FR251 thru FR257

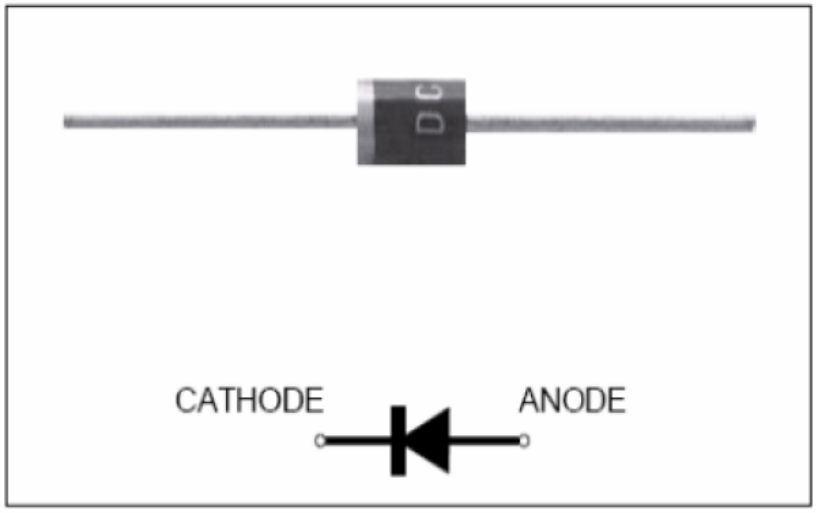
1.Feature & Dimensions

Fast Switching Rectifiers

Reverse Voltage 50 to 1000V

Forward Current 2.5A

* 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
* For use in high frequency rectifier circuits
* Fast switching for high efficiency
* Typical IR less than 1.0μA
* High temperature soldering guaranteed: 260°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

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

3.Electrical Characteristic

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

Parameter Symbol	symbol	FR 251	FR 252	FR 253	FR 254	FR 255	FR 255P	FR 256	FR 257	FR 257P	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	600	800	1000	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	420	560	700	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	600	800	1000	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at T_A = 55°C	IF(AV)	2.5									A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150									A
Maximum full load reverse current, full cycle average,0.375"(9.5mm) lead lengths at T_A = 55° C	IR(AV)	100									μA
Typical thermal resistance (Note 2)	RθJA	45									°C/W
Operating junction and storage temperature range	TJ, TSTG	–50 to +150									°C

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

Parameter Symbol	symbol	FR 251	FR 252	FR 253	FR 254	FR 255	FR 255P	FR 256	FR 257	FR 257P	Unit
Maximum instantaneous forward voltage at 2.5A	V_F	1.3									V
Maximum DC reverse current TA = 25°C at rated DC blocking voltage TA = 100°C	IR	5.0 200									μA
Typical reverse recovery time (Note 1)	trr	150				250	150	500		250	ns
Typical junction capacitance at 4.0V, 1MHz	CJ	15									PF

NOTES:

1. IF = 0.5A, IR = 1.0A, IRR = 0.25A
2. Thermal resistance from junction to ambient at 0.375” (9.5mm) lead length, P.C.B. mounted

