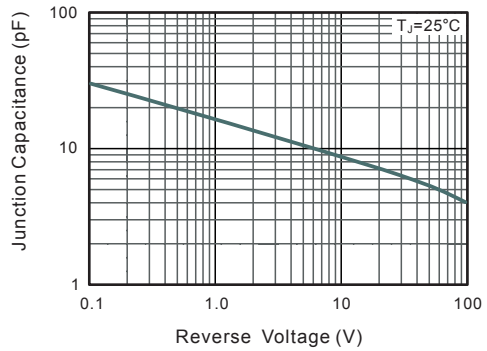
**Fig.2 Typical Reverse Characteristics**



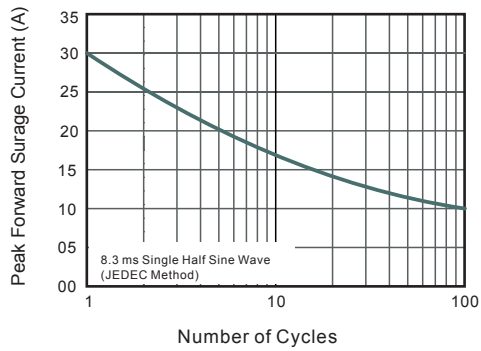
**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



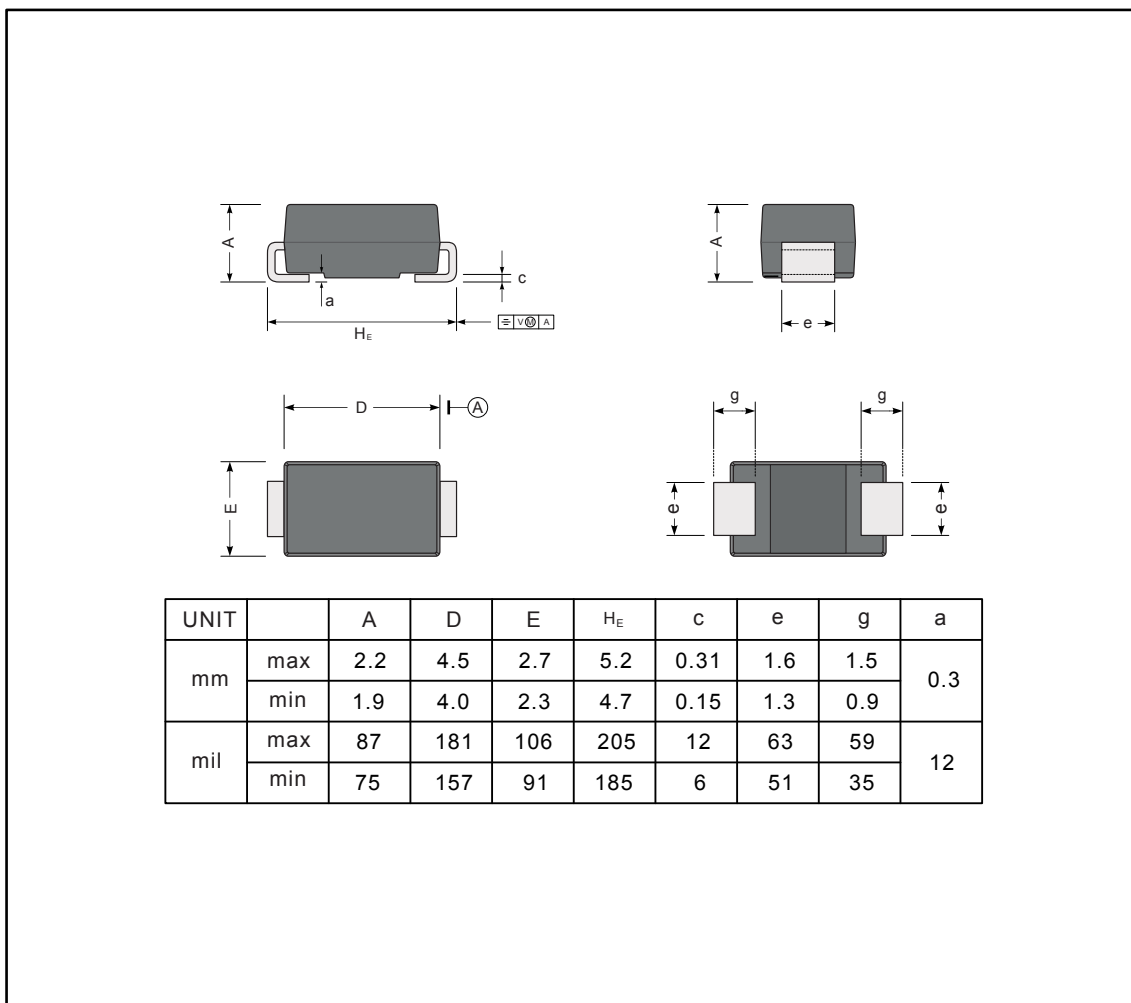
### Fast Recovery Rectifier

### FR101 ~ FR107

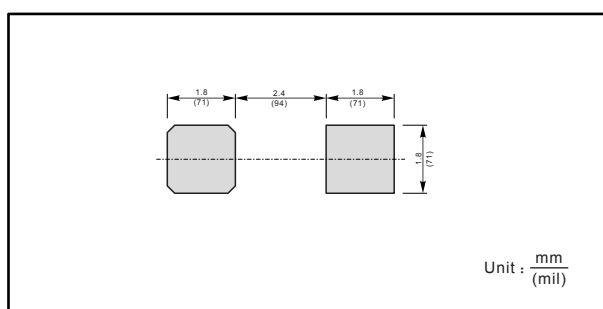
■ Package Outline Dimensions

Plastic surface mounted package; 2 leads

SMA



■ The recommended mounting pad size



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