



Integrated Device Technology, Inc.
 6024 Silver Creek Valley Road, San Jose, CA - 95138

PRODUCT/PROCESS CHANGE NOTICE (PCN)

PCN #: TB1601-01 DATE: 16-Feb-2016 Product Affected: P9145 devices (refer to attachment 2 for affected part#) Date Effective: 16-May-2016	MEANS OF DISTINGUISHING CHANGED DEVICES: <input type="checkbox"/> Product Mark <input type="checkbox"/> Back Mark Traceability to the test location is <input type="checkbox"/> Date Code maintained by IDT and available on <input checked="" type="checkbox"/> Other request
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Contact: IDT PCN DESK E-mail: pcndesk@idt.com	Attachment: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Samples: Please contact your local sales representative for sample request.
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DESCRIPTION AND PURPOSE OF CHANGE:

<input type="checkbox"/> Die Technology <input type="checkbox"/> Wafer Fabrication Process <input type="checkbox"/> Assembly Process <input type="checkbox"/> Equipment <input type="checkbox"/> Material <input type="checkbox"/> Testing <input checked="" type="checkbox"/> Manufacturing Site <input type="checkbox"/> Data Sheet <input type="checkbox"/> Other	<p>This notification is to advise our customers that IDT is adding Sigurd, Taiwan as an alternate facility for Test process for the selective products that are presently tested at IDT Penang, Malaysia facility. Products tested in Sigurd will also complete the Backend process in this same facility.</p> <p>Attachment I details the change.</p>
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RELIABILITY/QUALIFICATION SUMMARY:

There is no expected change to the product quality or reliability performance. Please refer to Attachment I for Electrical correlation data.

CUSTOMER ACKNOWLEDGMENT OF RECEIPT:

IDT records indicate that you require written notification of this change. Please use the acknowledgement below or E-Mail to grant approval or request additional information. If IDT does not receive acknowledgement within 30 days of this notice it will be assumed that this change is acceptable.

IDT reserves the right to ship either version manufactured after the process change effective date until the inventory on the earlier version has been depleted.

Customer: _____	<input type="checkbox"/> Approval for shipments prior to effective date.
Name/Date: _____	E-Mail Address: _____
Title: _____	Phone# /Fax# : _____
CUSTOMER COMMENTS: _____	

IDT ACKNOWLEDGMENT OF RECEIPT:

RECD. BY: _____ **DATE:** _____



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ATTACHMENT 1 - PCN # : TB1601-01

PCN Type: Manufacturing Site - Alternate Test & Backend Location
Data Sheet Change: None
Detail Of Change:

This notification is to advise our customers that IDT is adding Sigurd, Taiwan as an alternate facility for Test process for the selective products that are presently tested at IDT Penang, Malaysia facility. Products tested in Sigurd will also complete the Backend process in this same facility.

This change will allow IDT the flexibility to ship from either facility and will provide the increased capacity, flexibility and shorter lead time to meet market demand.

There is no change in the Test processing flows. Tester configuration used at IDT Penang is the same as Sigurd. IDT has completed the electrical test correlation and based on the test results we do not anticipate any impact on device performance. The testing is fully compatible and transferrable between the test facilities with no change to the test coverage. The Backend process is standardized between the two sites. The carrier tape and plastic reel used in Sigurd are with the same dimensions as used in IDT Penang. There is no change to form, fit and functions. Refer to Table 1 and Table 2 for the comparisons.

There is no change in the moisture sensitivity level (MSL).

If you require samples to conduct evaluations, please contact your local sales representative to acknowledge this PCN and request samples.