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

Fig. 1 – Forward Current Derating Curve

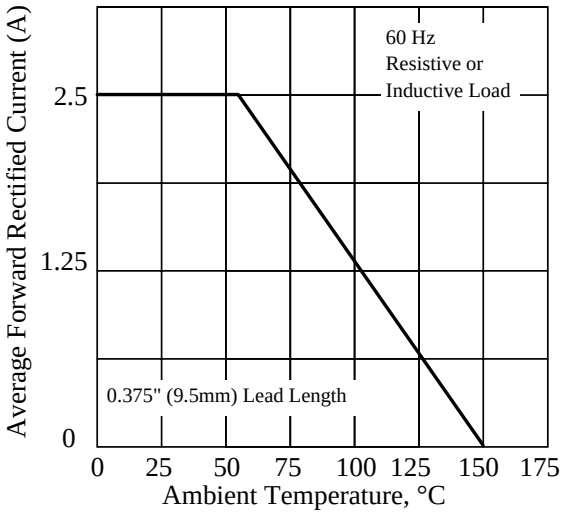


Fig. 2 – Maximum Non-repetitive Peak Forward Surge Current

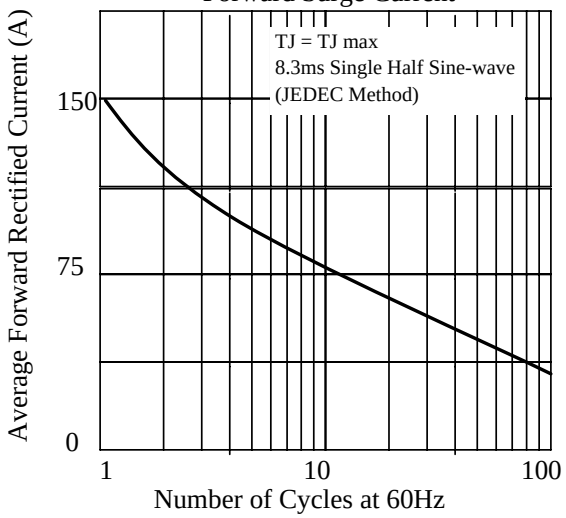


Fig 3. – Typical Instantaneous Forward Characteristics

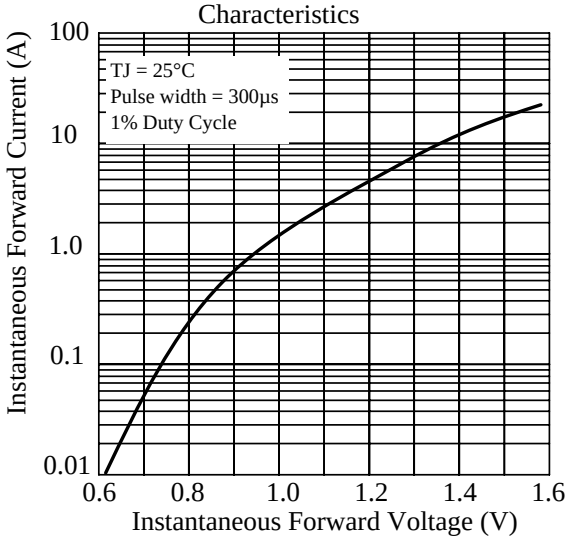


Fig 4. – Typical Reverse Characteristics

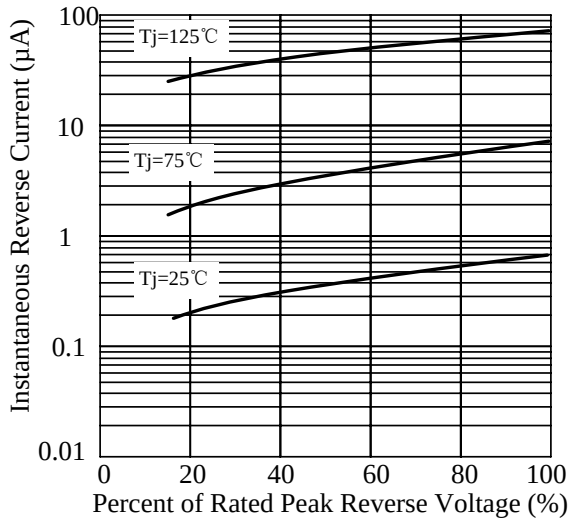


Fig 5. – typical transient thermal impedance

