

# SB202-E thru SB2010-E

## Schottky Barrier Rectifiers Reverse Voltage 20 to 100V Forward Current 2.0A

### Feature & Dimensions

- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* Low power loss, high efficiency
- \* For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- \* Guarding for over voltage protection
- \* High temperature soldering guaranteed:  
260°C/10 seconds at terminals
- \* IEC61000-4-2 ESD Air Contact  $\geq \pm 15KV$

### Mechanical Data

**Case:** JEDEC DO-41, molded plastic over sky die

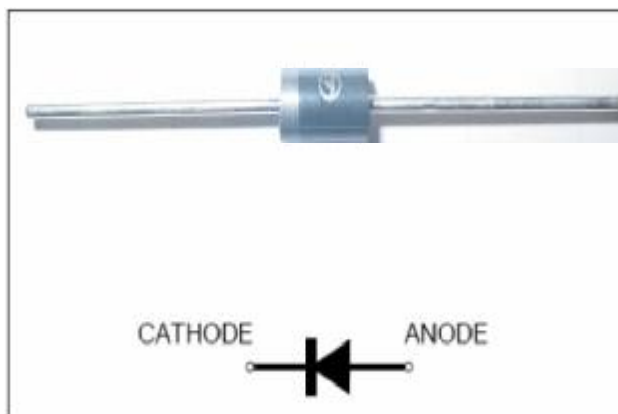
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.011 oz., 0.284 g

**Handling precaution:** None



We declare that the material of product compliance with ROHS requirements

### 1. Maximum & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	SB202 -E	SB203 -E	SB204 -E	SB205 -E	SB206 -E	SB208 -E	SB209 -E	SB2010 -E	Unit
device marking code		SB202 ESD	SB203 ESD	SB204 ESD	SB205 ESD	SB206 ESD	SB208 ESD	SB209 ESD	SB2010 ESD	
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	90	100	V
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	56	63	70	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	90	100	V
Maximum average forward rectified current 0.375" (9.5mm) lead length (See fig. 1)	$I_F$ (AV)	2.0								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	60								A
thermal resistance, junction to ambient	$R_{\theta JA}$	35								°C/W
thermal resistance, junction to case	$R_{\theta JC}$	5								°C/W
Operating junction and storage temperature range	$T_J$ , $T_{STG}$	-40 to +150								°C

### Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	SB202 -E	SB203 -E	SB204 -E	SB205 -E	SB206 -E	SB208 -E	SB209 -E	SB2010 -E	Unit	
Maximum instantaneous forward voltage at 2.0A	$V_F$	0.50			0.70		0.84			V	
Maximum DC reverse current $T_A = 25^\circ C$ at rated DC blocking voltage $T_A = 125^\circ C$	$I_R$	0.5					10				mA
Typical junction capacitance at 4.0V, 1MHz	$C_J$	170								PF	

