

1N5400 thru 1N5409

General Purpose Plastic Rectifiers

Reverse Voltage 50 to 1200V Forward Current 3.0A

Feature

- * Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- * Construction utilizes void-free molded plastic technique
- * Low reverse leakage
- * High forward surge capability
- * Diffused junction
- * High temperature soldering guaranteed:
260°C/10 seconds, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension

Mechanical Data

Case: JEDEC DO-201AD, molded plastic body

Terminals: Plated axial leads, solderable per

MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

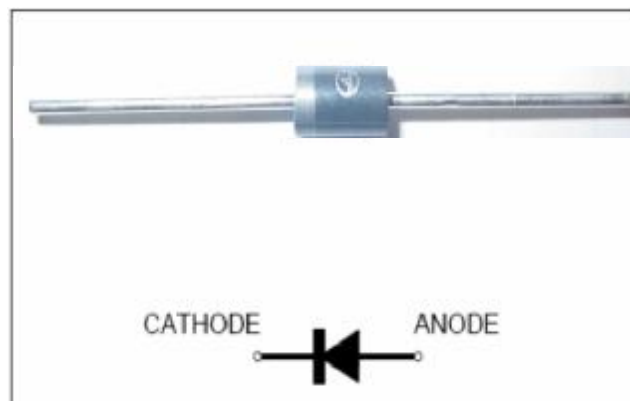
Weight: 0.038 oz., 1.03 g

Handling precaution: None

Electrical Characteristic

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

Parameter Symbol	symbol	1N 5400	1N 5401	1N 5402	1N 5403	1N 5404	1N 5405	1N 5406	1N 5407	1N 5408	1N 5409	Unit
Marking		1N 5400	1N 5401	1N 5402	1N 5403	1N 5404	1N 5405	1N 5406	1N 5407	1N 5408	1N 5409	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	500	600	800	1000	1200	V
Maximum RSM voltage	V_{RSM}	35	70	140	210	280	350	420	560	700	840	V
Maximum DC blocking voltage	V_{DC}	50	100	200	300	400	500	600	800	1000	1200	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 75^\circ\text{C}$	$I_{F(AV)}$	3.0										A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	200										A
Maximum full load reverse current, full cycle average, 0.375" (9.5mm) lead lengths at $T_A = 105^\circ\text{C}$	$I_{R(AV)}$	200										μA
Typical thermal resistance (Note 1)	$R\theta_{JA}$	20										$^\circ\text{C/W}$
Maximum DC blocking voltage temperature	T_A	150										$^\circ\text{C}$
Operating junction and storage temperature range	T_J	-50 to +150										$^\circ\text{C}$



We declare that the material of product compliance with ROHS requirements

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

Parameter Symbol	symbol	1N 5400	1N 5401	1N 5402	1N 5403	1N 5404	1N 5405	1N 5406	1N 5407	1N 5408	1N 5409	Unit
Maximum instantaneous forward voltage at 3.0A	V_F	1.10										V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$	I_R	5.0 200										μA
Typical junction capacitance at 4.0V, 1MHz	C_J	30										PF

NOTES:

1. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

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

Fig. 1 - Forward Current Derating Curve

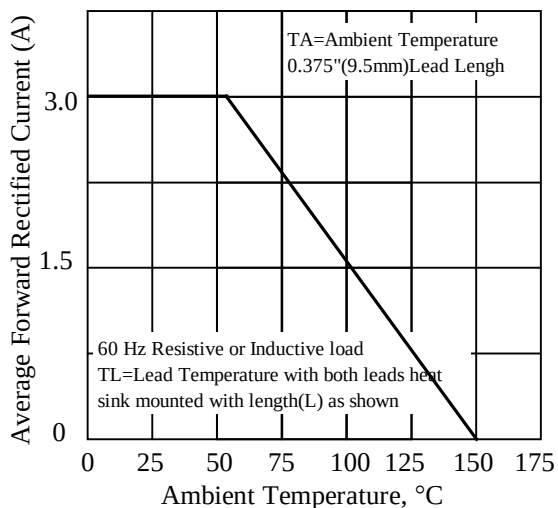


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

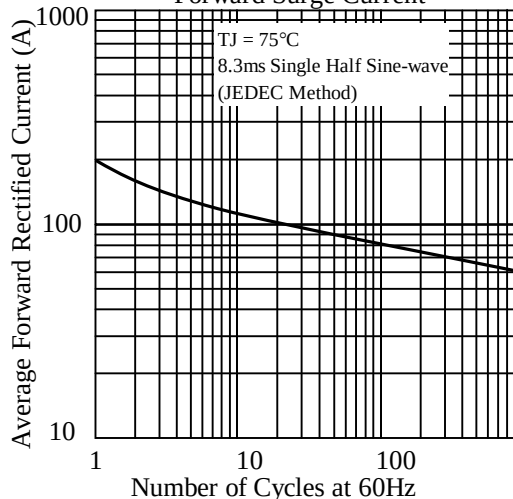


Fig 3. - Typical Instantaneous Forward Characteristics

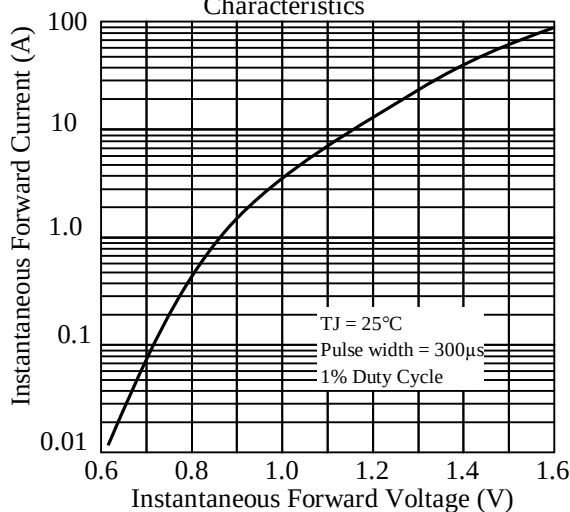


Fig 4. - Typical Reverse Characteristics

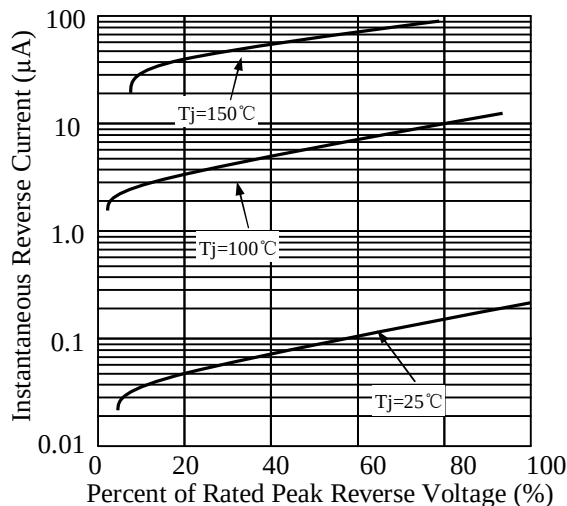