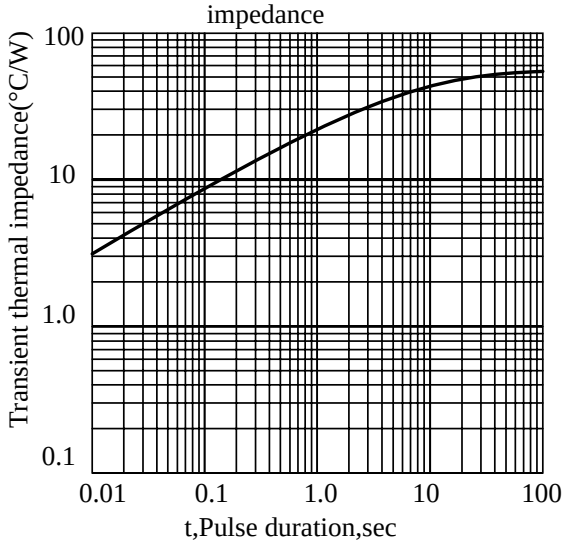
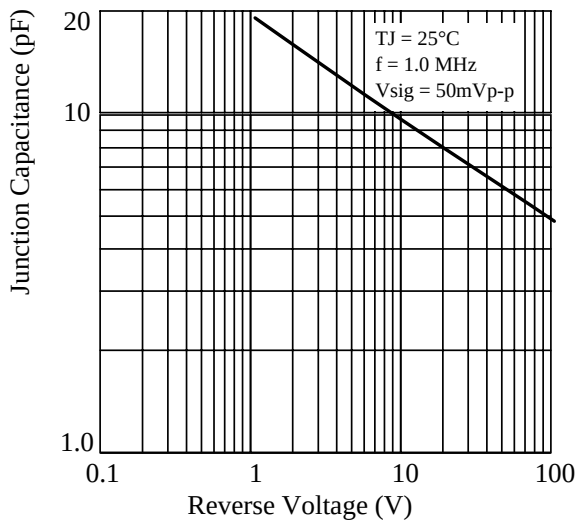
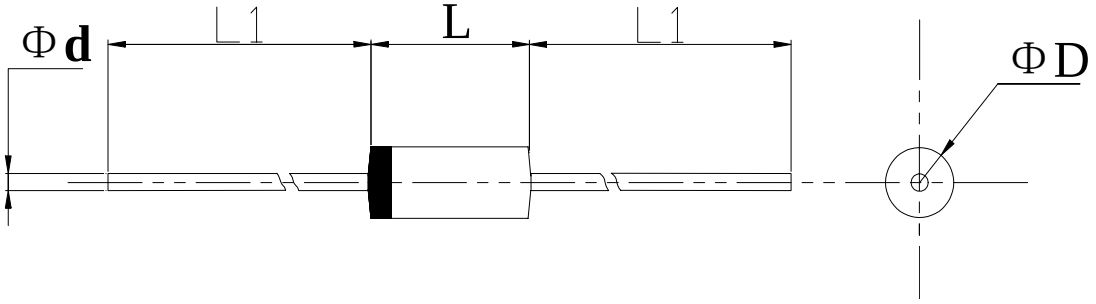


Fig 6. – Typical Junction Capacitance



5.Package Dimensions in inches and (millmeters)

Package outline



Dimensions				
	inches		mm	
	Min.	Max.	Min.	Max.
L	0.138	0.160	3.5	4.1
L1	1.0	-	25.4	-
ΦD	0.138	0.160	3.5	4.1
Φd	0.041	0.042	1.0	1.1

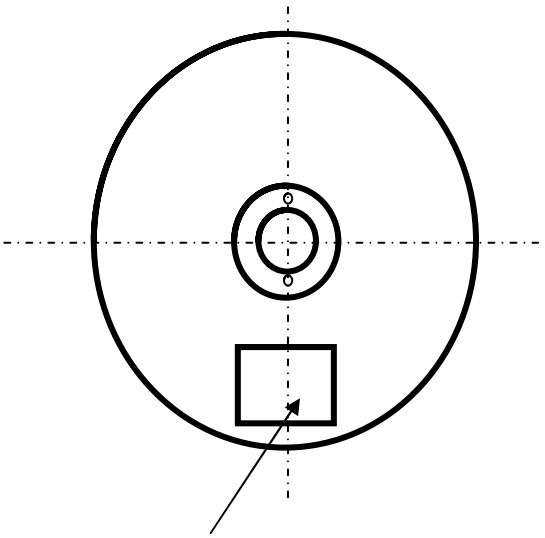
Note:
R-3
molded plastic case
The marking band indicates the cathode

