



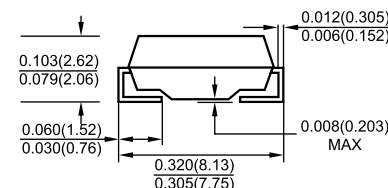
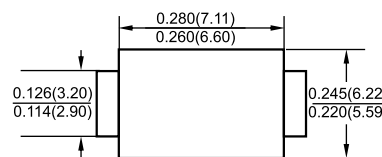
## Features

- ◇ Low cost
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with Alcohol, Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

## Mechanical Data

- ◇ Case: JEDEC DO-214AB, molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.007 ounces, 0.21 grams
- ◇ Mounting position: Any

## SMC/DO-214AB



Dimensions in inches and (millimeters)

## Marking Information



**LGE:** Lu Guang Electronic  
**XXXX:** marking code (US5A-US5M)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

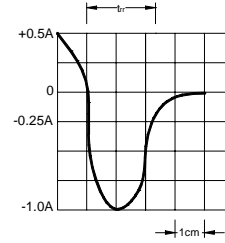
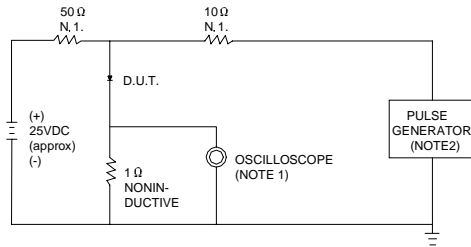
		US5A	US5B	US5D	US5G	US5J	US5K	US5M	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current @ $T_L=90^\circ\text{C}$	$I_{F(AV)}$				5.0				A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	$I_{FSM}$				100				A
Maximum instantaneous forward voltage at 5.0 A	$V_F$		1.0		1.4		1.7		V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=125^\circ\text{C}$	$I_R$				10				$\mu\text{A}$
					300				
Typical reverse recovery time (Note1)	$t_{rr}$		50				75		ns
Typical junction capacitance (Note2)	$C_J$		15				12		pF
Typical thermal resistance (Note3)	$R_{\theta JA}$				15				$^\circ\text{C/W}$
Operating junction temperature range	$T_J$				- 55 ---- + 150				$^\circ\text{C}$
Storage temperature range	$T_{STG}$				- 55 ---- + 150				$^\circ\text{C}$

NOTE: 1. Measured with  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$ .

2. Measured at 1.0MHZ and applied reverse voltage of 4.0V DC.

## Ratings AND Characteristic Curves

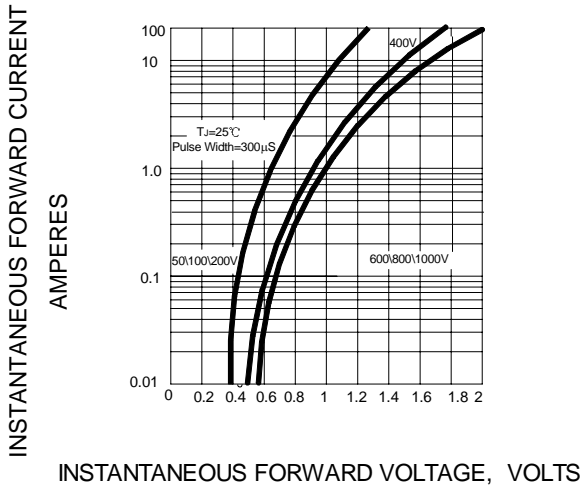
**FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**



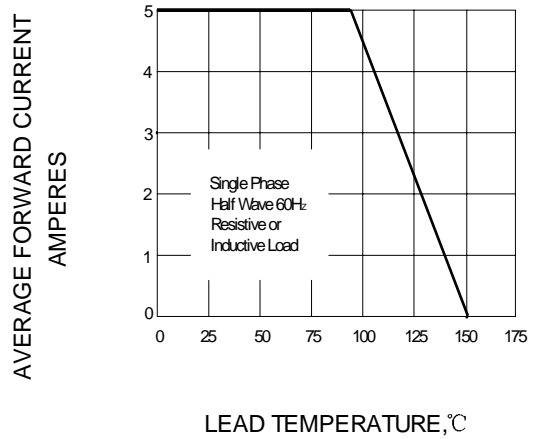
NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ .22pF.  
2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω.

SET TIME BASE FOR 20/30 ns/cm

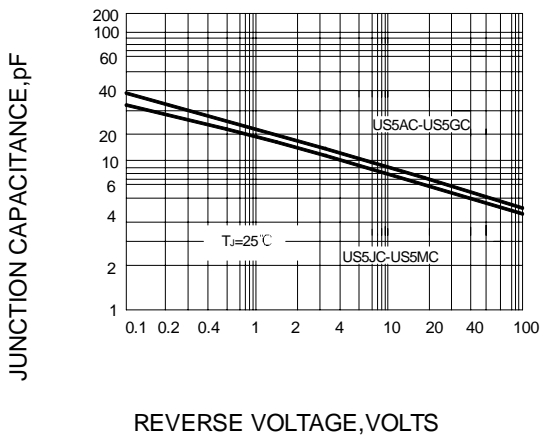
**FIG.2 – TYPICAL FORWARD CHARACTERISTIC**



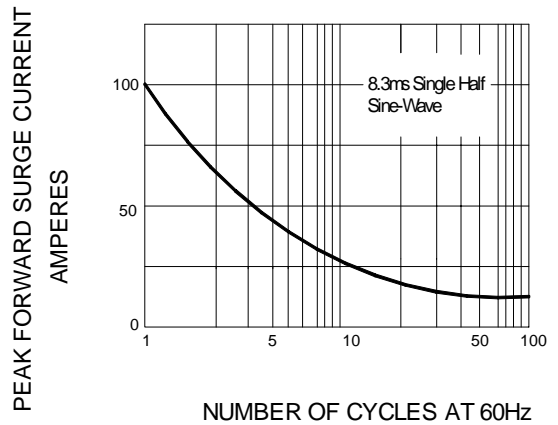
**FIG.3 – FORWARD DERATING CURVE**



**FIG.4 – TYPICAL JUNCTION CAPACITANCE**



**FIG.5 – PEAK FORWARD SURGE CURRENT**



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMC	3000/REEL	42000	36X36X36.5	18.50	15.50