

## RL251 thru RL257

### 1. FEATURES

- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* High temperature metallurgically bonded construction
- \* Deffused junction
- \* Capable of meeting environmental standards of MIL-S-19500
- \* 2.5 A operation at TA=55°C with no thermal runaway
- \* Typical IR less than 1.0μA
- \* High temperature soldering guaranteed: 350°C/10 seconds
- \* 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

### 2. Mechanical Data

**Case:** JEDEC R-3, molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

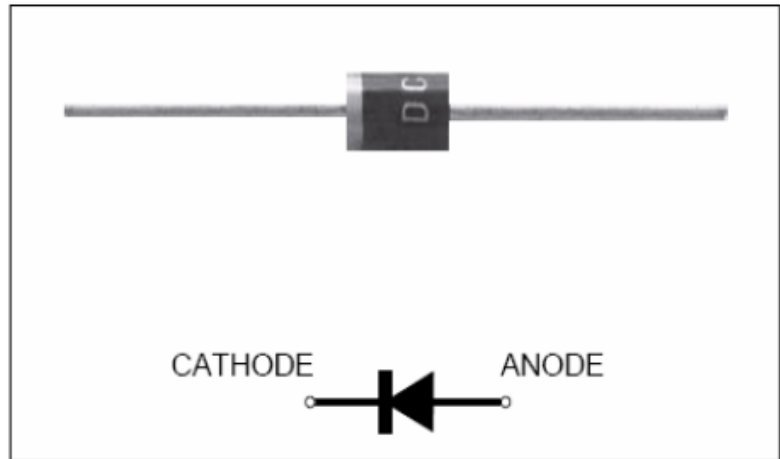
**Mounting Position:** Any

**Weight:** 0.015 oz., 0.40 g

**Handling precautin:** None

### General Purpose Plastic Rectifiers

Reverse Voltage 50 to 1000V  
 Forward Current 2.5A



We declare that the material of product compliance with RoHS requirements.

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

Parameter Symbol	symbol	RL 251	RL 252	RL 253	RL 254	RL 255	RL 256	RL 257	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at T <sub>A</sub> = 55°C	I <sub>F(AV)</sub>	2.5							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	150							A
Maximum full load reverse current, full cycle average, 0.375" (9.5mm) lead lengths at T <sub>A</sub> = 55°C	I <sub>R(AV)</sub>	100							μA
Typical thermal resistance (Note 1)	R <sub>θJA</sub>	45							°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-50 to +150							°C

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

Parameter Symbol	symbol	RL 251	RL 252	RL 253	RL 254	RL 255	RL 256	RL 257	Unit
Maximum instantaneous forward voltage at 2.50A	V <sub>F</sub>	1.1							V
Maximum DC reverse current TA = 25°C at rated DC blocking voltage TA = 100°C	I <sub>R</sub>	5.0 200							μA
Typical junction capacitance at 4.0V, 1MHz	C <sub>J</sub>	15							PF

NOTES:

