

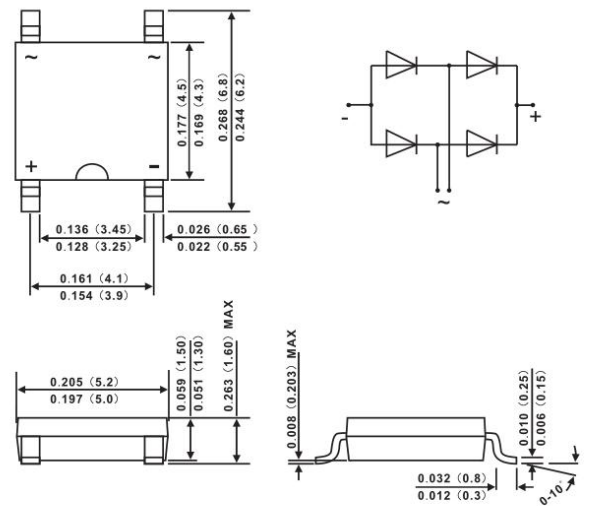


### LBR201SA THRU LBR210SA

### Features

- Fast recovery glass passivated chip
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering: 260°C/10S at terminals
- Component in accordance to ROHS 2002/95/1 and WEEE 2002/96/EC

### ABS



Dimensions in inches and (millimeters)

### Mechanical Data

- Case: Molded plastic body
- Molding compound meets UL 94 V-0 flammability rating, Halogen-free, RoHS-compliant, and commercial grade
- Polarity: Molded on body
- Weight: 0.003 ounce, 0.10 grams

### Maximum Ratings and Electrical Characteristics

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

TYPE NUMBER	SYMBOL	LBR 201SA	LBR 202SA	LBR 203SA	LBR 204SA	LBR 206SA	LBR 208SA	LBR 210SA	UNITS
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current $T_L=100^\circ\text{C}$	$I_{(AV)}$	2.0							Amp
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method)	$I_{FSM}$	60							Amps
Maximum Instantaneous Forward Voltage @ 2.0A	$V_F$	1.3							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A = 25^\circ\text{C}$	5.0							$\mu\text{A}$
	$T_A = 125^\circ\text{C}$	100							
Maximum Reverse Recovery Time $T_J=25^\circ\text{C}$ (Note 3)	$T_{RR}$	150				250			nS
Typical Junction Capacitance (Note 1)	$C_J$	30							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	26							$^\circ\text{C}/\text{W}$
	$R_{\theta JL}$	65							
Operating Junction Temperature Range	$T_J, T_{STG}$	(-55 to +150)							$^\circ\text{C}$

#### Notes:

1. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
2. Thermal Resistance test performed in accordance with JESD-51. Unit mounted on 15mm\*12mm\*1.6mm AL pad attach 195mm\*110mm\*10mm steel plate.
3. Reverse Recovery Test Conditions:  $I_f=0.5\text{mA}$ ,  $I_r=1.0\text{mA}$ ,  $I_{rr}=0.25\text{A}$
4. The typical data above is for reference only



