

SURFACE MOUNT PACKAGING

Packed per EIA/JEDEC standard RS-481
8, 12, 16, 24mm Tape only

Embossed Carrier
Dimensions

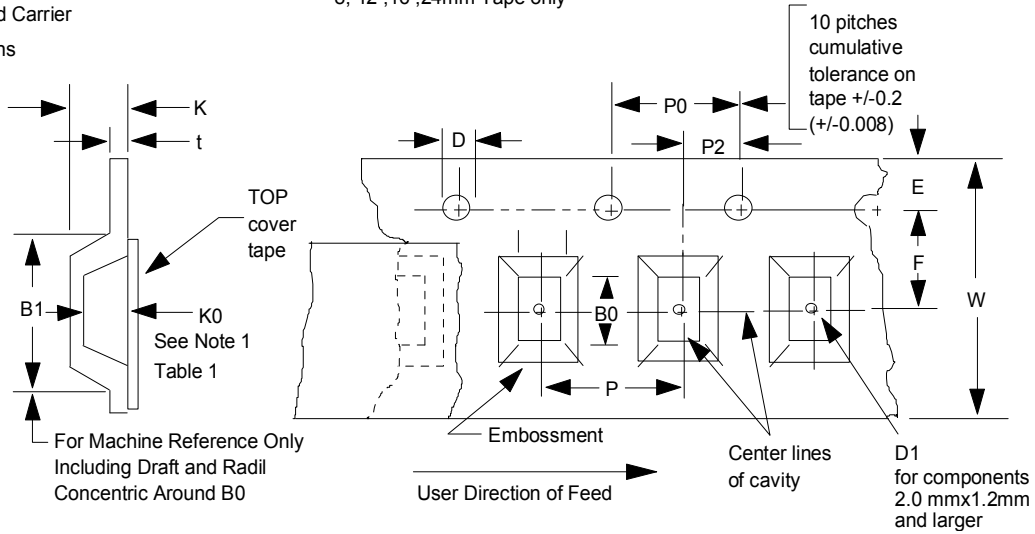


TABLE 1

EMBOSSED TAPE ALL DIMENSION IN MILLIMETERS AND (INCHES)

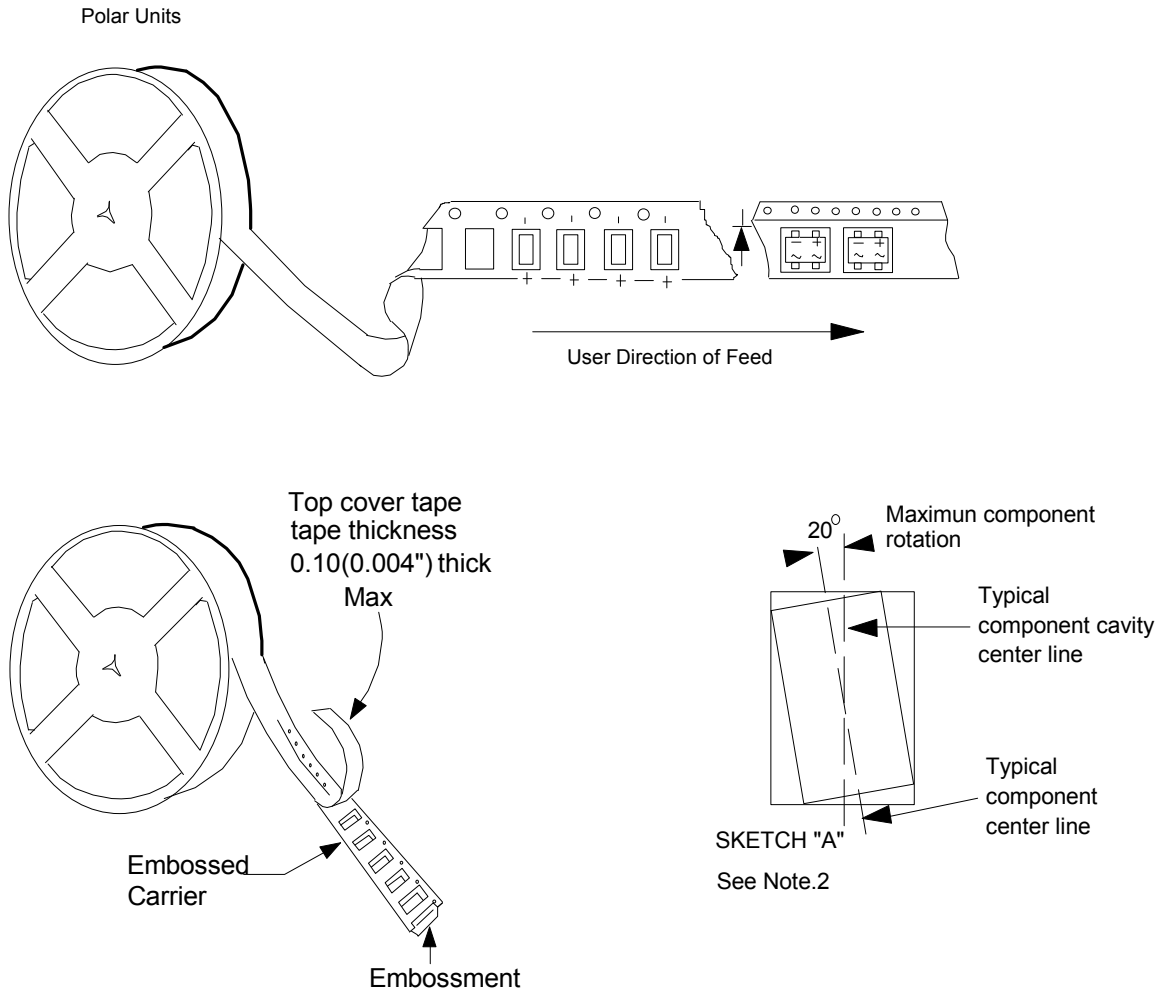
TAPE SIZE	D	E	PO	t (MAX)	t (MAX)	A0B0K0
8mm	1.55 + 0.10					
12mm	-0.00	1.75+/-0.10	4.0+/-0.10	0.4(0.016)	SEE NOTE 1	CONSTANT DIMENSION
16mm	(0.059 +0.004	(0.069+/-0.004)	(0.157+/-0.004)			
24mm	-0.00)					