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

### 4. Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

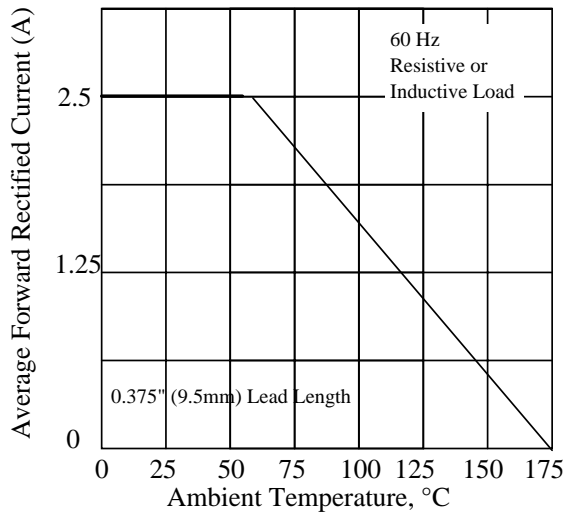


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

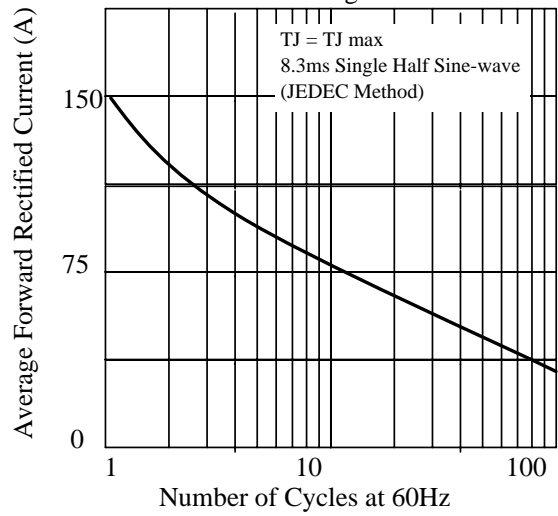


Fig 3. - Typical Instantaneous Forward Characteristics