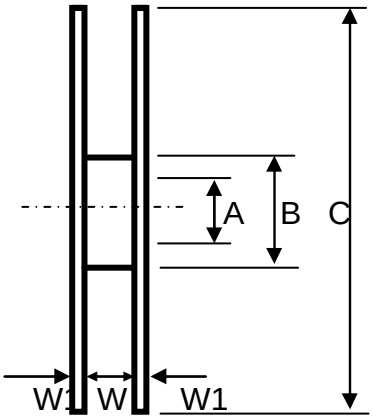
Packing Of Plastic-Sealed Axial Lead Diodes

1.卷盘/Reel Packing（52mm）

Unit:mm

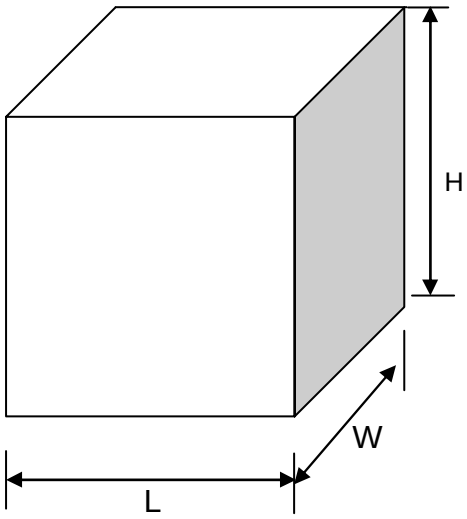
A：卷盘规格/Reel spec.





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

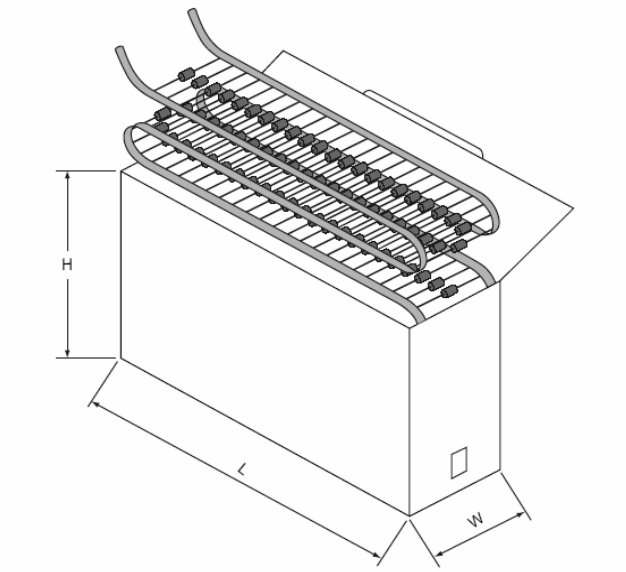
按以上包装方式：(As per the above spec)

	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

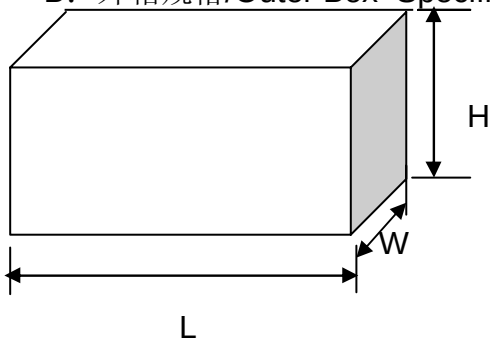
Unit:mm

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



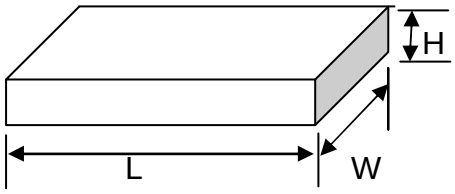
Item	Symbol	Dimension	Notes
Case's Size	L	430±2	52mm TYPE
	W	280±2	
	H	225±4	
	L	435±3	26mm TYPE
	W	280±3	
	H	295±5	