PRODUCT TYPE	TAPE SIZE	B1 MAX	D1 MIN	F	K MAX	P2	R Min	W	P	
SOT-23 SOT-323 SOT-353 SOT-363 SOT-523 SOT-563 SOD-123 SOD-323 SOD-882 SLP1006P3 FBP-02C FBP-03B SOD-523 SOD-723 SOD-923	8mm	4.5 (.177)	1.0 (.039)	3.5+/-0.05 (.138+/-0.002)	2.4 (.256)	2.0+/-0.05 (.079+/-0.002)	25 (0.984)	8.0+/-0.030 (.315+/-0.012)	4.0+/-0.10 (.157+/-0.004)	VARIABLE DIMENSIONS
DO-222AA	12mm	5.0 (.197)	1.5 (.059)	5.5+/-0.1 (.217+/-0.004)	1.65 (.065)	2.0+/-0.05 (.079+/-0.002)	30 (1.181)	12.0+/-0.30 (.472+/-0.012)	4.0+/-0.10 (.157+/-0.004)	
DO-221AC		6.5 (.255)								
DO-216AA		5.3 (.209)								
SMA		8.2 (.323)								
SMB										
HDDF										
SOT-223										
SMC	16mm	12.1 (.476)	7.5+/-0.10 (.295+/-0.004)	3.29 (.129)	2.0+/-0.1 (.079+/-0.004)	40 (1.575)	16.0+/-0.30 (.630+/-0.012)	8.0+/-0.1 (.314+/-0.004)		
DF-S				3.7 (.146)	2.0+/-0.1 (.079+/-0.004)			12.0+/-0.10 (.472+/-0.004)		
D2PAK	24mm	20.1 (.791)		11.5+/-0.10 (.453+/-0.004)	6.5 (.256)	2.0+/-0.10 (.079+/-0.004)	50 (1.969)	24.0+/-0.30 (.945+/-0.012)	16.0+/-0.10 (.787+/-0.004)	

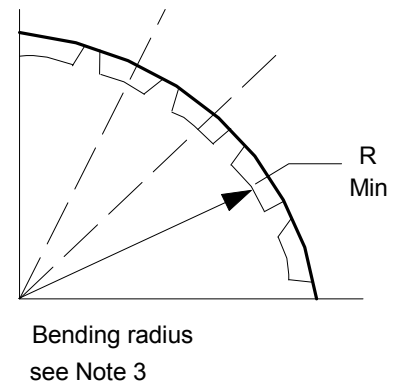
Note:1

A0B0K0 are determined by component size. The clearance between the component and the cavity must be within 0.05(.002) min. to 0.50 (.020) max. for 8 mm tape. 0.05(.002) min. to 0.65 (.025) max. for 12mm tape. 0.15 (0.006) min. to 0.90 (.035) max. for 16mm tape and 0.05(0.002)min. to 1.00 (.039) max. for 24 mm tape and larger.