Fig 5. - typical transient thermal impedance

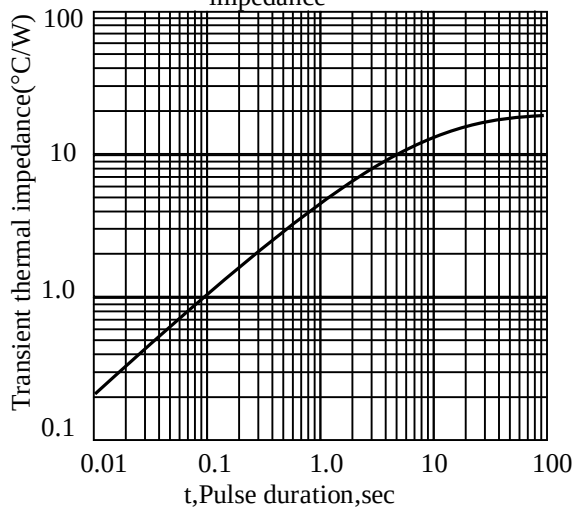
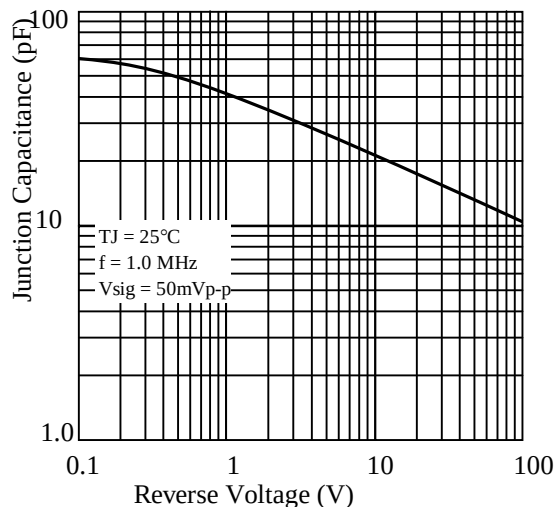
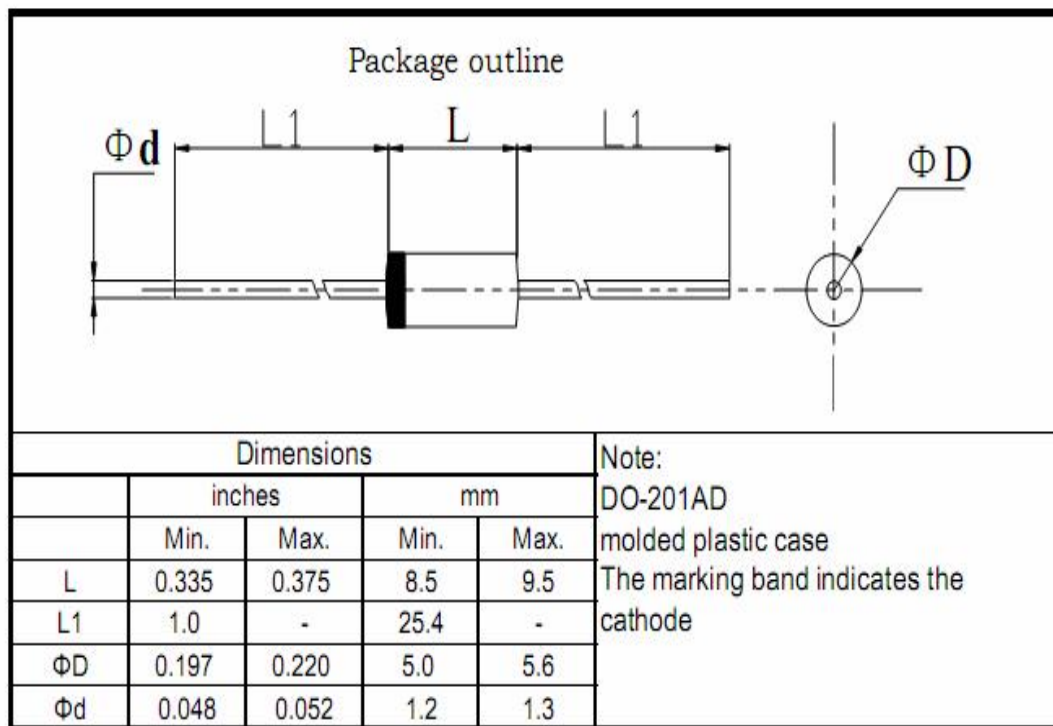


Fig 6. - Typical Junction Capacitance



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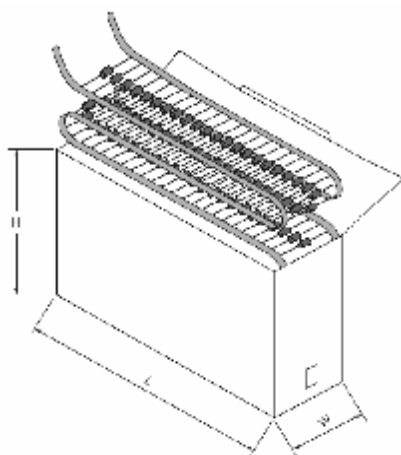
3. dimension:



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 1 页

1 弹带盒装 ammo and box

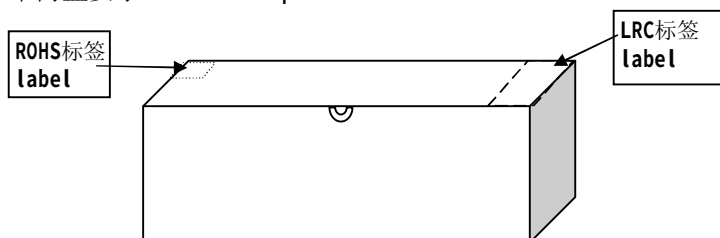
1.1. 弹带盒规格 ammo spec.



