1.5KE Series

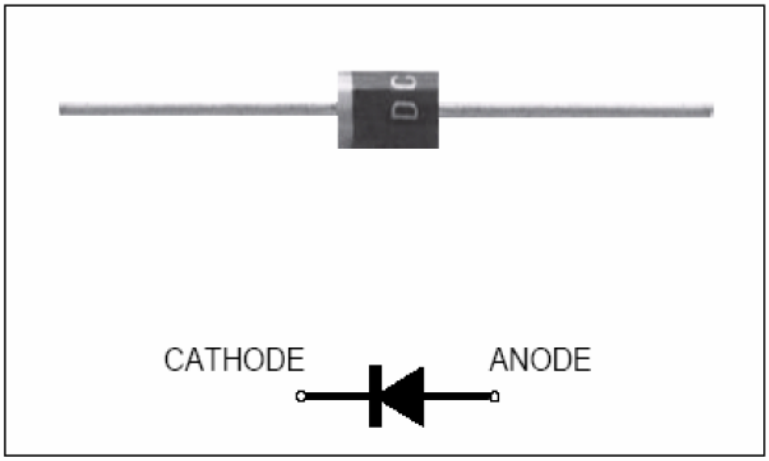
GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

VOLTAGE - 6.8 TO 440 Volts

1500Watt Peak Power 6.5 Watt Steady State

1.Feature

* Plastic package has Underwriters Laboratory Flammability Classification 94V-O
* Glass passivated chip junction in DO-201 package
* 1500W surge capability at 1ms
* Excellent clamping capability
* Low zener impedance
* Fast response time: typically less than 1.0 ps from 0 volts to BV min
* Typical IR less than 1μA above 10V
* High temperature soldering guaranteed: 260 /10 seconds/.375",(9.5mm) lead length/5lbs., (2.3kg) tension



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

2.Mechanical Data

Case: JEDEC DO-201AD molded plastic
Terminals: Axial leads, solderable per MIL-STD-202, Method 208
Polarity: Color band denoted cathode except Bipolar
Mounting Position: Any
Weight: 0.04 ounce, 1.12 gram

DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use C or CA Suffix for types 1.5KE6.8 thru types 1.5KE440

Electrical characteristics apply in both directions.

3.Electrical Characteristic

Ratings at 25℃ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

RATING	SYMBOL	VALUE	UNITS
Peak Power Dissipation at T_A=25°C, T_P=1ms(Note 1)	P_{PPM}	Minimum 1500	Watts
Steady State Power Dissipation at T_L=75°C Lead Lengths .375",(9.5mm) (Note 2)	$P_{M(AV)}$	6.5	Watts
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load(JECED Method) (Note 3)	I_{FSM}	200	Amps
Operating and Storage Temperature Range	T_J,T_{STG}	-50 to +150	°C

NOTES:
1. Non-repetitive current pulse, per Fig. 3 and derated above TA=25°Cper Fig. 2.
2. Mounted on Copper Leaf area of 1.57in2(40mm2).
3. 8.3ms single half sine-wave, duty cycle= 4 pulses per minutes maximum.