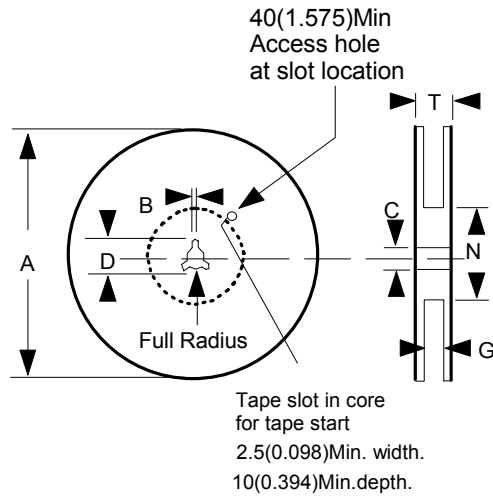
SURFACE MOUNT PACKAGING



- 2. The component cannot rotate more than 20° within the determined cavity, see sketch "A" below
- 3. Tape and component shall pass around radius "R" without damage .



SURFACE MOUNT PACKAGING



REEL DIMENSIONS

TAPE SIZE	A MAX.	B MAX.	C	D MIN	N MIN	G	T MAX.
8mm	178 (7.0)	1.5 (.06)	13.0+/-0.5 (.512+/- .020)	20.2 (.80)	75 (2.952)	8.4+1.5/-0.0 (.33+0.06/-0.0)	14.4 (0.566)
12mm	330 (13.0)					12.4+2.0/-0.0 (.488+0.078/-0.0)	18.4 (.724)
16mm						16.4+2.0/-0.0 (.646+0.078/-0.0)	22.4 (.882)
24mm						24.4+2.0/-0.0 (.960+0.078/-0.0)	30.4 (1.196)

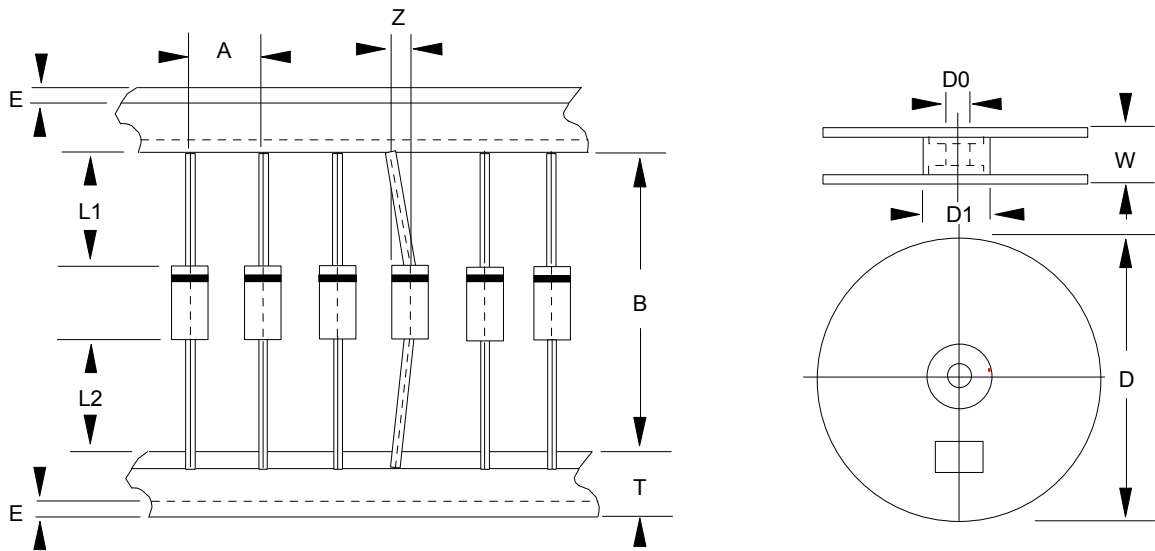
PACKING

DEVICE TYPE	Q'TY/REEL (PCS)	REEL DIA. (mm)	BOX SIZE (mm)	Q'TY/BOX (PCS)	CARTON SIZE (mm)	Q'TY/CARTON (PCS)		
DO-216AA	12000	330	340x338x30	12000	350x350x340	144000		
SMA	5000		334x334x21	5000		60000		
SMB	3000			337x337x27		3000	36000	
HDDF						1500	15000	
SMC						800	6400	
DF-S	1500		338x338x26	1500		15000		
D2PAK	800		334x334x21	800		6400		
DO-222A/ DO-216AA	12000			12000		144000		
DO-221AC	10000			10000		120000		
SOT-223	2500		353x347x50	5000		360x360x315	30000	
DO-222A/ DO-216AA	3000	178	184x184x72	12000	380x380x360	192000		
DO-221AC				6000		96000		
SMA	1500			184x184x88		2000	32000	
SMB	500					206x207x203	45000	180000
SMC							120000	480000
SOT-23/ 323/ 353/363/ 523/ 563 SOD-123/ 323/ 523/ 723/ 882 SLP1006P3, FBP-02C/ 03B	3000		206x207x203	206x207x203	45000	438x438x241	180000	
SOD-923	8000				120000		480000	

REEL PACKAGING

Axial devices are packed in accordance with EIA standard RS-296-D and specification.