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PRODUCT/PROCESS CHANGE NOTICE (PCN)

ATTACHMENT 1 - PCN # : TB1601-01

Qualification Information and Qualification Data:

Electrical Test Correlation Results

Vehicle: P9145

Sample size: 200 electrically good units and 30 reject units

Description	Existing Test (IDT, Penang)	Alternate Test (Sigurd, Taiwan)
Tester Platform	Teradyne Flex	Teradyne Flex
Loadboard	IDT board	IDT board
Test Program	FRP9145_XX_SeikoEpsonNS 5000.txt	FRP9145_XX_SeikoEpsonNS5000.txt
Test Site	2	2
Test Temperature	25°C	25°C
Test Correlation Results	100%	100%
Number of Good Units Correlated @ ambient	200 pcs	200 pcs
200 units Bin 1 handler run (good units)	200 good units pass electrical test	200 good units pass electrical test
Number of Reject Units Correlated @ ambient	30 pcs	30 pcs
30 units rejects handler run	30 rejects fail electrical test	30 rejects fail electrical test
200 units Bin 1 datalog correlation (good units)	Passed	Passed
30 units rejects datalog correlation	Passed	Passed



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ATTACHMENT 1 - PCN # : TB1601-01

Carrier Tape and Plastic Reel comparisons:

Table 1: Carrier Tape Comparisons



Item	Vendor	Carrier Dimensions		Cavity Dimensions (mm) ±0.1 or Specific				Top View	Drawing
		W (mm.) ±0.3	P1 (mm.) ±0.1	A0	B0	K0	K1		
IDT	PCT QFN9x9GP-20B3-360C-SD	16	12	9.3	9.3	1.05	NA		Refer Attachment 3
Sigurd	ADVANTEK ML0909-D	16	12	9.3	9.3	1.05	NA		Refer Attachment 4

Table 2: Plastic Reel Comparisons

Item	Vendor	(A) Reel Dia. (inch)	(N) Hub Dia. (inch)	Color	Snapshot	Drawing
IDT	TAIPEX 3.3C161307(BLK)	13"	7"	Black		Refer Attachment 5
Sigurd	TAIPEX 3.3C161307(BLK)	13"	7"	Black		



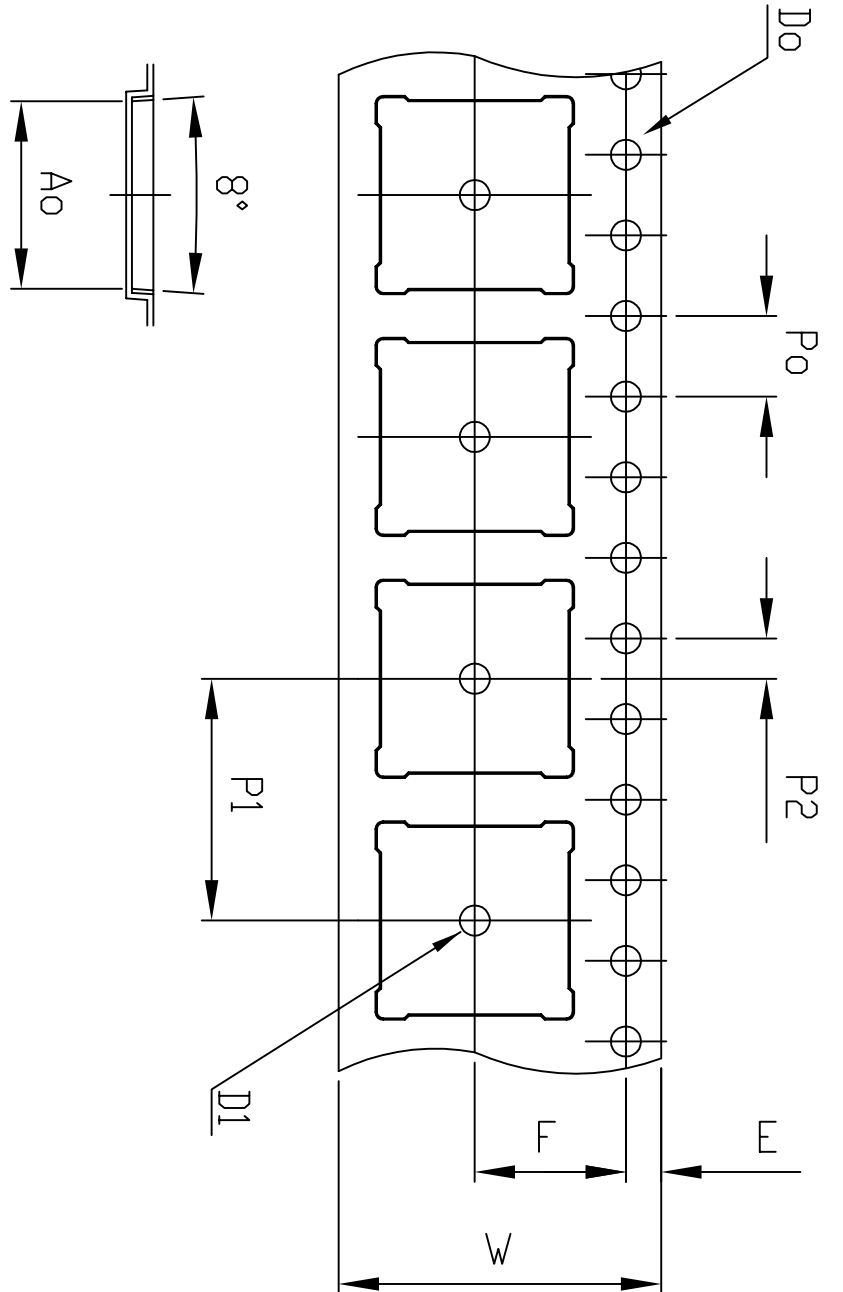
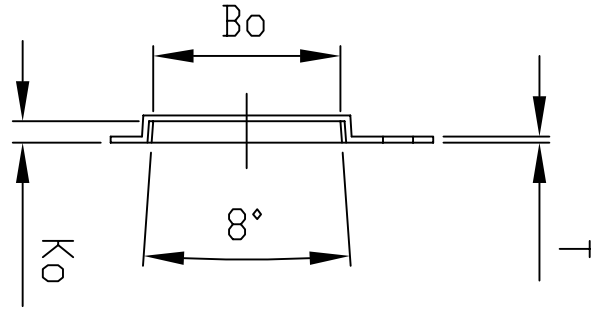
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PRODUCT/PROCESS CHANGE NOTICE (PCN)

