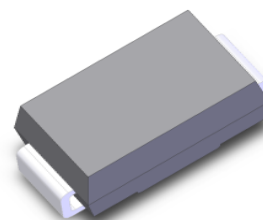


## Features

- Glass passivated Fast Recovery rectifiers
- Ideal for automated placement
- Low forward voltage drop
- High current capability
- Low reverse leakage current
- Solder dip 260 °C, 10 s
- Add suffix "E" for Halogen Free



DO-214AC(SMA)

## Typical Applications

For use of fast switching rectification in lighting, cellular phone, portable device, power supplies and other consumer applications.

Maximum Ratings (TA = 25 °C unless otherwise noted)										
Parameter	Symbol	GR1A	GR1B	GR1D	GR1G	GR1J	GR1K	GR1M	Unit	
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V	
Maximum RMS voltage	VRMS	35	70	140	280	420	560	700	V	
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	V	
Maximum average forward rectified current	IF(AV)	1.0								A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	30								A
Operating junction and storage temperature range	TJ, TSTG	- 55 to + 150								°C

Electrical Characteristics (TA = 25 °C unless otherwise noted)										
Parameter	Test Conditions	Symbol	GR1A	GR1B	GR1D	GR1G	GR1J	GR1K	GR1M	Unit
Maximum instantaneous forward voltage	1.0 A	V <sub>F</sub>	1.3							Volts
Maximum DC reverse current at rated DC blocking voltage	TA=25°C TA=125°C	I <sub>R</sub>	5 50							µA
Maximum reverse recovery time	I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A	t <sub>rr</sub>	150					250	500	nS
Typical junction capacitance	4.0 V, 1 MHz	C <sub>J</sub>	7.6							pF
Typical thermal resistance <sup>(1)</sup>		R <sub>θJA</sub>	61							°C/W
		R <sub>θJC</sub>	30							
		R <sub>θJL</sub>	6							

Note:1), The thermal resistance from junction to lead, mounted on P.C.B with 5x5mm copper pads, 2 OZ, FR4 PCB

## Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

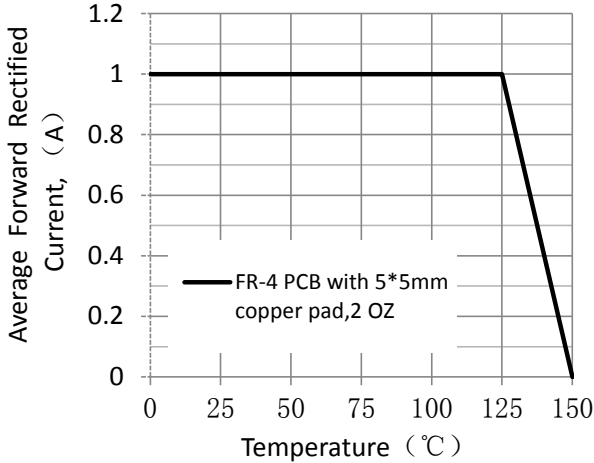


Figure 1. Forward Current Derating Curve

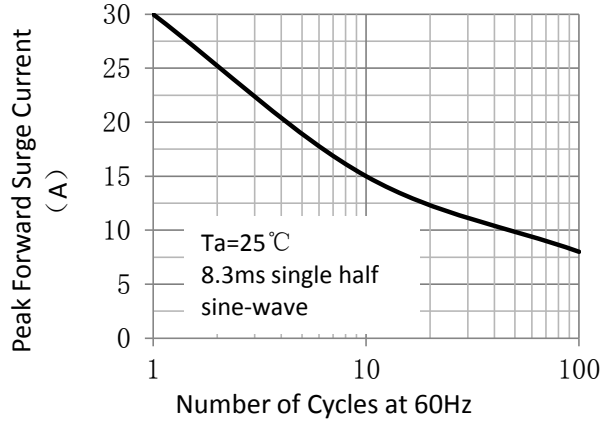


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

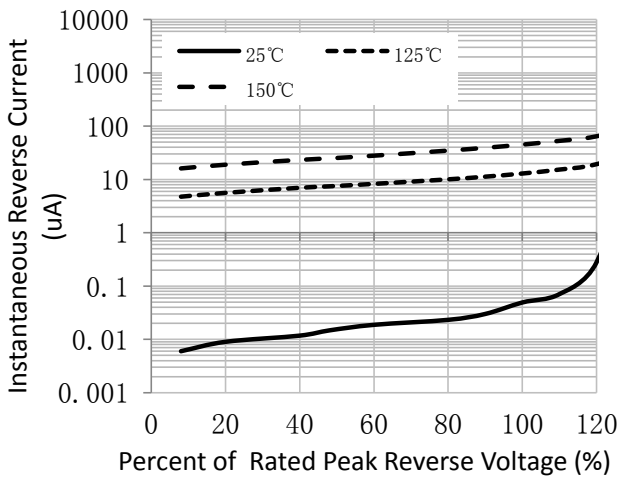


Figure 3. Typical Reverse Characteristics

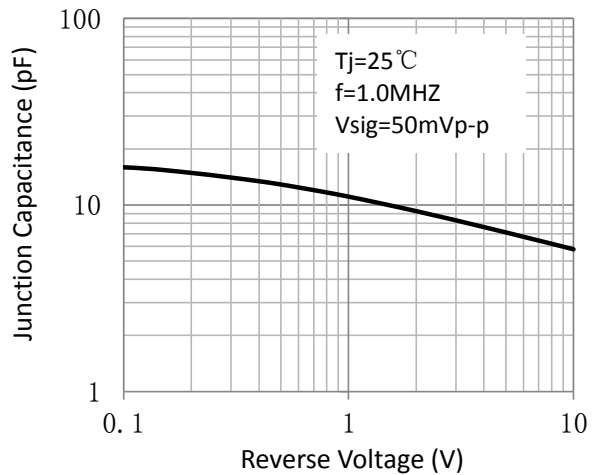


Figure 4. Typical Junction Capacitance

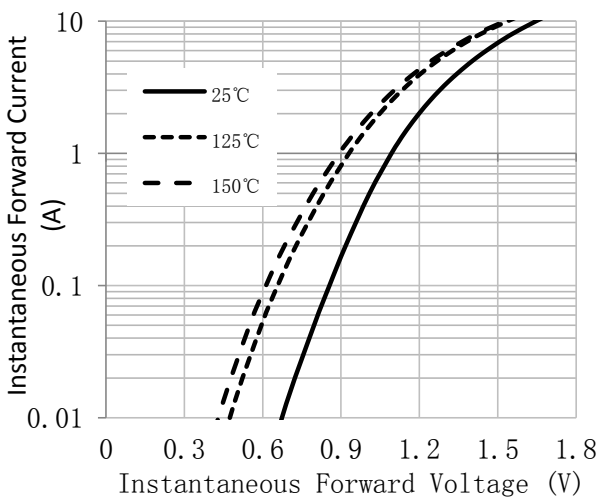
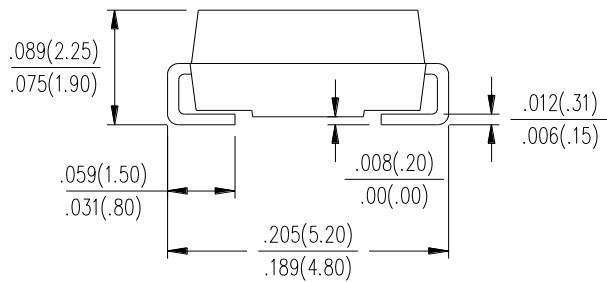
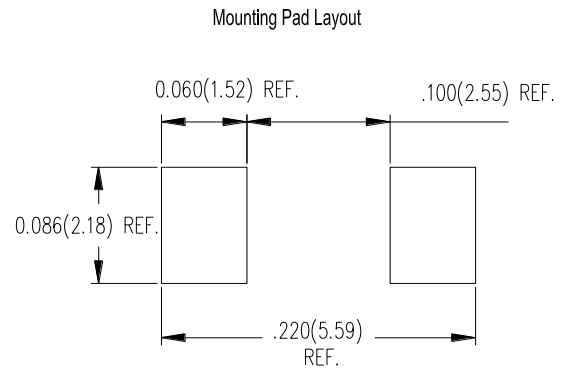
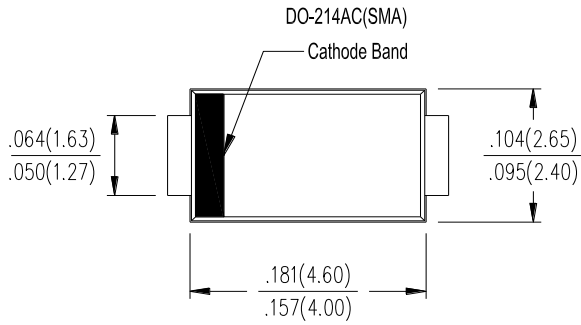


Figure 5. Typical Instantaneous Forward Characteristics

## Package Outline Dimensions

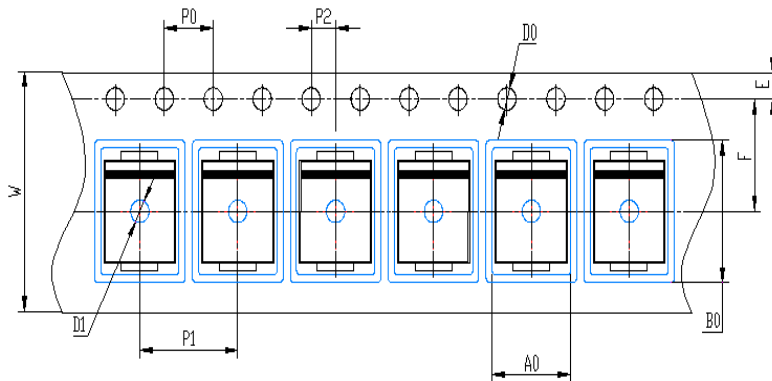
in inches (millimeters)



## Packing Information

7500 pcs/Reel, 18 Reels/Box; 12mm Tape, 13" Reel

### Tape & Reel Specification



Symbols	SMA(mm)
W	$12 \pm 0.2$
E	$1.75 \pm 0.1$
F	$5.5 \pm 0.05$
D0	$1.5 \pm 0.1$
D1	$1.50 +0.1/-0$
P0	$4.0 \pm 0.1$
P1	$4.0 \pm 0.1$
P2	$2.0 \pm 0.05$
A0	$2.65 \pm 0.1$
B0	$5.25 \pm 0.1$



# **GR1A thru GR1M**

Surface Mount Glass Passivated Fast Recovery Rectifier  
Reverse Voltage 50~1000V Forward Current 1.0A

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