UNI-DIRECTIONAL PART NUMBER	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VBR (V) MAX. @IT	TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @IPP VC (V)	REVERSE LEAKAGE @VRWM IR (uA)
1.5KE6.8	5.5	6.12	7.48	10	10.8	1000
1.5KE6.8A	5.8	6.45	7.14	10	10.5	1000
1.5KE7.5	6.05	6.75	8.25	10	11.7	500
1.5KE7.5A	6.4	7.13	7.88	10	11.3	500
1.5KE8.2	6.63	7.38	9.02	10	12.5	200
1.5KE8.2A	7.02	7.79	8.61	10	12.1	200
1.5KE9.1	7.37	8.19	10	1	13.8	50
1.5KE9.1A	7.78	8.65	9.5	1	13.4	50
1.5KE10	8.1	9	11	1	15	10
1.5KE10A	8.55	9.5	10.5	1	14.5	10
1.5KE11	8.92	9.9	12.1	1	16.2	5
1.5KE11A	9.4	10.5	11.6	1	15.6	5
1.5KE12	9.72	10.8	13.2	1	17.3	5
1.5KE12A	10.2	11.4	12.6	1	16.7	5
1.5KE13	10.5	11.7	14.3	1	19	5
1.5KE13A	11.1	12.4	13.7	1	18.2	5
1.5KE15	12.1	13.5	16.5	1	22	5
1.5KE15A	12.8	14.3	15.8	1	21.2	5
1.5KE16	12.9	14.4	17.6	1	23.5	5
1.5KE16A	13.6	15.2	16.8	1	22.5	5
1.5KE18	14.5	16.2	19.8	1	26.5	5
1.5KE18A	15.3	17.1	18.9	1	25.2	5
1.5KE20	16.2	18	22	1	29.1	5
1.5KE20A	17.1	19	21	1	27.7	5
1.5KE22	17.8	19.8	24.2	1	31.9	5
1.5KE22A	18.8	20.9	23.1	1	30.6	5
1.5KE24	19.4	21.6	26.4	1	34.7	5
1.5KE24A	20.5	22.8	25.2	1	33.2	5
1.5KE27	21.8	24.3	29.7	1	39.1	5
1.5KE27A	23.1	25.7	28.4	1	37.5	5
1.5KE30	24.3	27	33	1	43.5	5
1.5KE30A	25.6	28.5	31.5	1	41.4	5
1.5KE33	26.8	29.7	36.3	1	47.7	5
1.5KE33A	28.2	31.4	34.7	1	45.7	5
1.5KE36	29.1	32.4	39.6	1	52	5
1.5KE36A	30.8	34.2	37.8	1	49.9	5
1.5KE39	31.6	35.1	42.9	1	56.4	5
1.5KE39A	33.3	37.1	41	1	53.9	5
1.5KE43	34.8	38.7	47.3	1	61.9	5
1.5KE43A	36.8	40.9	45.2	1	59.3	5
1.5KE47	38.1	42.3	51.7	1	67.8	5
1.5KE47A	40.2	44.7	49.4	1	64.8	5
1.5KE51	41.3	45.9	56.1	1	73.5	5
1.5KE51A	43.6	48.5	53.6	1	70.1	5
1.5KE56	45.6	50.4	61.6	1	80.5	5
1.5KE56A	47.8	53.2	58.8	1	77	5
1.5KE62	50.2	55.8	68.2	1	89	5
1.5KE62A	53	58.9	65.1	1	85	5
1.5KE68	55.1	61.2	74.8	1	98	5

UNI-DIRECTIONAL PART NUMBER	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VBR (V) MAX. @IT	TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @IPP VC (V)	REVERSE LEAKAGE @VRWM IR (uA)
1.5KE68A	58.1	64.6	71.4	1	92	5
1.5KE75	60.7	67.5	82.5	1	108	5
1.5KE75A	64.1	71.3	78.8	1	103	5
1.5KE82	66.4	73.8	90.2	1	118	5
1.5KE82A	70.1	77.9	86.1	1	113	5
1.5KE91	73.7	81.9	100	1	131	5
1.5KE91A	77.8	86.5	95.5	1	125	5
1.5KE100	81	90	110	1	144	5
1.5KE100A	85.5	95	105	1	137	5
1.5KE110	89.2	99	121	1	158	5
1.5KE110A	94	105	116	1	152	5
1.5KE120	97.2	108	132	1	173	5
1.5KE120A	102	114	126	1	165	5
1.5KE130	105	117	143	1	187	5
1.5KE130A	111	124	137	1	179	5
1.5KE150	121	135	165	1	215	5
1.5KE150A	128	143	158	1	207	5
1.5KE160	130	144	176	1	230	5
1.5KE160A	136	152	168	1	219	5
1.5KE170	138	153	187	1	244	5
1.5KE170A	145	162	179	1	234	5
1.5KE180	146	162	198	1	258	5
1.5KE180A	154	171	189	1	246	5
1.5KE200	162	180	220	1	287	5
1.5KE200A	171	190	210	1	274	5
1.5KE220	175	198	242	1	344	5
1.5KE220A	185	209	231	1	328	5
1.5KE250	202	225	275	1	360	5
1.5KE250A	214	237	263	1	344	5
1.5KE300	243	270	330	1	430	5
1.5KE300A	256	285	315	1	414	5
1.5KE350	284	315	385	1	504	5
1.5KE350A	300	332	368	1	482	5
1.5KE400	324	360	440	1	574	5
1.5KE400A	342	380	420	1	548	5
1.5KE440	356	396	484	1	631	5
1.5KE440A	376	418	462	1	600	5

NOTES:

1. Non-repetitive current pulse, per Fig. 3 and derated above TA=25°Cper Fig. 2.
2. Mounted on Copper Leaf area of 1.57in2(40mm2).
3. 8.3ms single half sine-wave, duty cycle= 4 pulses per minutes maximum.