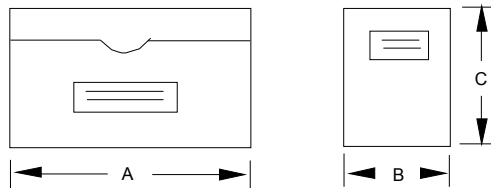
COMPONENT OUTLINE	COMPONENT PITCH A +/- 0.5mm (.020")	INNER TAPE PITCH B +/- 1.5mm (.059")	CUMULATIVE PITCH TOLERANCE	Q'TY per REEL	Q'TY per CARTON
T-1	5.0mm	26.0mm	2.0mm/20pitch	5000	20 K
T-1	5.0mm	52.4mm	2.0mm/10pitch	5000	20 K
A-405	5.0mm	26.0mm	2.0mm/20pitch	5000	20 K
A-405	5.0mm	52.4mm	2.0mm/10pitch	5000	20 K
DO-41	5.0mm	26.0mm	2.0mm/20pitch	5000	20 K
DO-41	5.0mm	52.4mm	2.0mm/10pitch	5000	20 K
DO-15	5.0mm	26.0mm	2.0mm/10pitch	4000	16 K
DO-15	5.0mm	52.4mm	2.0mm/10pitch	4000	16 K
DO-201/DO-201AD	10.0mm	52.4mm	2.0mm/10pitch	1200	4.8 K
R-6	10.0mm	52.4mm	2.0mm/10pitch	700	2.8 K



ITEM	SYMBOL	SPECIFICATIONS (mm)	SPECIFICATIONS (inch)
Component alignment	Z	1.2 max.	0.048 max.
Tape width	T	6.0+/-0.4	0.236+/-0.016
Exposed adhesive	E	0.8 max.	0.032 max.
Body eccentricity	L1-L2	1.0 max.	0.040 max.
Reel outside diameter	D	330.0	13.0
Reel inner diameter	D1	85.7+/-0.3	3.375+/-0.012
Feed hole diameter	D0	16.6+/-0.4	0.655+/-0.016
Reel width (Note 1)	W	79.0+/-1.0	3.110+/-0.040

NOTE: 1. The reel width 'W' for 26 mm taping is 50.0 +/- 1.0 mm (1.97" +/- 0.040")

AMMO BOX PACKAGING



BOX SIZE

Unit: mm

Packaging	Products Outline	Dimension "A"	Dimension "B"	Dimension "C"	Q'TY per BOX
26MM Horizontal Ammo Pack	T-1,A-405,DO-41	255~259	50~54	107~113	3K
	DO-15				2K
52MM Horizontal Ammo Pack	DO-15	259	83	113	2K
	T-1,A-405,DO-41				3K
	DO-201,DO-201AD				1K

CARTON SIZE

Packaging	Products Outline	Dimension Length	Dimension Width	Dimension Height	Q'TY per Carton
26MM Horizontal Ammo Pack	T-1,A-405,DO-41	530	300	280	54K
	DO-15	530	300	280	36K
52MM Horizontal Ammo Pack	DO-15	545	300	280	24K
	T-1,A-405,DO-41				36K
	DO-201, DO-201AD				12K

BULK PACKAGING

BOX:

DEVICE TYPE	PACKAGING SIZE (m.m.)		QUANTITY (EA)		APPROX GROSS WEIGHT(KG)	
	BOX	CARTON	BOX	CARTON	BOX	CARTON
A-405	196x84x20	450x210x250	1000	50K	0.29	15.8
DO-41	196x84x20	450x210x250	1000	50K	0.38	20
DO-15	196x84x20	450x210x250	800	40K	0.38	20
DO-201/DO-201AD	305x93x59	395x315x340	1000	20K	1.2	25
R-6	305x93x59	395x315x340	500	10K	1.15	23.6
WOG	-----	-----	1000	10K	1.6	18

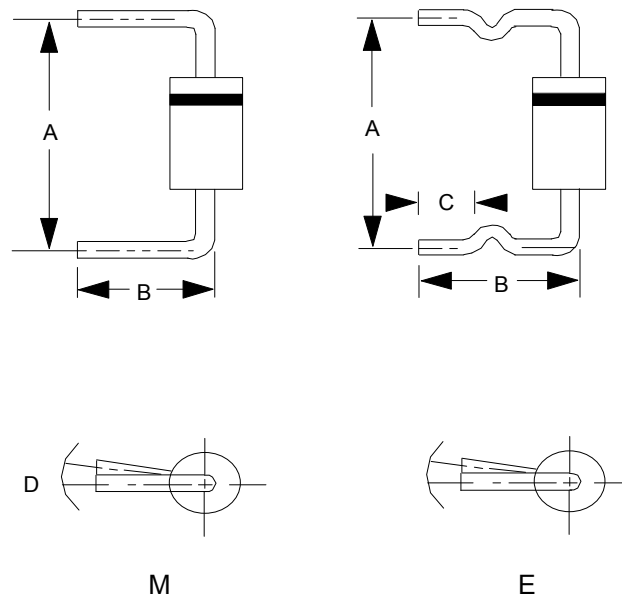
TUBE:

DEVICE TYPE	PACKAGING SIZE (m.m.)			QUANTITY (EA)			APPROX GROSS WEIGHT(KG)		
	TUBE	BOX	CARTON	TUBE	BOX	CARTON	TUBE	BOX	CARTON
DF	444x15x13.3	490x155x145	510x330x275	50	4000	16K	0.04	3.5	14
TO-220	537x34x 6.0	555x165x95	575x179x225	50	2000	4K	0.14	5.8	14.9
TO-3P	502x46x 8.0	550x150x125	575x180x275	30	840	1.68K	0.24	7.1	15.1
DF-S	444x15x5.9	490x155x145	350x350x340	50	4000	16K	0.03	6.8	14
KBJ	525x37.3x7.1	550x200x110	580x230x270	20	1000	2K	0.16	7.4	15
KBP	531x29.6x6.2	550x200x122	580x230x270	35	2800	5.6K	0.09	7.3	15.4
GBU	465x41.5x6.2	500x200x120	520x210x265	20	1000	2K	0.132	6.6	14.2
GBJ	475x42.5x7.2	500x200x120	520x210x265	15	600	1.2K	0.16	7.5	17

TRAY:

DEVICE TYPE	PACKAGING SIZE (m.m.)		QUANTITY (EA)		APPROX GROSS WEIGHT(KG)	
	TRAY	CARTON	TRAY	CARTON	TRAY	CARTON
KBPC-G	320x280x30	330x290x210	100	0.5K	2.4	13
KBPC-GW	320x280x30	330x290x210	100	0.5K	2.1	11.5
GBPC	320x280x30	330x290x210	100	0.5K	1.98	11
GBPC-W	320x280x30	330x290x210	100	0.5K	1.70	9.5

PREFORMED LEAD DRAWING

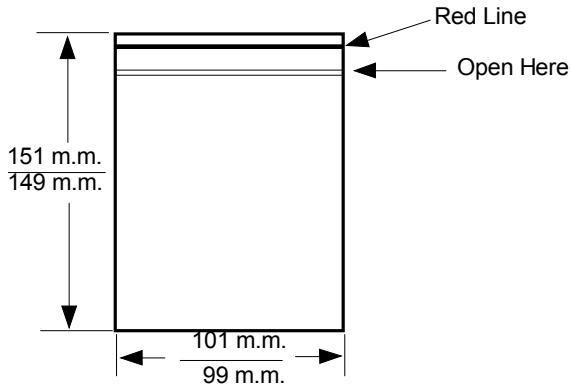


Case type	Preformed type	A (mm)		B (mm)		C (mm)		D (mm)		R (mm)	
		Range	Tolerance	Range	Tolerance	Range	Tolerance	Range	Tolerance	Range	Tolerance
DO-41	M	11.0-20.0	+/-0.5	8.0-20.0	+/-0.5	----	----	1.5	max	----	----
A-405	E	11.0-20.0	+/-0.5	11.0-16.0	+/-1.0	4.0-5.0	+/-0.5	1.5	max	----	----
DO-15	M	13.0-20.0	+/-0.5	8.0-22.0	+/-0.5	----	----	1.5	max	----	----
	E	13.0-20.0	+/-0.5	11.0-16.0	+/-1.0	4.0-5.0	+/-0.5	1.5	max	----	----
DO-201 DO-201AD	M	15.0-20.0	+/-1.0	8.0-22.0	+/-1.0	----	----	2.0	max	----	----
	E	15.0-20.0	+/-1.0	10.0-22.0	+/-1.0	3.0-5.0	+/-0.5	2.0	max	----	----
R-6	M	15.0-20.0	+/-1.0	8.0-22.0	+/-1.0	----	----	2.0	max	----	----