### Ratings and Characteristic Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

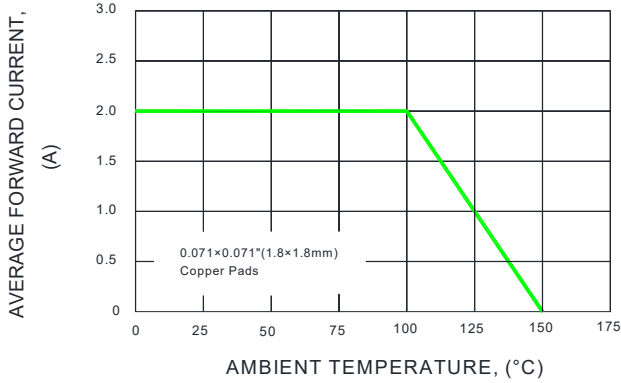


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

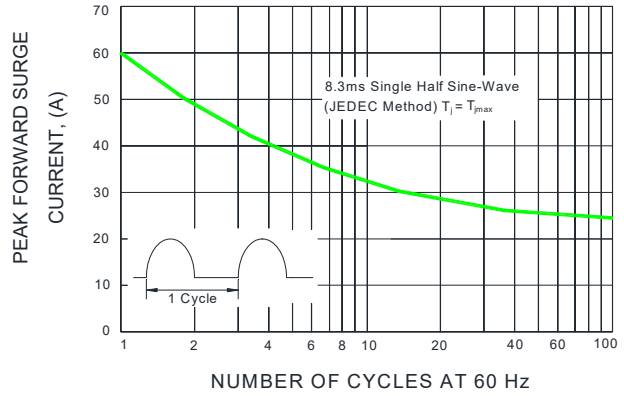


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

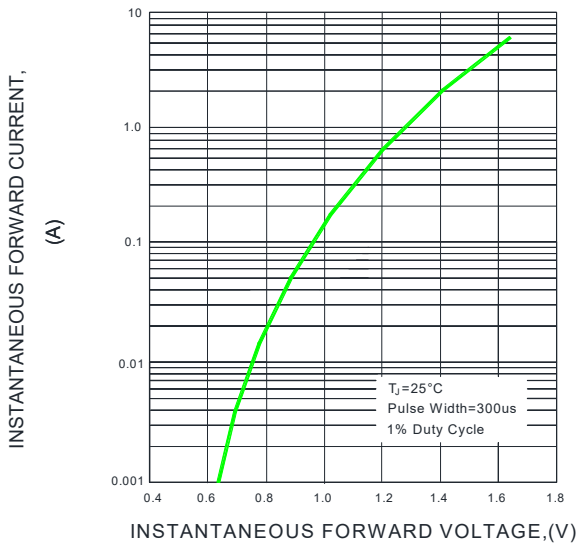


FIG.4-TYPICAL REVERSE CHARACTERISTICS

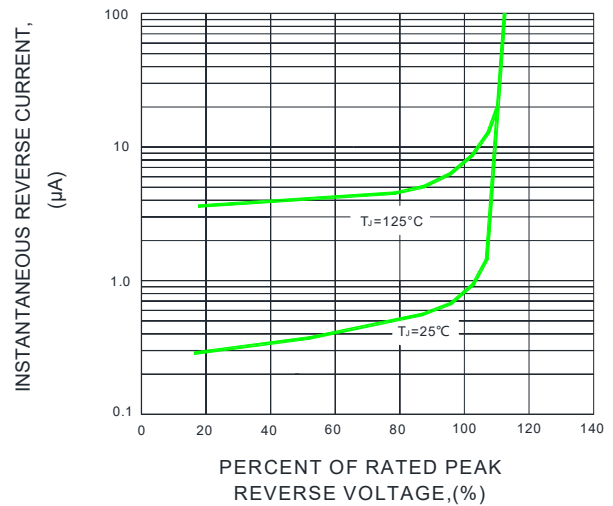


FIG.5-TYPICAL JUNCTION CAPACITANCE

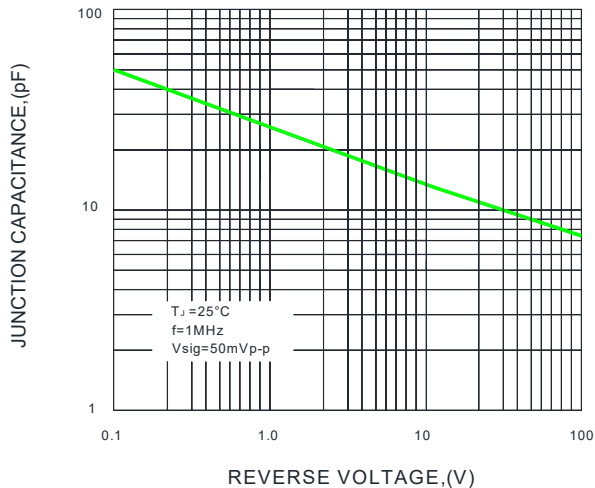
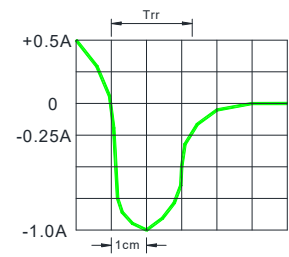
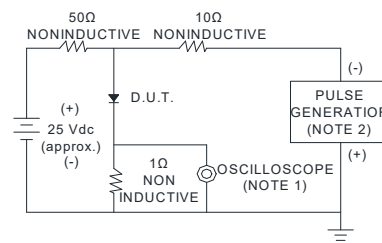


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



- NOTES : 1. Rise Time=7ns max. Input Impedance= 1 magohm. 22pF  
2. Rise time=10ns max. Source Impedance= 50 ohms