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

Fig. 1-Peak Pulse Power Rating Curve

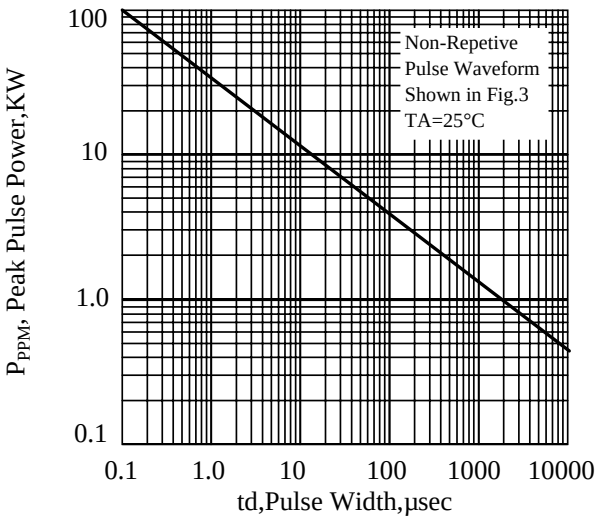


Fig. 2-Pulse Derating Curve

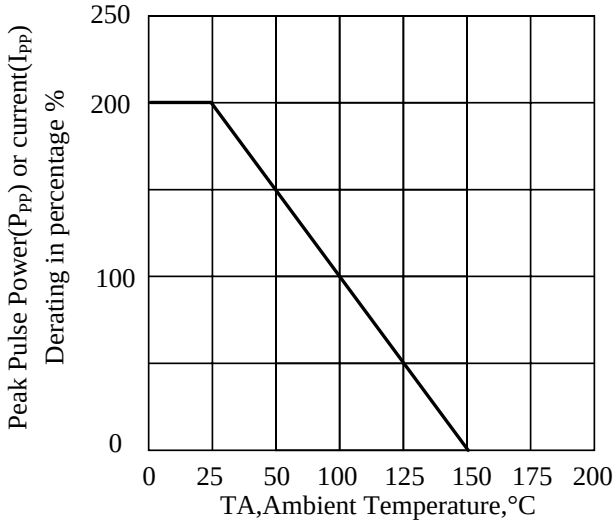


Fig. 3-Pulse Waveform

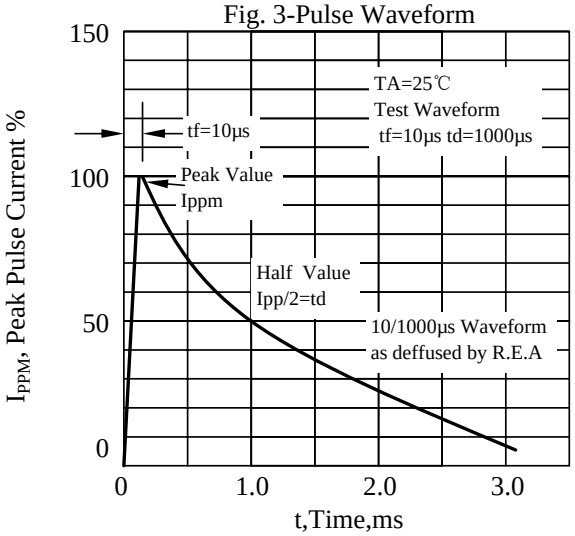


Fig. 4-Typical Junction Capacitance
Unidirectional

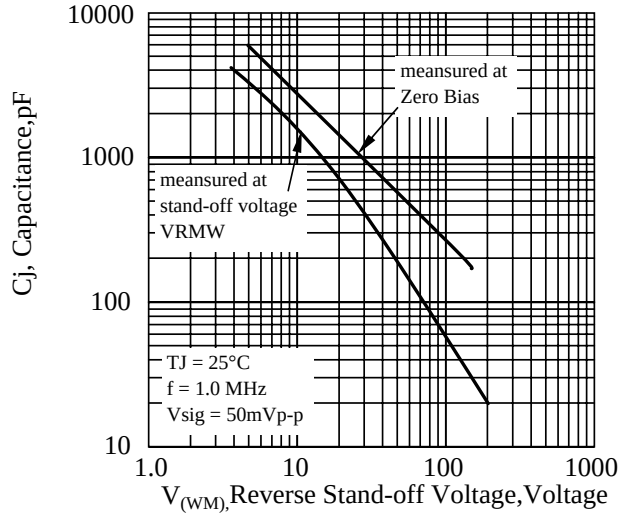


Fig. 5-Steady State Power
Derating Curve