## SB202-E thru SB2010-E

### 2. Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

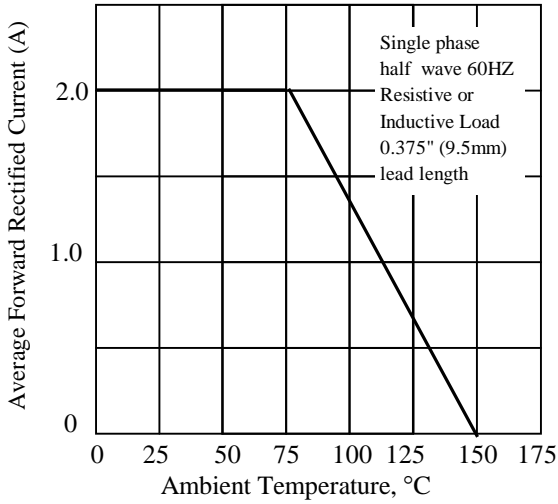


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

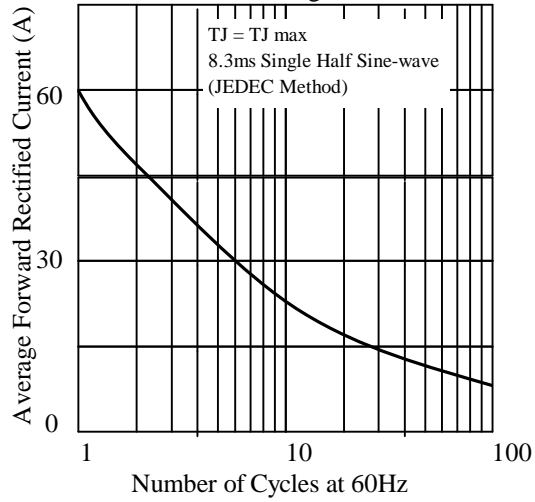


Fig. 3 - Typical Instantaneous Forward Characteristics