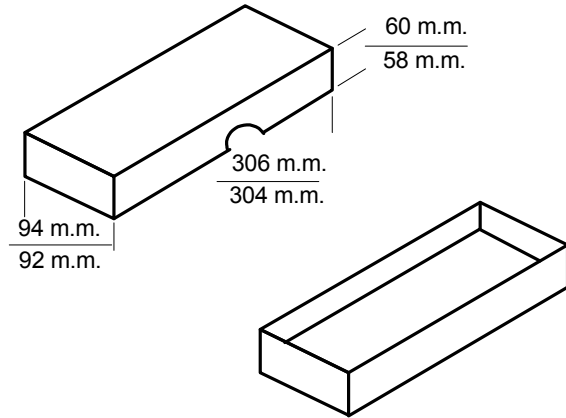
● Press Forming Also Available

PACKAGE OF PREFORMED DIODE

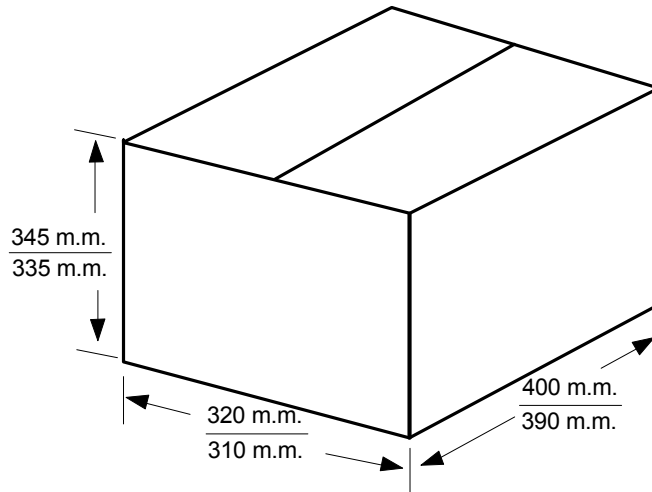
A. PLASTIC BAG



B. BOX



C. CARTON



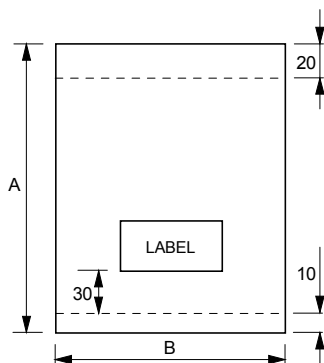
Case Type	Preformed Type		Q'TY/Plastic Bag	Q'TY/Box	Q'TY/Carton
DO-41	M	Short Type	400	2K	40K
		Long Type	250	1.25K	25K
DO-41L	E		500	2.5K	50K
	B		250	1.25K	25K
	C		500	2.5K	50K
DO-15	M		400	2K	40K
	E		400	2K	40K
DO-201 DO-201AD	M		100	500	10K
	E		100	500	10K
R-6	M		100	500	10K

* Preformed Type see front page.

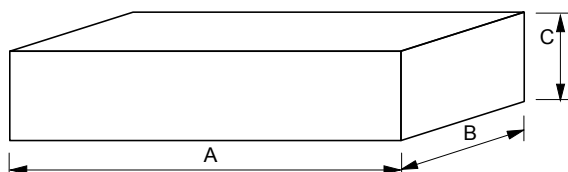
(Unit : PCS)

PACKAGE OF TO-92 SERIES

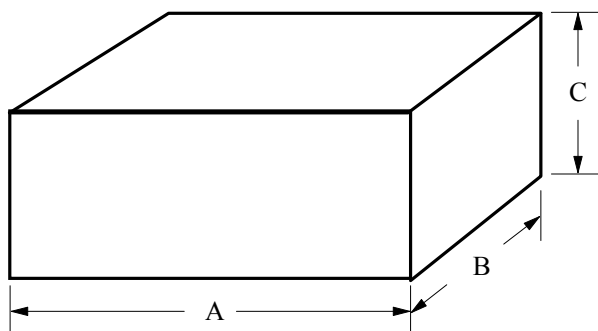
1. Plastic Bag



2. Inner Box



3. Carton



BULK PACKAGING

Unit: mm

P/N	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	Q'TY PER	REMARK
PLASTIC BAG	185	125		1K	
INNER BOX	242	170	100	10K	10 PAG
CARTON	520	360	270	100K	10 INNER BOX