ATTACHMENT 2 - PCN # : TB1601-01

Affected Part Numbers

Part Number	Part Number	Part Number	Part Number
P9145-00NAGI	P9145-A2NAGI8	P9145-N1NAGI	P9145-T1NAGI8
P9145-00NAGI8	P9145-H1NAGI	P9145-N1NAGI8	P9145-T2NAGI
P9145-00NHGI	P9145-H1NAGI8	P9145NAGI	P9145-T2NAGI8
P9145-00NHGI8	P9145-I0NAGI	P9145NAGI8	P9145-X0NAGI
P9145-A0NAGI	P9145-I0NAGI8	P9145NHGI	P9145-X0NAGI8
P9145-A0NAGI8	P9145-K0NAGI	P9145NHGI8	P9145-X1NAGI
P9145-A1NAGI	P9145-K0NAGI8	P9145-T0NAGI	P9145-X1NAGI8
P9145-A1NAGI8	P9145-N0NAGI	P9145-T0NAGI8	
P9145-A2NAGI	P9145-N0NAGI8	P9145-T1NAGI	



A ₀ ±0.1	B ₀ ±0.1	K ₀ ±0.1	K ₁ ±0.1	E ±0.1	F ±0.1	P ₀ ±0.1	P ₁ ±0.1	P ₂ ±0.1	D ₀ +0.1	D ₁ +0.1	T ±0.05	W ±0.3
9.3	9.3	1.05	NA	1.75	7.5	4.0	12.0	2.0	Ø1.5	Ø1.5	0.30	16.0

NOTES : (UNLESS OTHERWISE SPECIFIED)