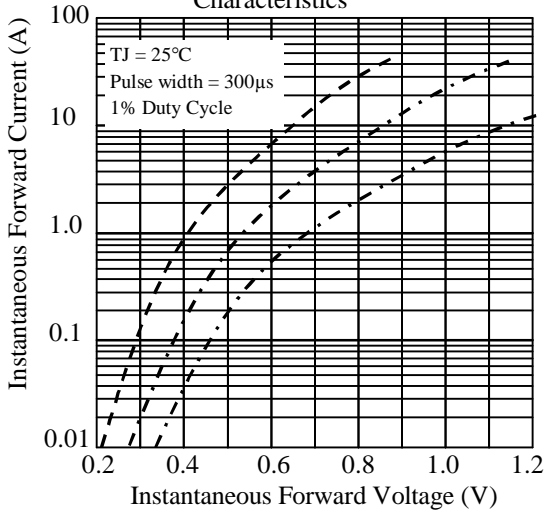


Fig. 4 - Typical Reverse Characteristics

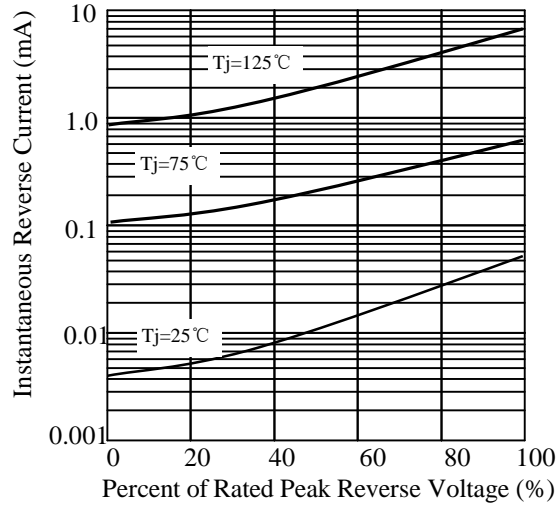


Fig. 5 - typical transient thermal impedance

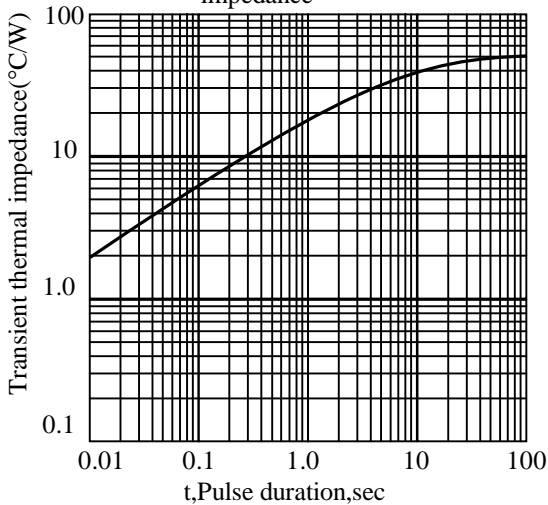
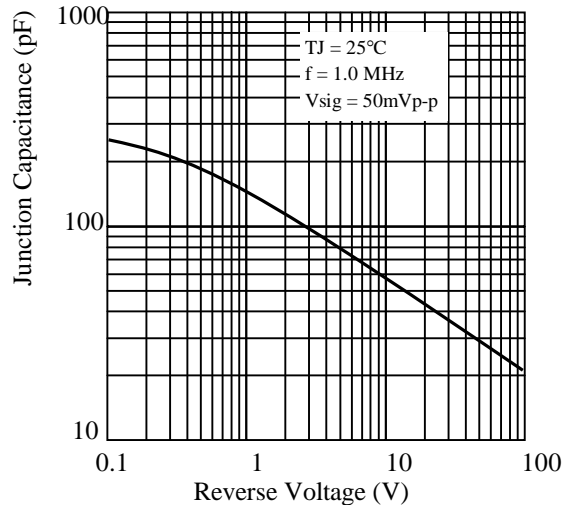
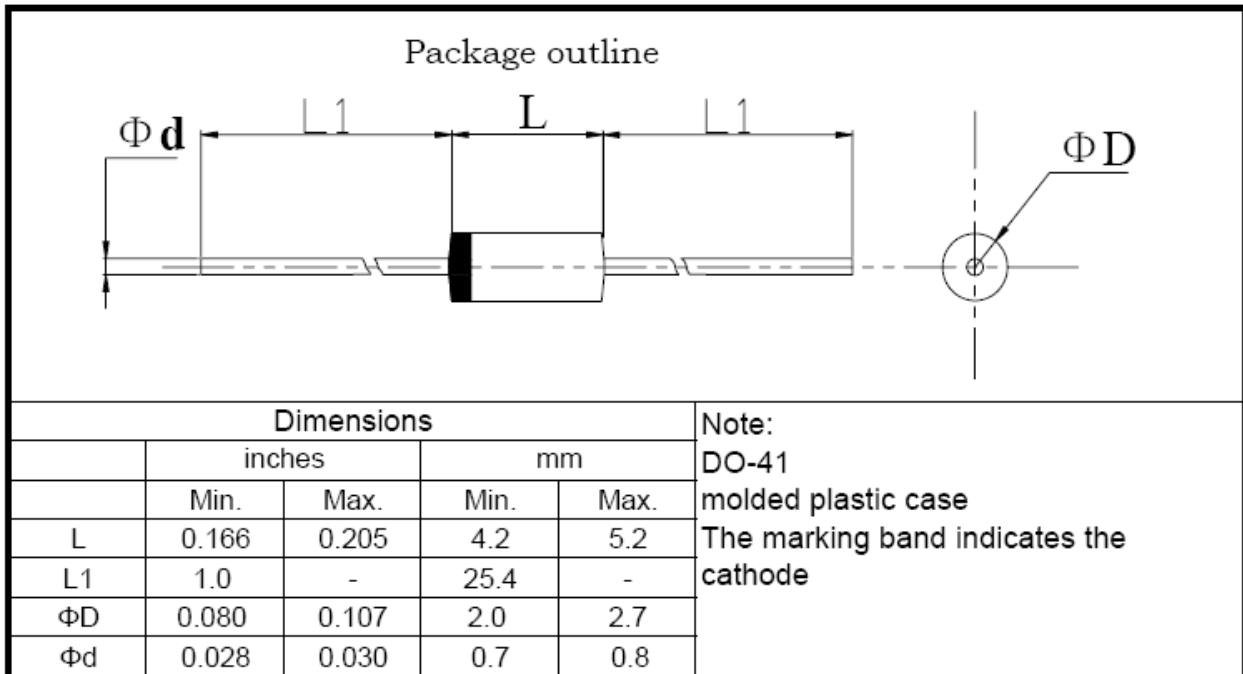