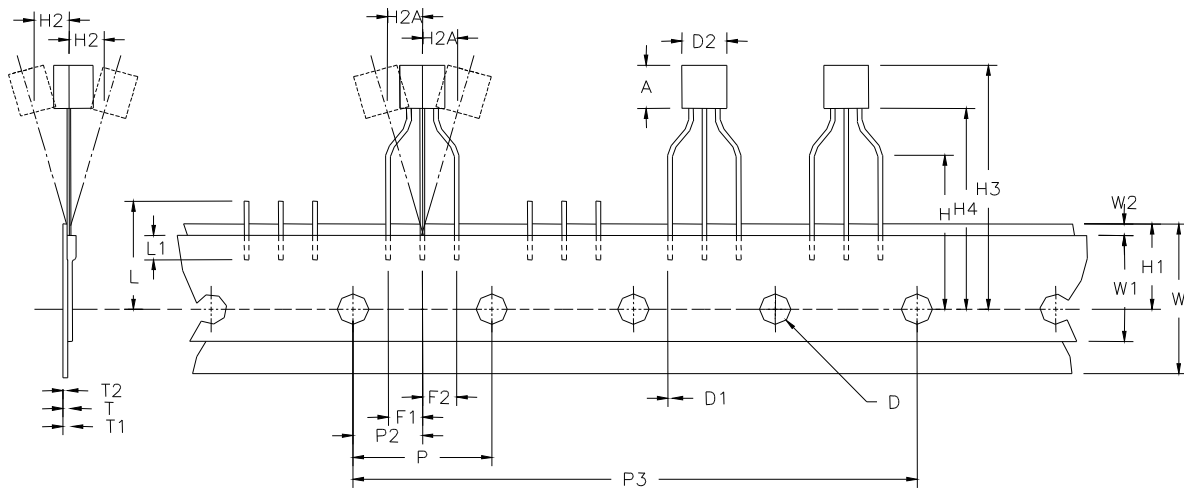
TAPPING PACKAGING

P/N	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	Q'TY PER	REMARK
INNER BOX	330	200	41	2K	1 PACK
CARTON	430	360	280	20K	10 INNER BOX

PACKAGE OF TO-92 SERIES

Tape reel packing :

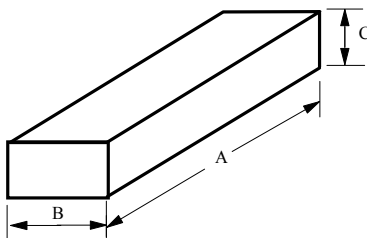
2. INNER BOX



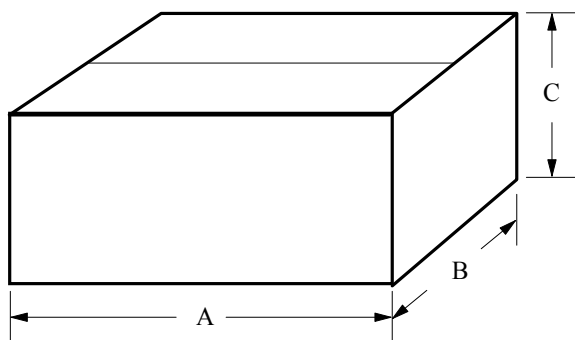
SYMBOL	ITEM	Metric system	Dimensions in inch
A	Body height	4.4-4.8	0.173-0.189
D	Sprocket hole diameter	4.0±0.2	0.158±0.008
D1	Lead-wire diameter	0.45-0.55	0.018-0.022
D2	Body diameter	4.4-4.8	0.173-0.189
F1.F2	Component lead spacing	2.5+0.4. -0.1	0.1+0.015. -0.004
H	Lead wire clinch height	16±0.5	0.63±0.02
H1	Sprocket hole position	9±0.5	0.354±0.02
H2	Body shift	1MAX	0.04MAX
H3	Overall height above abscissa	32.0MAX	1.26MAX
H4	Height of component from tape	21.0MAX	0.827MAX
P	Sprocket hole pitch	12.7±0.2	0.5±0.008
P2	Sprocket hole center to lead	6.35±0.4	0.25±0.018
P3	4 Sprocket holes pitch	50.8±0.5	2.0±0.02
T	Total tape thickness	0.55MAX	0.022MAX
W	Total tape width	17.5-19	0.689-0.748
W1	Carrier tape width	5.0-7.0	0.197-0.276
W2	Sprocket hole position	0.5MAX	0.02MAX
—	20 Sprocket holes pitch	254.0±1	10±0.04

PACKAGE OF TO-220 (SCR/TRIAC/MOSFET)

1. INNER BOX



2. CARTON



Unit: mm

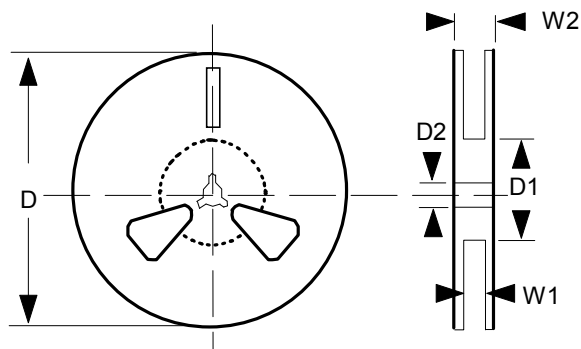
P/N	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	Q'TY PER	REMARK
TUBE	537	34	6	50	
INNER BOX	575	150	50	1K	20 TUBE / 5 FLOORS
CARTON	595	270	170	5K	5 INNER BOX

PACKAGE OF TO-3P (MOSFET)

Unit: mm

P/N	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	Q'TY PER	REMARK
TUBE	507	48	8	30	
INNER BOX	555	160	130	840	28TUBES
CARTON	565	170	270	1680	2 INNER BOXS