**TAICANG TIANYU ELECTRONIC**  
SURFACE MOUNT FAST RECOVERY RECTIFIER BRIDGE

**LBR201SA THRU LBR210SA**

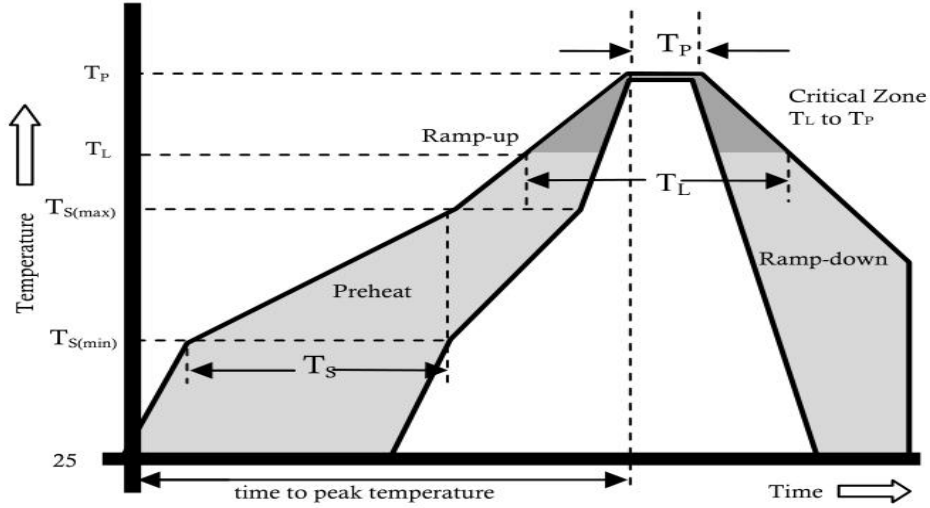
**VOLTAGE RANGE**

**50 to 1000 Volts**

**CURRENT**

**2.0 Ampere**

**Reflow Profile**



Reflow Condition		Pb-Free Assembly
Pre Heat	Temperature Min.	+150°C
	Temperature Max.	+200°C
	Time(Min to Max)	60-180 secs.
Average ramp up rate(Liquidus Temp(T <sub>L</sub> ) to peak)		3°C/sec. Max.
T <sub>S</sub> (max) to T <sub>L</sub> - Ramp-up Rate		3°C/sec. Max.
Reflow	Temperature (T <sub>L</sub> )(Liquidus)	+217°C
	Temperature (T <sub>L</sub> )	60-150 secs.
Peak Temp (T <sub>P</sub> )		+(260+0/-5)°C
Time within 5°C of actual Peak Temp (T <sub>P</sub> )		25 secs.
Ramp-down Rate		6°C/sec. Max.
Time 25°C to peak Temp (T <sub>P</sub> )		8 min. Max.
Do not exceed		+260°C