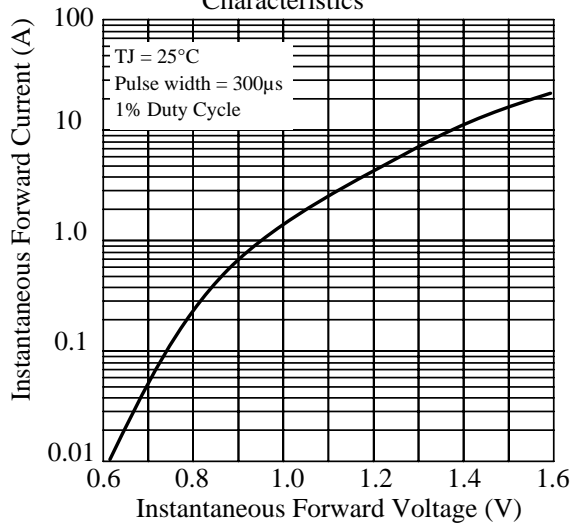


Fig 4. - Typical Reverse Characteristics

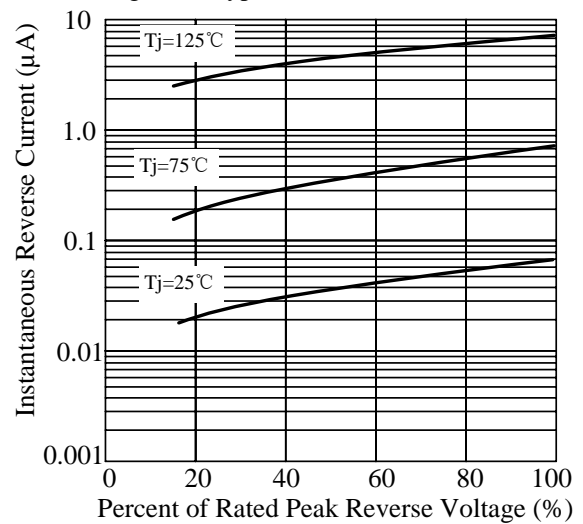


Fig 5. - typical transient thermal impedance

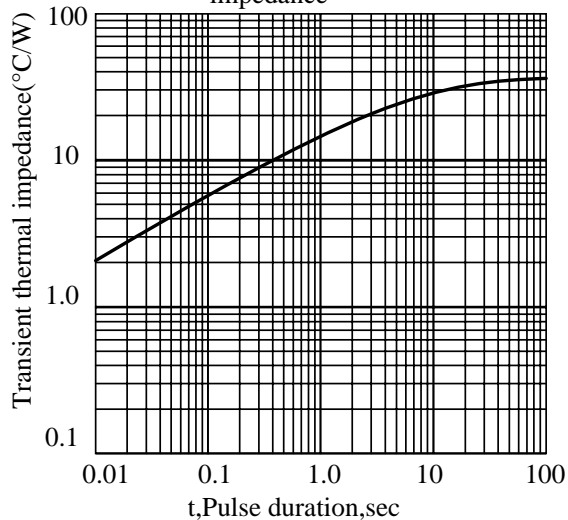
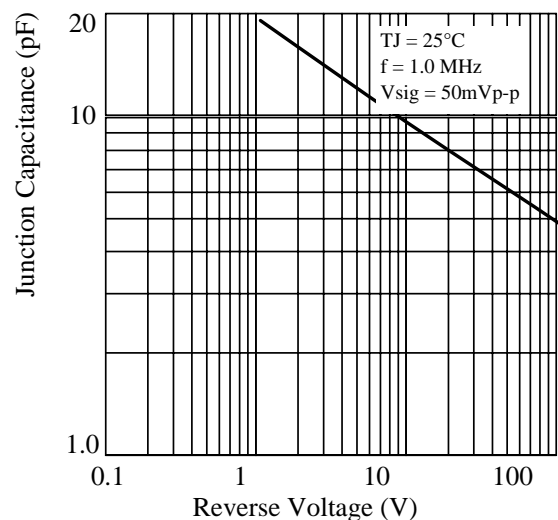
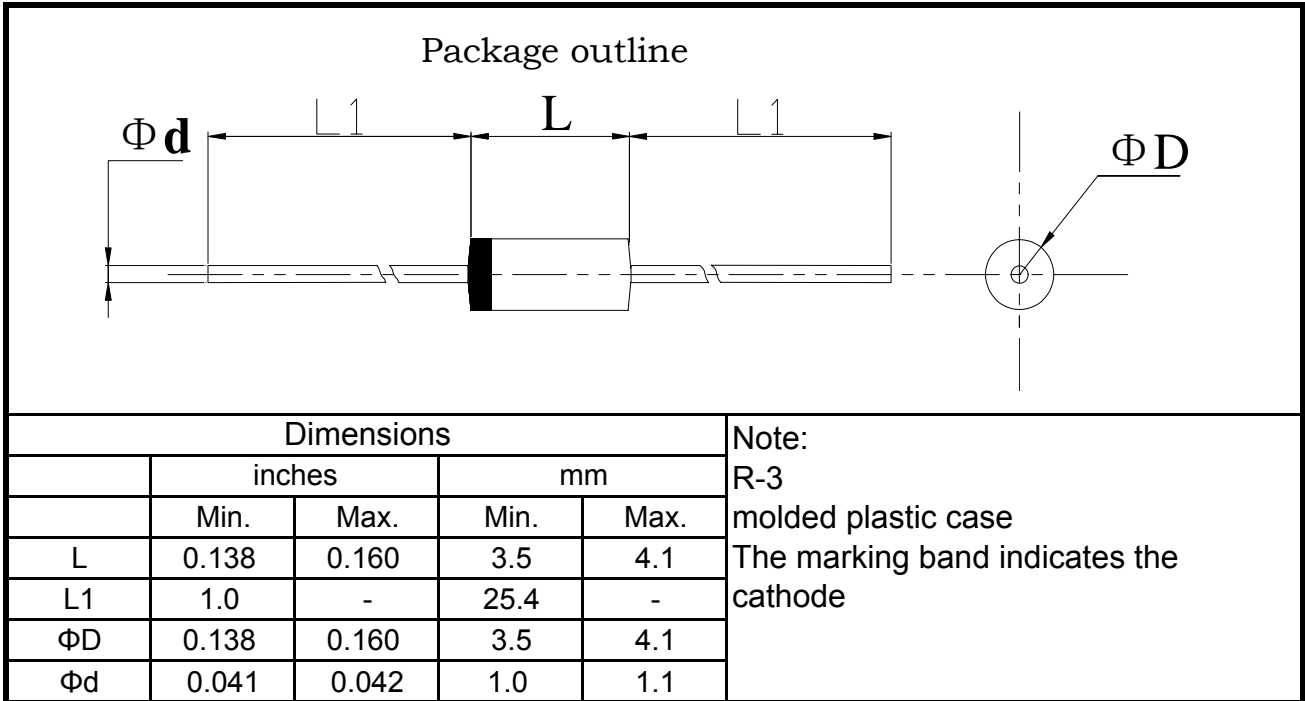