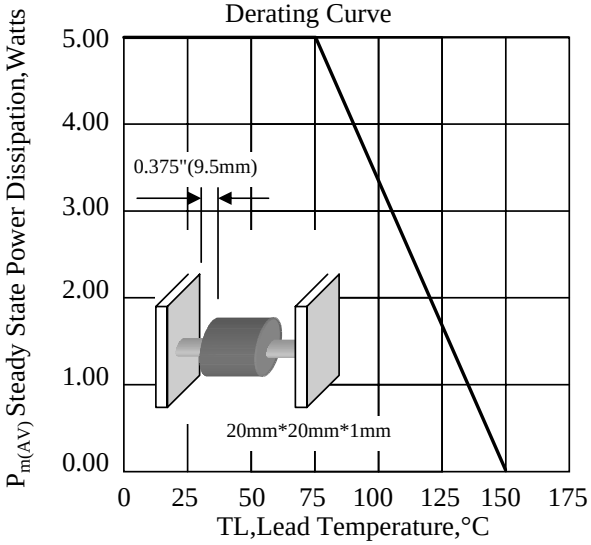
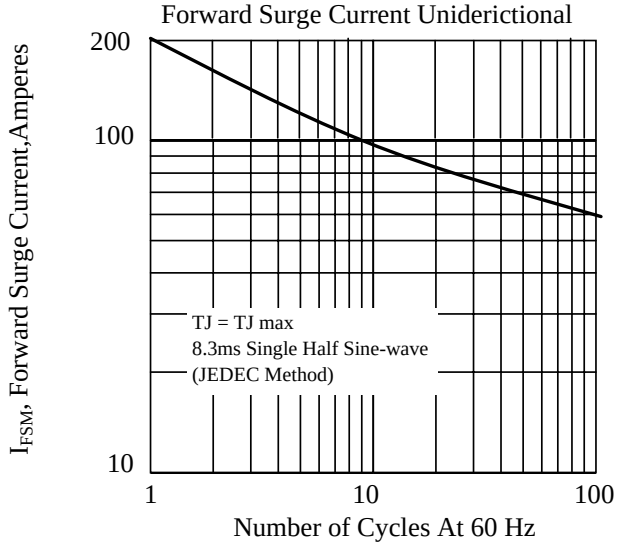
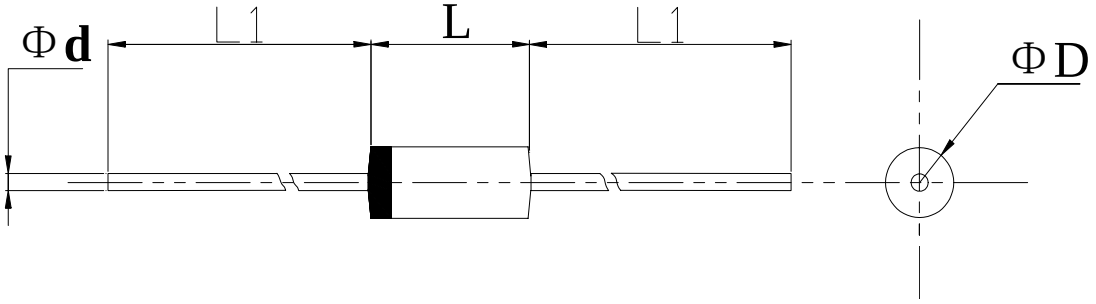


Fig. 6-Maximum Non-Repetitive Peak
Forward Surge Current Uniderictional



5.Package Dimensions in inches and (millmeters)

Package outline



Dimensions				
	inches		mm	
	Min.	Max.	Min.	Max.
L	0.335	0.375	8.5	9.5
L1	1.0	-	25.4	-
ΦD	0.197	0.220	5.0	5.6
Φd	0.048	0.052	1.2	1.3

