

## SUF205A

### Ultra Fast Power Rectifier

#### Features

- Ideal for surface mount applications
- Easy pick and place
- Built-in strain relief
- Super Fast switching speed under 35nsapplication.
- RoHS compliant package

#### Mechanical Data

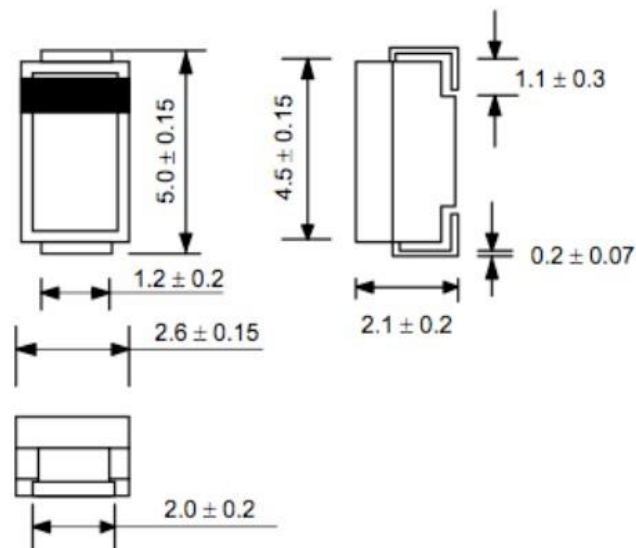
- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Metallurgically bonded construction
- Polarity: Color band denotes cathode end
- Mounting position: Any
- Weight: 0.063 grams

**Package type :** SMA

#### Packing &Order Information

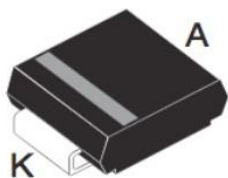
5,000/Reel

#### SMA (DO-214AC)



**Dimensions in millimeters**

#### Graphic symbol



**RoHS**  
COMPLIANT

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

#### Maximum Ratings (Tc=25°C unless otherwise noted)

Parameter	Symbol	SUF205A	Unit
Maximum repetitive peak reverse voltage	VRRM	600	V
Maximum RMS Voltage	VRMS	420	V
Maximum DC blocking voltage	VDC	600	V
Maximum average forward rectified current Total device	IF(AV)	2	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	50	A
Operating junction temperature range	TJ	-55 to +175	°C
Storage temperature range	TSTG	-55 to +175	°C

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#### Electrical characteristics (Tc=25°C unless otherwise noted)

Parameter	Symbol	Value		Unit
		Typical	Max	
Instantaneous forward voltage at IF=1A, Tj=25°C	VF	1.5	1.7	V
Maximum reverse current per leg Tj=25°C	IR	5		u'A
at working peak reverse voltage Tj=100°C		80		m'A
Maximum Reverse Recovery Time	Trr	35		ns
Typical Junction Capacitance (Note)		15		pF

#### Thermal characteristics (Tc=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Typical thermal resistance	RθJA	75	°C/W
	Rthjl	20	

#### Notes:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Device mounted FR-4 PCB 0.013mm

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■ TYPICAL CHARACTERISTICS @  $T_a=25^\circ\text{C}$  unless otherwise specified