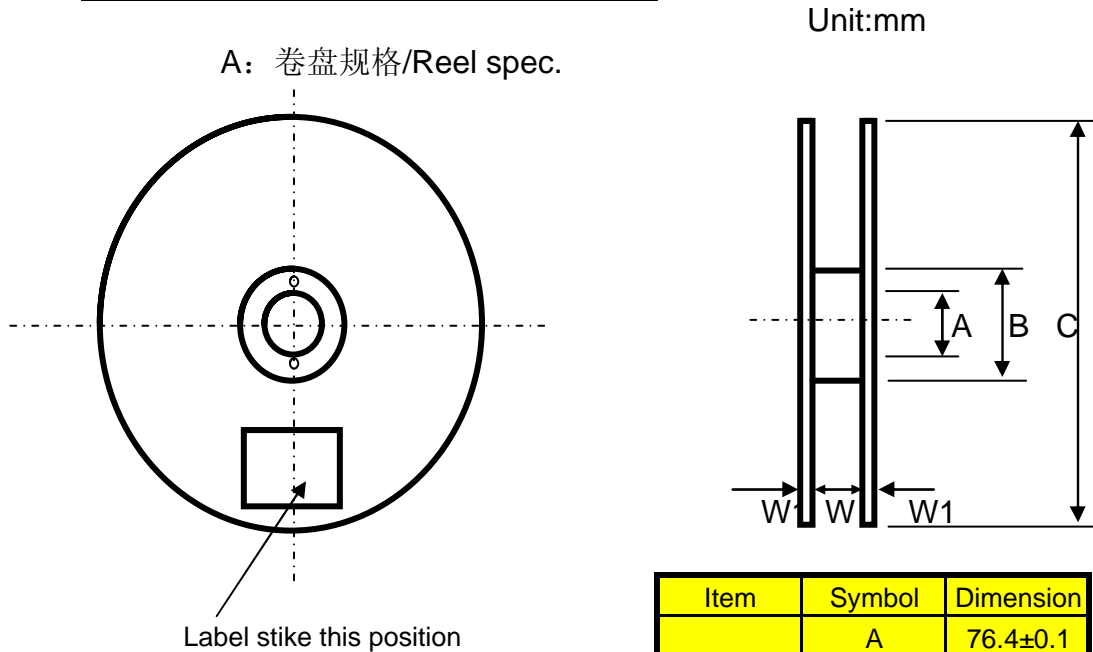
Fig 6. - Typical Junction Capacitance



**5.Package Dimensions in inches and (millimeters)**


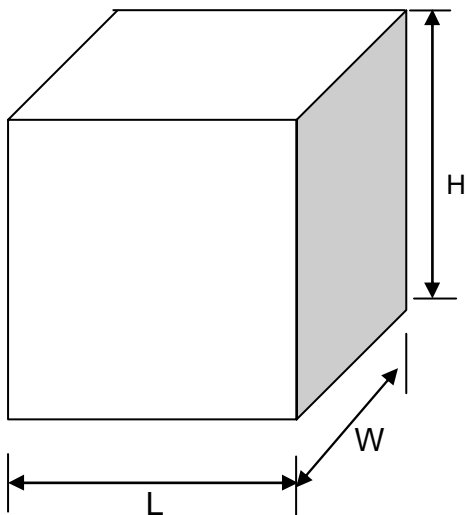
## Packing Of Plastic-Sealed Axial Lead Diodes

### 1. 卷盘/Reel Packing (52mm)



Item	Symbol	Dimension
Dimeter	A	76.4±0.1
	B	82.5±0.2
	C	330±0.5
Width	W	72±0.2
Thickness	W1	3±0.2

### B: 外箱规格/Outer Box Specification



Item	Symbol	Dimension
Size	L	350±2
	W	350±2
	H	340±4

按以上包装方式: (As per the above spec)

	外型/Outside		
	DO-41 & A-405	DO-15	DO-201AD
Q'ty/Taping	5K	4K	1.4K
Q'ty/Packing Case	20K	16K	5.6K

**2. 弹带盒装/Ammo Packing**

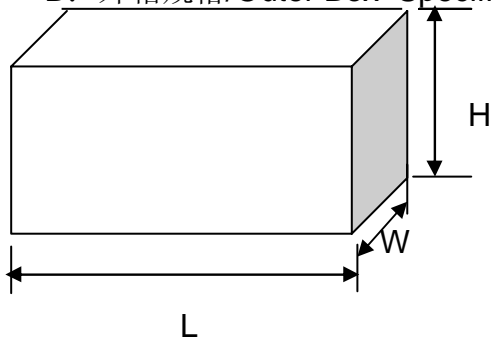
Unit:mm

**A: 弹带盒规格/Ammo Box Spec.**



Item	Symbol	Dimension	Notes
Box's Size	L	260±2	52mm TYPE
	W	76±2	
	H	100±4	
	L	250±3	26mm TYPE
	W	45±3	
	H	95±5	

**B: 外箱规格/Outer Box Specification**



Item	Symbol	Dimension	Notes
Case's Size	L	430±2	52mm TYPE
	W	280±2	
	H	225±4	
	L	435±3	26mm TYPE
	W	280±3	
	H	295±5	

按以上包装方式: (As per the above spec)

	外型/Outside		
	A-405 & DO-41 & R-1	DO-15	DO-201AD
Q'ty/Taping	3K	2K	0.8K
Q'ty/Packing Case 26mm/TYPE	30K	20K	7.2K
Q'ty/Packing Case 52mm/TYPE	60K	40K	14.4K

**3. 散装/Bulk Packing**

**A. 包装盒尺寸/Box Dimension**



( DO-41&DO-15 )

Item	Symbol	Dimension
Box's Size	L	200±2
	W	84±2
	H	21±2



( DO-201AD )

Item	Symbol	Dimension
Box's Size	L	200±2
	W	84±2
	H	29±2

**B: 外箱规格/Outer Box Specification**



Item	Symbol	Dimension
Case's Size	L	465±2
	W	225±2
	H	260±4

按以上包装方式: (As per the above spec)

	外型/Outside		
	DO-41&A-405&R-1	DO-15	DO-201AD
Q'ty/Taping	1K	0.5K	0.3K
Q'ty/Packing Case	50K	25K	12K

4. 编带图形及规格/Taping Specification



Unit:mm

尺寸代号	编带尺寸/Tape Dimension		
Dimension Code	26/tape	52/tape	52/tape#
W	26 0.0/+1.6	52 -1.0/+2.0	52 -1.0/+2.0
P	5±0.5	5±0.5	10±0.5
L1-L2	<1.0	<1.2	<1.2
H	6±1.0	6±1.0	6±1.0
Z	<1.2	<1.2	<1.2
R	<1.0	<1.0	<1.0
T	>3.2	>3.2	>3.2

注: 52编带# 为DO-201AD编带规格

Remark: 52 tape# is DO-201AD taping spec.