



### Features

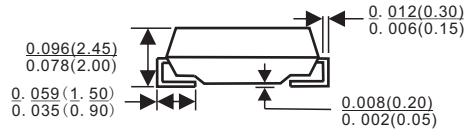
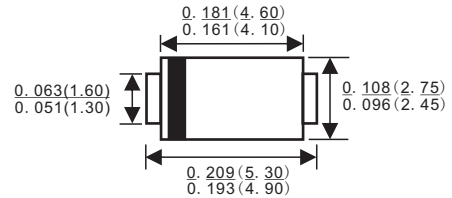
- ✧ For surface mounted application
- ✧ Glass passivated junction chip.
- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ Easy pick and place
- ✧ High surge current capability
- ✧ Plastic material used carries Underwriters Laboratory Classification 94V-0
- ✧ High temperature soldering: 260°C / 10 seconds at terminals

### Mechanical Data

- ✧ Case: Molded plastic
- ✧ Polarity: Indicated by cathode band
- ✧ Packaging: 12mm tape
- ✧ Weight: 0.064 gram

### Marking Information

### SMA/DO-214AC



**LGE: Lu Guang Electronic**  
**XXXX: marking code (S1A-S1Y)**

Dimensions in inches and(millimeters)

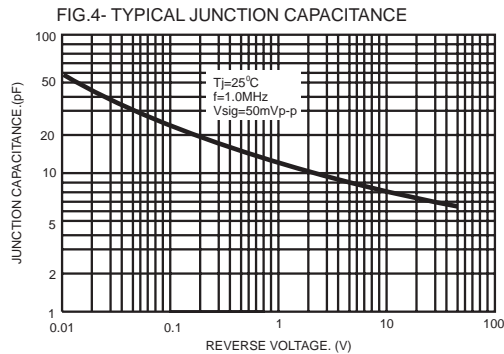
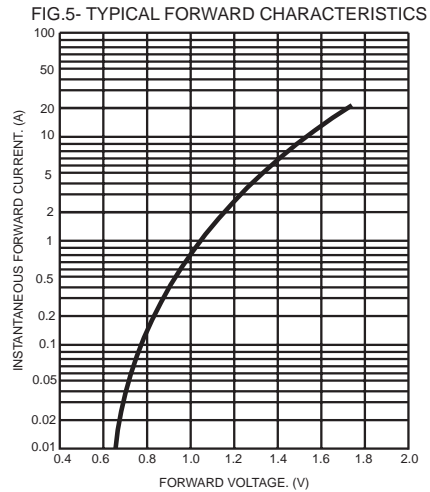
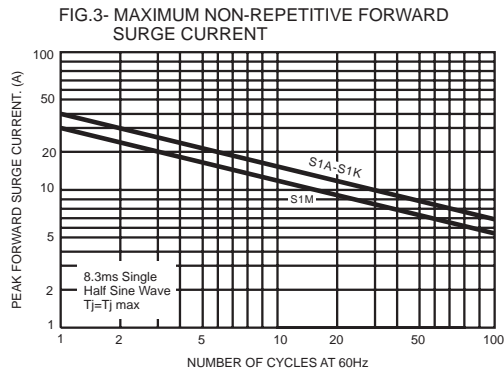
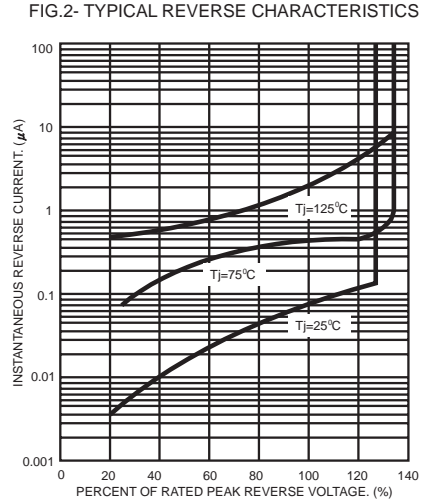
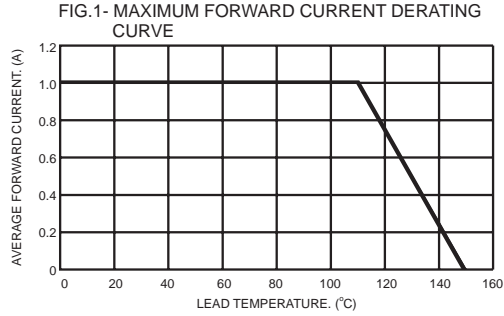
### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%

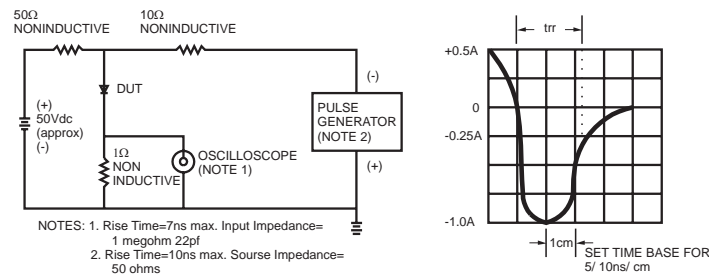
Type Number	Symbol	S1A	S1B	S1D	S1G	S1J	S1K	S1M	S1T	S1W	S1X	S1Y	Units	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	1300	1600	1800	2000	V	
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	760	780	840	900	V	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	1300	1600	1800	2000	V	
Maximum Average Forward Rectified Current @ $T_L = 110^\circ\text{C}$	$I_{(AV)}$	1.0											A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	30											A	
Maximum Instantaneous Forward Voltage @ 1.0A	$V_F$	1.1											V	
Maximum DC Reverse Current @ $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$	$I_R$	1.0											uA	
		50											uA	
Typical Reverse Recovery Time (Note 1)	$T_{rr}$	1.5											uS	
Typical Junction Capacitance ( Note 2 )	$C_j$	12											pF	
Non-Repetitive Peak Reverse Avalanche Energy at 25°C, $I_{AS}=1\text{A}$ , $L=10\text{mH}$	$E_{AS}$	5											mJ	
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$	27					30			85				°C/W
	$R_{\theta JA}$	75					85							
Operating Temperature Range	$T_J$	-55 to +150											°C	
Storage Temperature Range	$T_{STG}$	-55 to +150											°C	

- Notes:
- Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$
  - Measured at 1 MHz and Applied  $V_R=4.0$  Volts
  - Measured on P.C. Board with 0.2" x 0.2" (5.0mm x 5.0mm) Copper Pad Areas.

## RATINGS AND CHARACTERISTIC CURVES (S1A THRU S1M)



**FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMA	5000/REEL	80000	36X30.6X31	12.00	11.00

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