1. SUPPLIER : PCT
2. SUPPLIER PART NUMBER : QFN9x9GP-20B3-360C-SD
3. 10 SPROCKET HOLE PITCHES CUMULATIVE TOLERANCE ±0.2mm
4. REFER TO MSA-3018 FOR THE ALLOWABLE CAMBER REQUIREMENT.
5. MATERIAL : BLACK CONDUCTIVE POLYSTYRENE.
6. A₀ AND B₀ MEASURED ON A PLANE 0.3 MM ABOVE THE BOTTOM OF THE POCKET.
7. K₀ MEASURED FROM A PLANE ON THE INSIDE BOTTOM OF THE POCKET TO THE TOP SURFACE OF THE CARRIER.
8. POCKET POSITION RELATIVE TO SPROCKET HOLE MEASURED AS TRUE POSITION OF POCKET, NOT POCKET HOLE.
9. POCKET CENTER AND POCKET HOLE CENTER MUST BE SAME POSITION.
10. REFER TO MAA-3092 & MSA-3018 FOR THE IDT STANDARD REQUIREMENT FOR CARRIER TAPE.
11. ALL THE DIMENSIONS ARE IN MILLIMETERS (MM).
12. LENGTH PER ROLL = 360 METERS.

TOLERANCES UNLESS OTHERWISE SPECIFIED
 DECIMAL
 .XX ±.13
 .XXX ±.13
 ANGLE
 ±.5°

APPROVALS
 DRAWN
 DATE
 WWW.IDT.COM

IDT
 6024 Silver Creek Valley Road,
 San Jose, CA 95138
 PHONE: (408) 284-8200
 FAX: (408) 284-5072

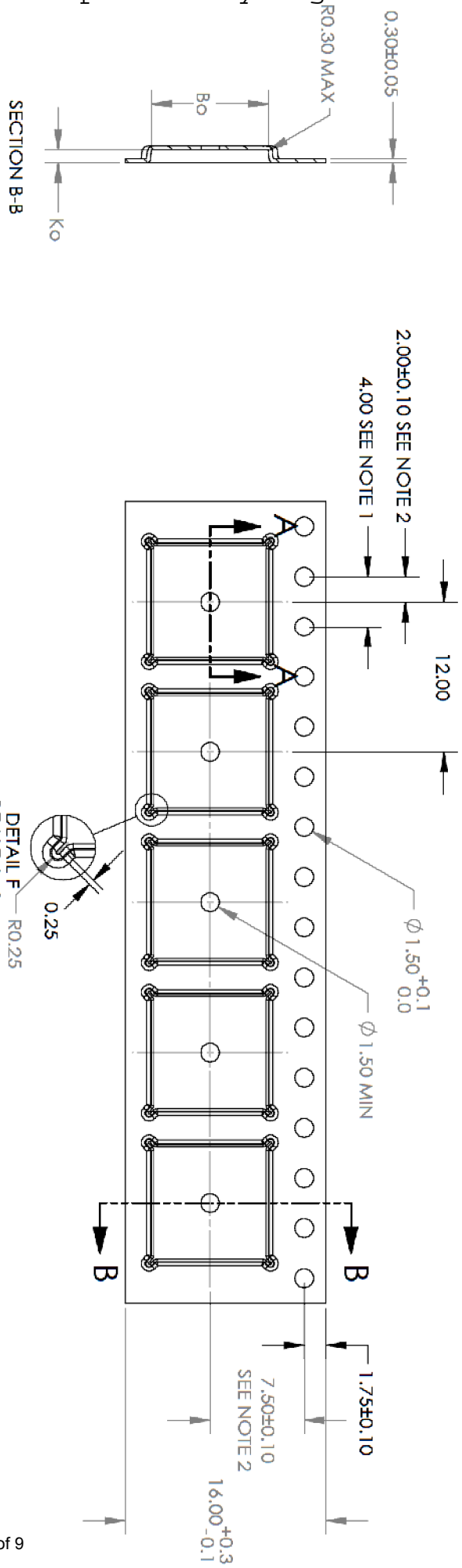
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 NA/NAG 100 & NH/NHG 100
 CARRIER TAPE (PCT)