Fig. 6 - Typical Junction Capacitance



## SB202-E thru SB2010-E

### 3. dimension:

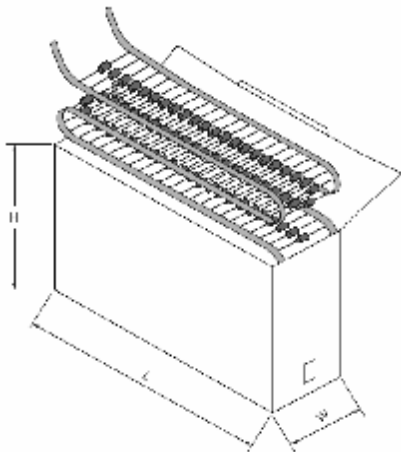


标题:	文件编号: WI-250
	第 4 版 第 0 次修改
	第 1 页

塑封生产线轴向产品包装规范

1 弹带盒装 ammo and box

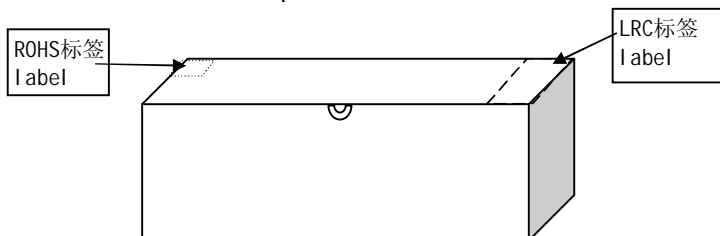
1.1. 弹带盒规格 ammo spec.



单位: mm

	L	W	H
T52	262±2	76±2	90±2
T42	262±2	64±2	90±2
T26	250±3	45±3	95±3

1.2 弹带内盒要求 inner box spec.



标题: <b>塑封生产线轴向产品包装规范</b>	文件编号: WI-250
	第 4 版 第 0 次修改
	第 2 页

1.4 标签要求 label spec.

1.4.1 LRC标签 LRC label

成型 FORMING \*\*\*\*\* ← 成型规格forming spec.

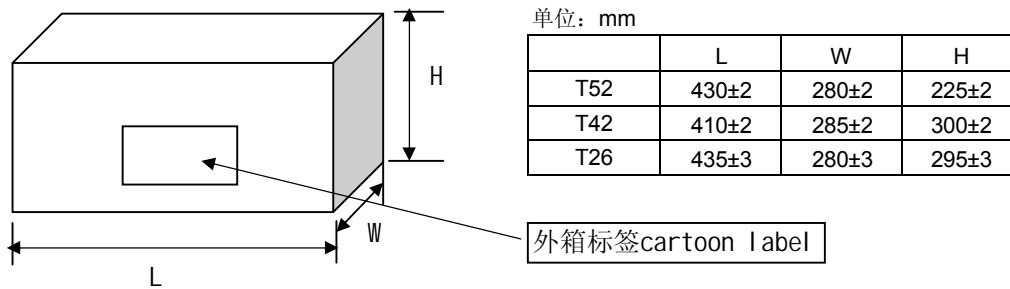
型号 TYPE \*\*\*\*\* ← LRC产品型号 type

重复峰压 (V) PRV (V)	****	← 产品重复峰压值 peak repetitive voltage
额定电流 (A) I <sub>o</sub> (A)	**	← 产品额定电流值 average output current
数量 (只) QTY (pcs)	****	← 产品数量 quantity
检验员 CHECKER	02	
日期: DATE:	*****	← 产品生产日期 date

1.4.2环保标签 environmental protection label



2.外箱规格 carton spec.



3 按以上包装方式, 编带数量和外包装箱产品数量: typing and carton spec.