SWITCHING DIODE REEL PACKAGING



Reel Dimension

Unit: mm (inch)

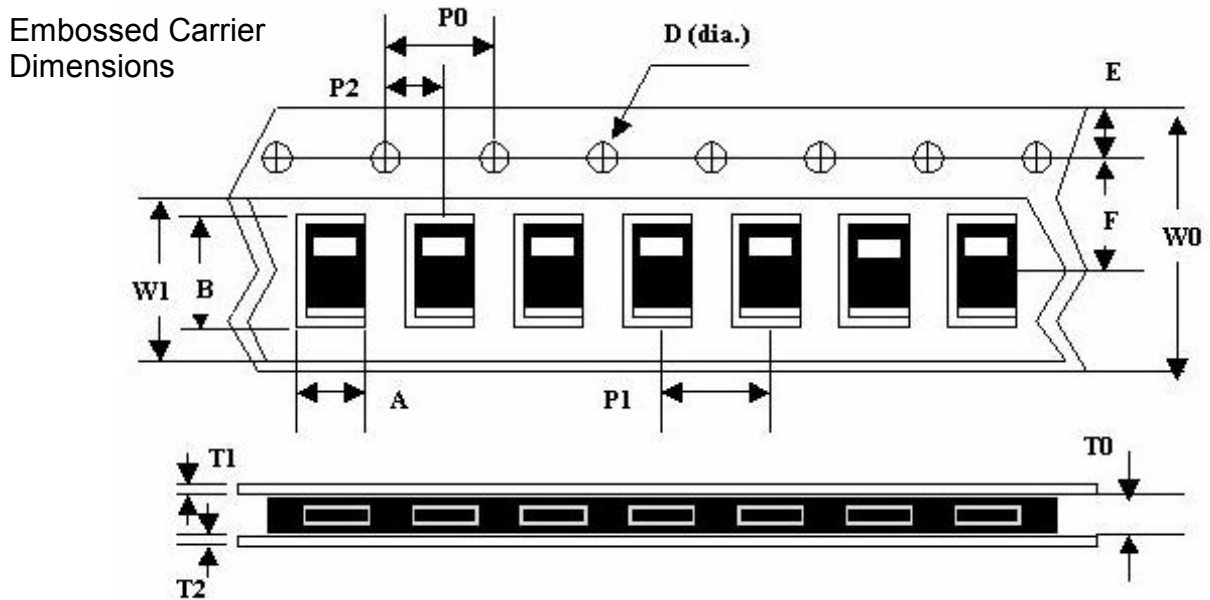
Item	Symbol	Dimension
Feed hold diameter	D2	13.0+/-0.2 (0.512+/-0.008)
Reel inner diameter	D1	60.0+/-0.5 (2.36+/-0.02)
Reel outside diameter	D	178.0+/-1.0 (7.008+/-0.04)
Reel inner width	W1	9.0+/-0.5 (0.354+/-0.02)
Reel outside width	W2	12.0+/-0.15 (0.472+/-0.006)

PACKING

Unit: mm

DEVICE TYPE	Q'TY/REEL (PCS)	REEL DIA. (mm)	BOX SIZE (mm)	Q'TY/BOX (PCS)	CARTON SIZE (mm)	Q'TY/CARTON (PCS)
1206	5000	178	181x181x74	30000	393x367x189	300000
0805						
0603						

SWITCHING DIODE REEL PACKAGING



EMBOSSSED TAPE

Unit: mm

Item	Symbol	Dimension
Punch hole idth	A	1206 2.00+/-0.2 (0.079+/-0.008)
		805 1.65+/-0.2 (0.065+/-0.008)
		603 1.20+/-0.2 (0.047+/-0.008)
Punch hole length	B	1206 3.50+/-0.2 (0.138+/-0.008)
		805 2.40+/-0.2 (0.094+/-0.008)
		603 1.90+/-0.2 (0.075+/-0.008)
Sprocket hole	D	1.60+/-0.05 (0.063+/-0.002)
Sprocket hole position	E	1.75+/-0.10 (0.070+/-0.004)
Punch hole position	F	3.50+/-0.05 (0.140+/-0.002)
Sprocket hole pitch	P0	4.00+/-0.10 (0.160+/-0.004)
Punch hole pitch	P1	4.00+/-0.10 (0.160+/-0.004)
Punch hole center	P2	2.00+/-0.05 (0.08+/-0.002)
Base tape width	W0	8.00+/-0.20 (0.320+/-0.008)
Top/Bottom seal tape width	W1	5.25+/-0.05 (0.210+/-0.002)
Base tape thickness	T0	0.95+/-0.02 (0.038+/-0.008)
Top seal tape thickness	T1	0.0054+/-0.005 (0.002+/-0.0002)
Bottom seal tape thickness	T2	0.042+/-0.05 (0.0016+/-0.0002)