SCALE
 N/A

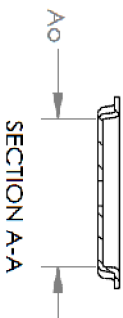
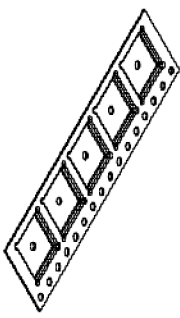
STOCK NO. P8-452-000
 DRAWING NO. MSC-7378
 REV 01

DO NOT SCALE DRAWING SHEET 1 OF 1

Attachment 4 - Carrier Tape used by Sigurd



SCALE 1:1

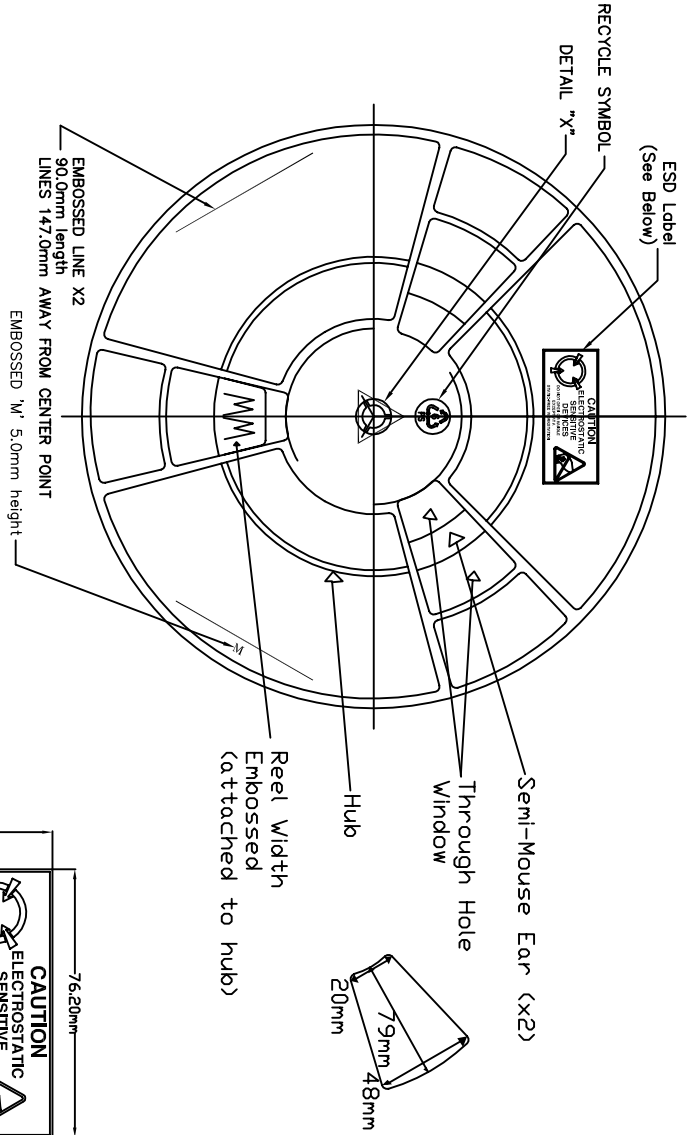


DIM	±
Ao	9.30 0.10
Bo	9.30 0.10
Ko	1.05 0.10

- NOTES : (UNLESS OTHERWISE SPECIFIED)
1. 10 SPROCKET HOLE PITCHES CUMULATIVE TOLERANCE ±0.2mm
 2. REFER TO MSA-3018 FOR THE ALLOWABLE CAMBER REQUIREMENT.
 3. MATERIAL : BLACK CONDUCTIVE POLYSTYRENE.
 4. Ao AND Bo MEASURED ON A PLANE 0.3 MM ABOVE THE BOTTOM OF THE POCKET.
 5. Ko MEASURED FROM A PLANE ON THE INSIDE BOTTOM OF THE POCKET TO THE TOP SURFACE OF THE CARRIER.
 6. POCKET POSITION RELATIVE TO SPROCKET HOLE MEASURED AS TRUE POSITION OF POCKET, NOT POCKET HOLE.
 7. POCKET CENTER AND POCKET HOLE CENTER MUST BE SAME POSITION.
 8. REFER TO MAA-3092 & MSA-3018 FOR THE IDT STANDARD REQUIREMENT FOR CARRIER TAPE.
 9. ALL THE DIMENSIONS ARE IN MILLIMETERS (MM).
 10. APPLICABLE TO NA/NAG 100 & NH/NHG 100 TAPED BY SIGURD, TAIWAN.