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： 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 2 页

1.4 标签要求 label spec.

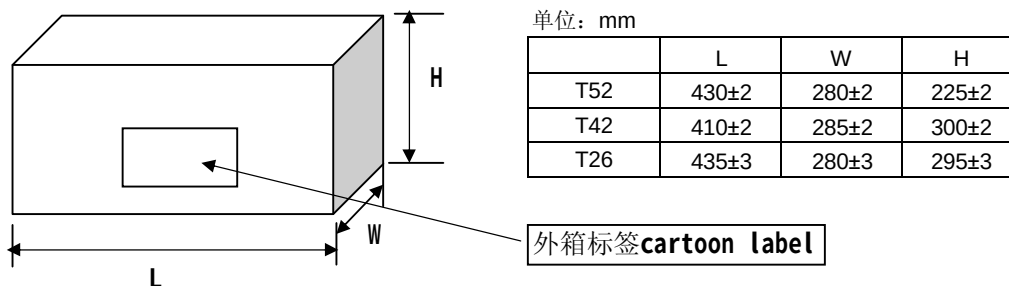
1.4.1 LRC标签 LRC label

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 repitive voltage
额定电流 (A) I _o (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 cartoon spec.



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

	塑封外型			
	A-405 & DO-41 & R-1	R-3	DO-15	DO-201AD
每根编带数量 quantity/ammoo	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:

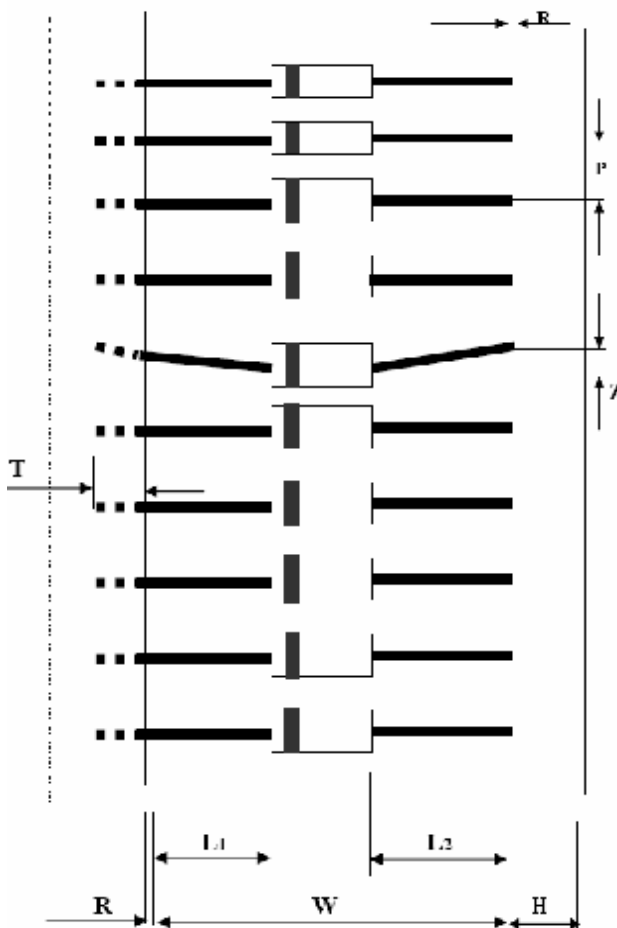
塑封生产线轴向产品包装规范

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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#
W	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
P	5±0.5	5±0.5	5±0.5	5±0.5	5±0.5	10±0.5
L1-L2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
H	6±1.0	6±1.0	6±1.0	6±1.0	6±1.0	6±1.0
Z	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
R	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
T	>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

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4. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	周杰	2010-4-12
2	增加包装规范	周杰	2012-5-15
3	增加1N4009	周杰	2012-8-2