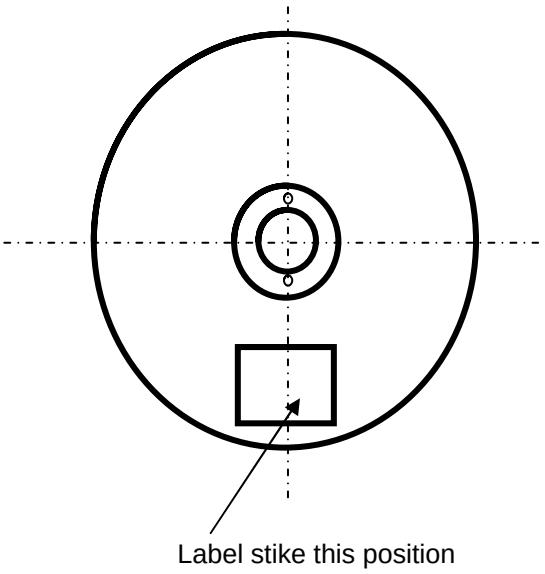
Note:
DO-201AD
molded plastic case
The marking band indicates the cathode

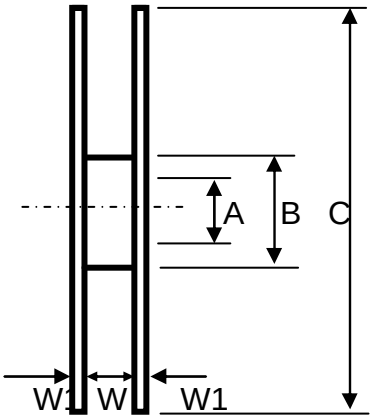
Packing Of Plastic-Sealed Axial Lead Diodes

1.卷盘/Reel Packing（52mm）

Unit:mm

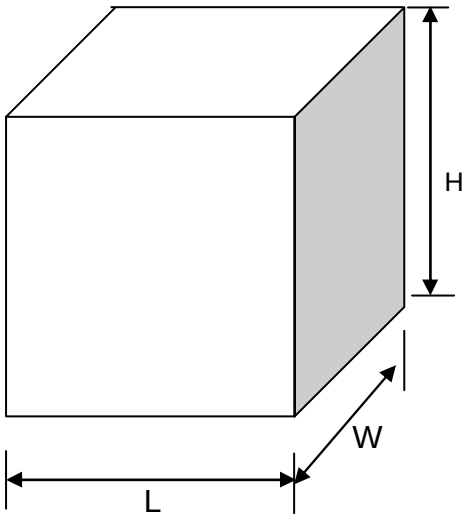
A：卷盘规格/Reel spec.





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

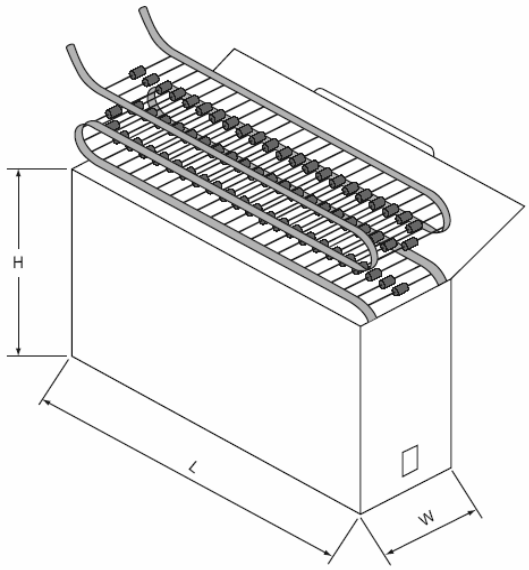
按以上包装方式：(As per the above spec)

	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

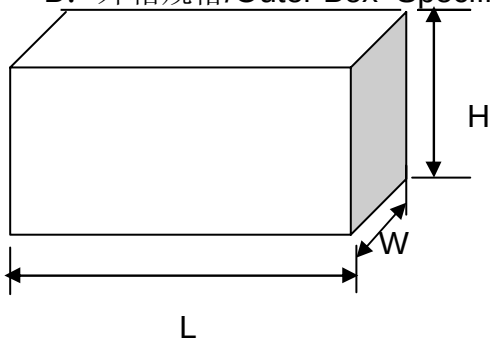
Unit:mm

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



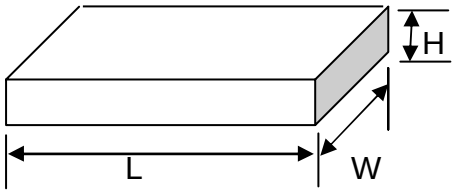
Item	Symbol	Dimension	Notes
Case's Size	L	430±2	52mm TYPE
	W	280±2	
	H	225±4	
	L	435±3	26mm TYPE
	W	280±3	
	H	295±5	