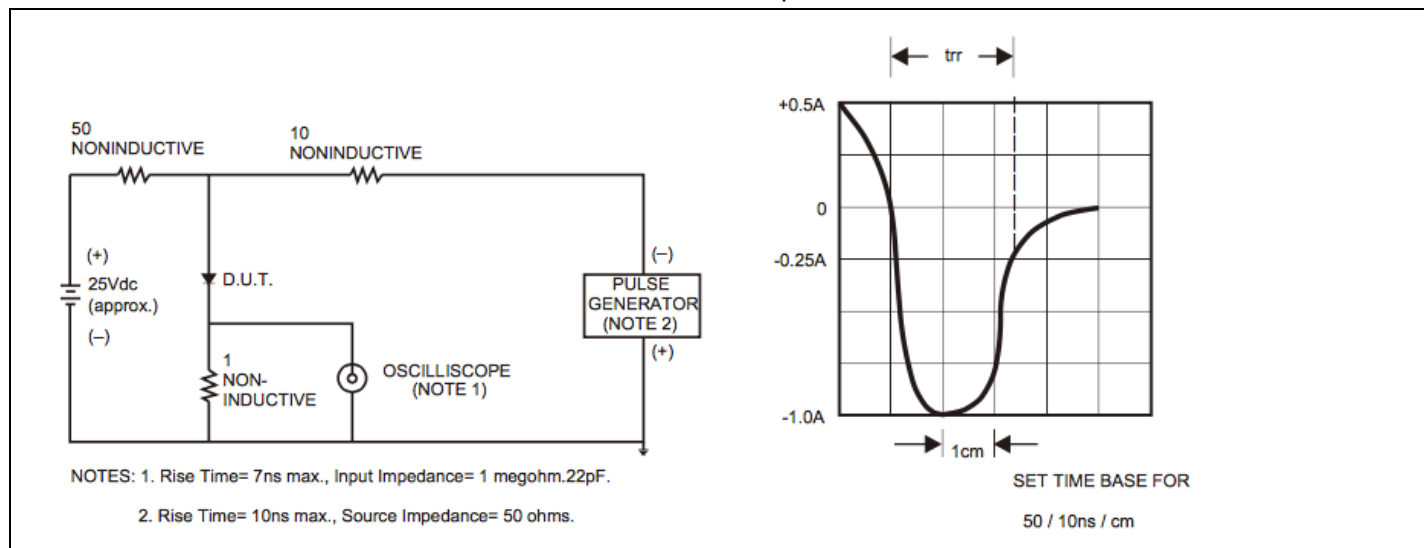


FIG.1- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

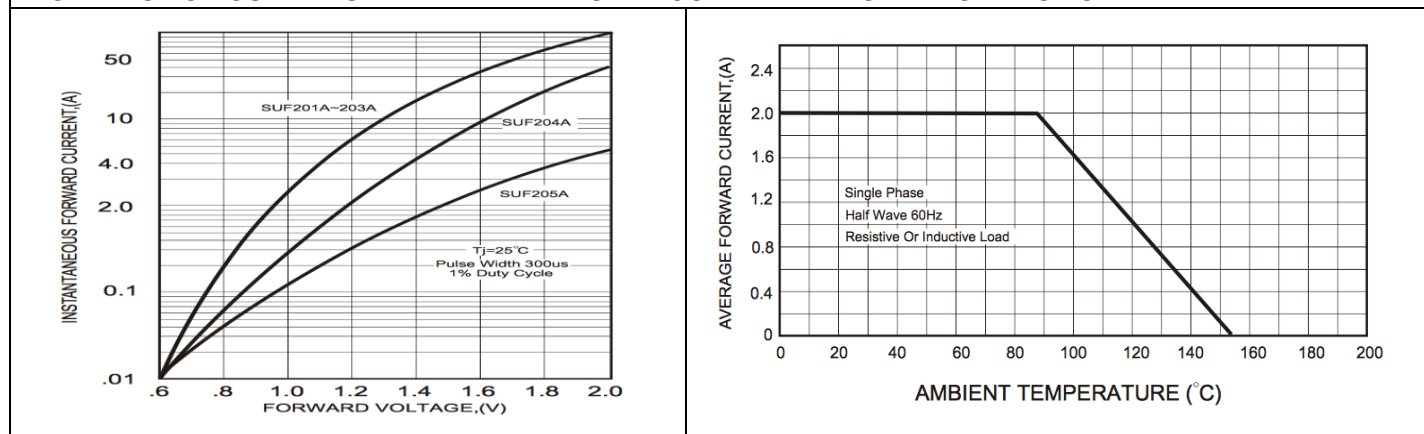


FIG.2- TYPICAL FORWARD CHARACTERISTIC

FIG.3- FORWARD DERATING CURVE

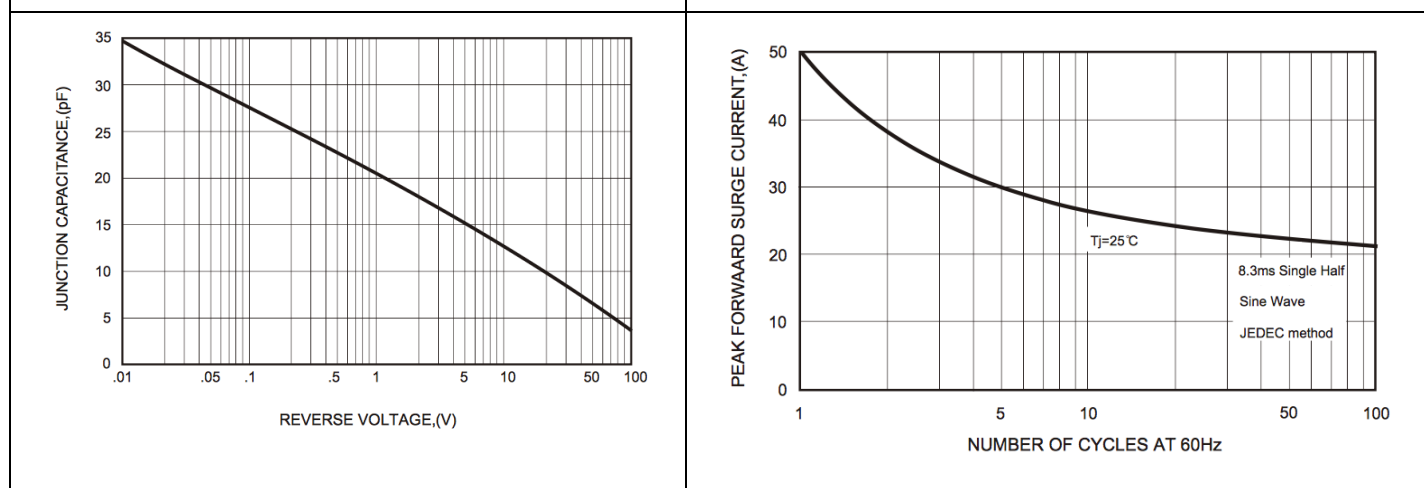


FIG.4- TYPICAL JUNCTION CAPACITANCE

FIG.5- PEAK FORWARD SURGE CURRENT

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#### Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE

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