	塑封外型			
	A-405 & DO-41 & R-1	R-3	DO-15	DO-201AD
每根编带数量 quantity/ammo	3K	1.8K	2K(T52) 1.8K(T26)	0.8K
外箱数量 (T52编带) quantity/cartoon	30K	18K	20K	8.0K
外箱数量 (T26编带) quantity/cartoon	60K	36K	36K	-
外箱数量 (T42编带) quantity/cartoon	54K	32.4K	36K	-

标题:

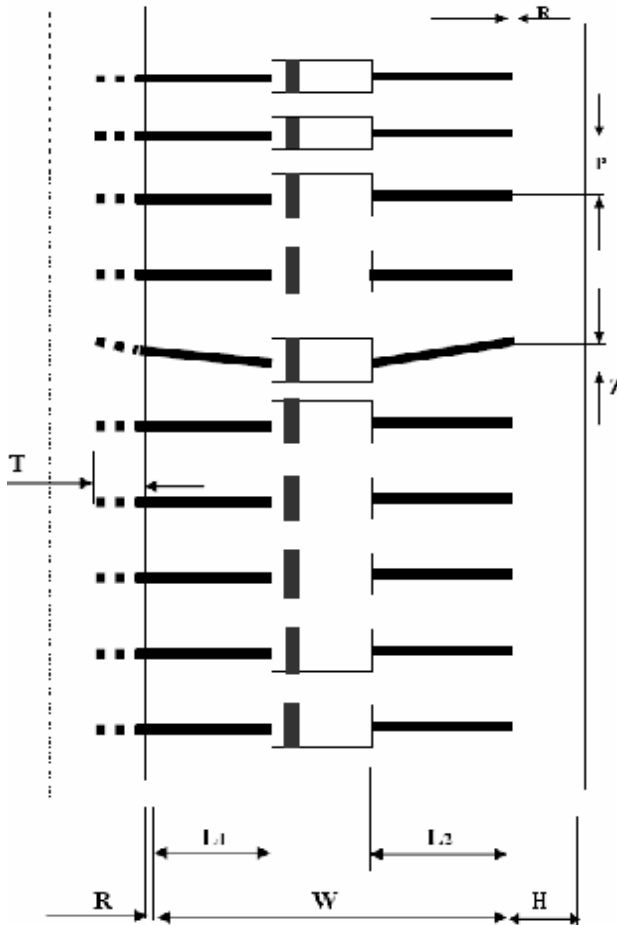
塑封生产线轴向产品包装规范

文件编号: WI-250

第 4 版 第 0 次修改

第 3 页

4 编带规格 brede spec



尺寸代号	编带尺寸 typing dimension					
	26/tape	35/tape	40/tape	42/tape	52/tape	52/tape#
<b>W</b>	26 0.0/+1.6	35 -1.0/+0.5	40 -1.0/+0.5	42 -1.0/+1.0	52 -1.0/+2.0	52 -1.0/+2.0
<b>P</b>	5±0.5	5±0.5	5±0.5	5±0.5	5±0.5	10±0.5
<b>L1-L2</b>	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>H</b>	6±1.0	6±1.0	6±1.0	6±1.0	6±1.0	6±1.0
<b>Z</b>	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>R</b>	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>T</b>	>3.5	>3.5	>3.5	>3.5	>3.5	>3.5

注: 52编带# 为DO-201AD编带规格 "52编带#" just for D0-201AD

1. 红白编带厚度为0.05mm; 两种胶带各自之间无明显色差; 编带要求均为胶带。  
The typing thickness is 0.05mm and color is obvious difference
2. 两端引带20~40cm. Typing lead over 20~40cm
3. 红色编带一端为二极管“负极”; 白色编带一端为二极管“正极”。  
red color is cathode ,white color is anode
4. 无卤 green epoxy compound (无卤产品才贴HF only)

**Green**



**LRC**

乐山无线电股份有限公司  
Leshan Radio Company, Ltd

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## SB202-E thru SB2010-E

### 4. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	周杰	2012.07.31