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

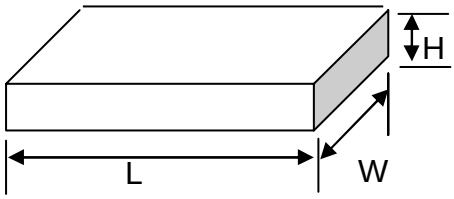
3. 散装/Bulk Packing

A.包装盒尺寸/Box Dimension



(DO-41&DO-15)

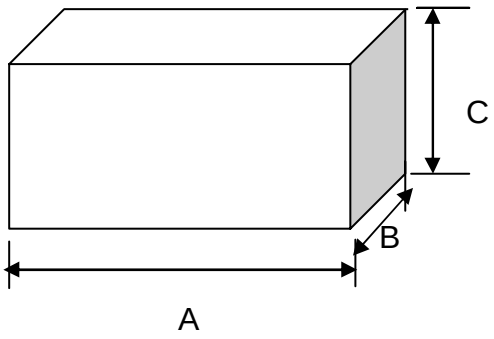
Item	Symbol	Dimension
Box's Size	L	200±2
	W	84±2
	H	21±2



(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

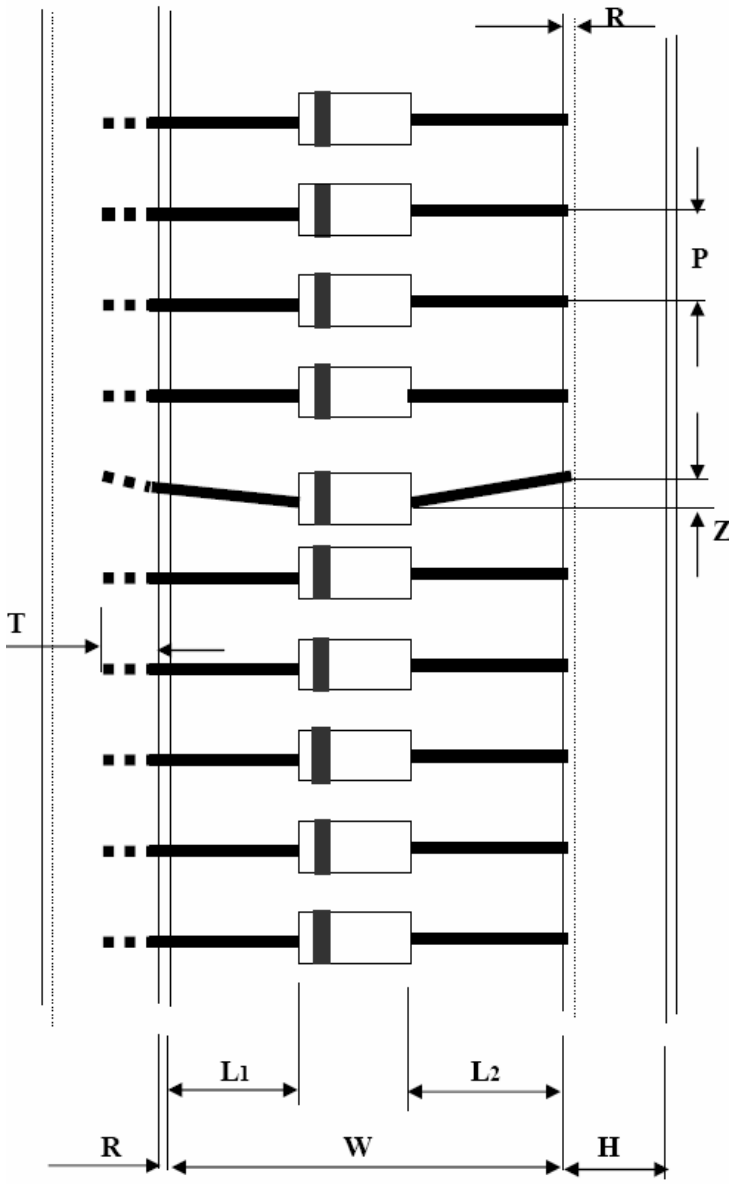


Item	Symbol	Dimension
Case's Size	L	465±2
	W	225±2
	H	260±4

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.