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

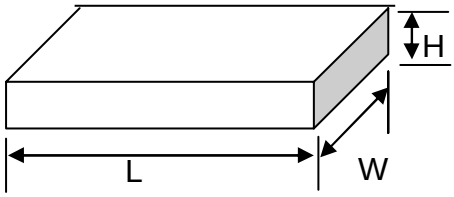
3. 散装/Bulk Packing

A.包装盒尺寸/Box Dimension



(DO-41&DO-15)

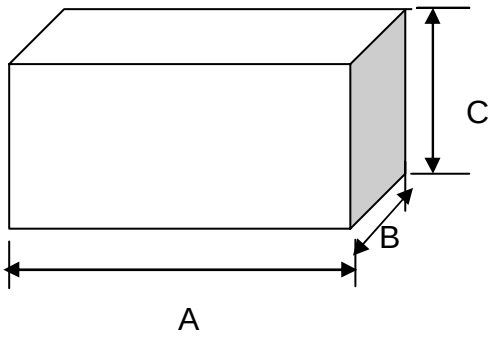
Item	Symbol	Dimension
Box's Size	L	200±2
	W	84±2
	H	21±2



(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

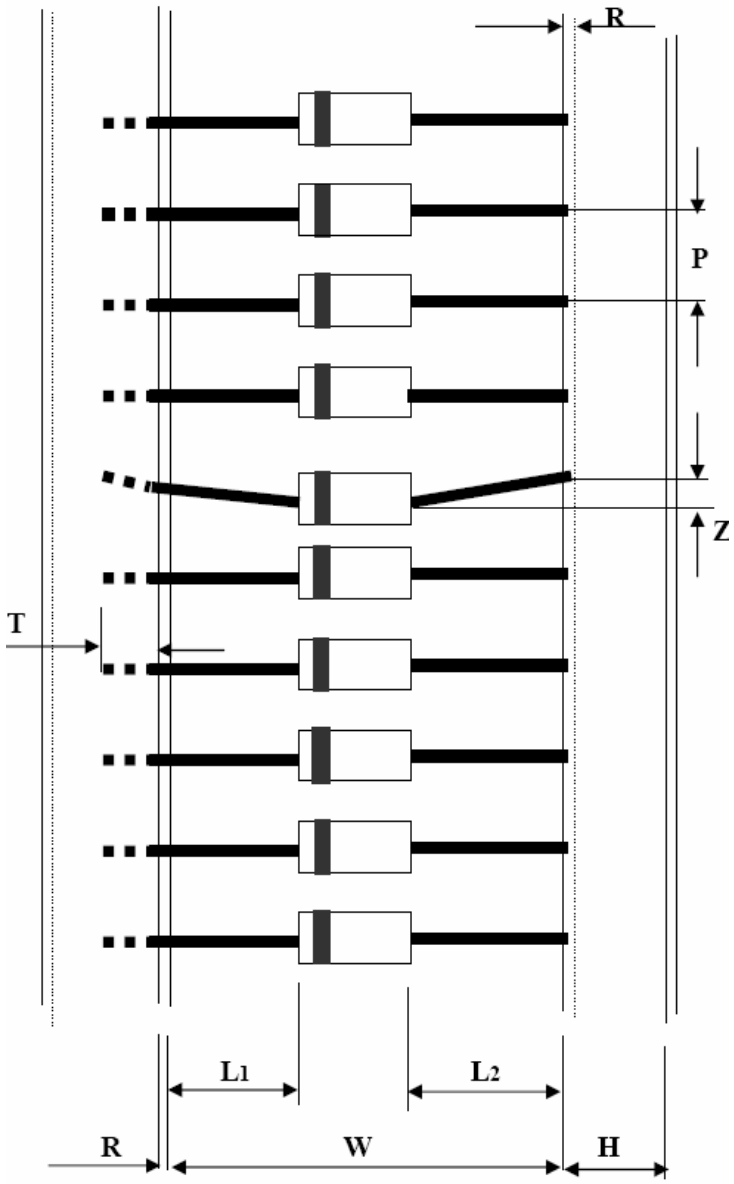


Item	Symbol	Dimension
Case's Size	L	465±2
	W	225±2
	H	260±4

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
L_1-L_2	＜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.