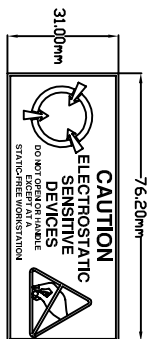
TOLERANCES UNLESS OTHERWISE SPECIFIED		DECIMAL		ANGLE	
.XX ± .13		.XXX ± .13		±.5°	
APPROVALS		DATE		SCALE	
DRAWN		DATE		N/A	
STOCK NO.		DRAWING NO.		REV	
P8-452-000		MSC-7723		00	
DO NOT SCALE DRAWING		SHEET 1 OF 1		SIZE	
TITLE:		WWW.IDT.COM		SCALE	
NA/NAG 100 & NH/NHG		6024 Silver Creek Valley Road		N/A	
100 CARRIER TAPE		San Jose, CA 95138		SIZE	
		PHONE: (408) 284-8200			
		FAX: (408) 284-5972			

Attachment 5 - Plastic Reel



PLASTIC REEL INFORMATION

IDT PART NUMBER	P9-061-000	P9-062-000	P9-063-000	P9-064-000	P9-110-000	P9-061-BLUE	P9-062-BLUE	P9-063-BLUE	P9-064-BLUE	P9-110-BLUE
TAPE WIDTH	12 MM	16 MM	24 MM	32 MM	44 MM	12 MM	16 MM	24 MM	32 MM	44 MM
A	328 - 332	328 - 332	328 - 332	328 - 332	328 - 332	328 - 332	328 - 332	328 - 332	328 - 332	328 - 332
N	176 - 180	176 - 180	176 - 180	176 - 180	176 - 180	176 - 180	176 - 180	176 - 180	176 - 180	176 - 180
D	207 - 21.3	207 - 21.3	207 - 21.3	207 - 21.3	207 - 21.3	207 - 21.3	207 - 21.3	207 - 21.3	207 - 21.3	207 - 21.3
C	12.8 - 13.5	12.8 - 13.5	12.8 - 13.5	12.8 - 13.5	12.8 - 13.5	12.8 - 13.5	12.8 - 13.5	12.8 - 13.5	12.8 - 13.5	12.8 - 13.5
B	1.5 - 2.5	1.5 - 2.5	1.5 - 2.5	1.5 - 2.5	1.5 - 2.5	1.5 - 2.5	1.5 - 2.5	1.5 - 2.5	1.5 - 2.5	1.5 - 2.5
V1	12.4 - 14.4	16.4 - 18.4	24.4 - 26.4	32.4 - 34.4	44.4 - 46.4	12.4 - 14.4	16.4 - 18.4	24.4 - 26.4	32.4 - 34.4	44.4 - 46.4
V2	18.4 MAX	22.4 MAX	30.4 MAX	38.4 MAX	50.4 MAX	18.4 MAX	22.4 MAX	30.4 MAX	38.4 MAX	50.4 MAX
SUPPLIER PART NUMBER	3.3C121307(BLK)	3.3C161307(BLK)	3.3C21307(BLK)	3.3C21307(BLK)	3.3C441307(BLK)	3.3C121307(BLU)	3.3C161307(BLU)	3.3C21307(BLU)	3.3C21307(BLU)	3.3C441307(BLU)
COLOR	BLACK	BLACK	BLACK	BLACK	BLACK	BLUE	BLUE	BLUE	BLUE	BLUE

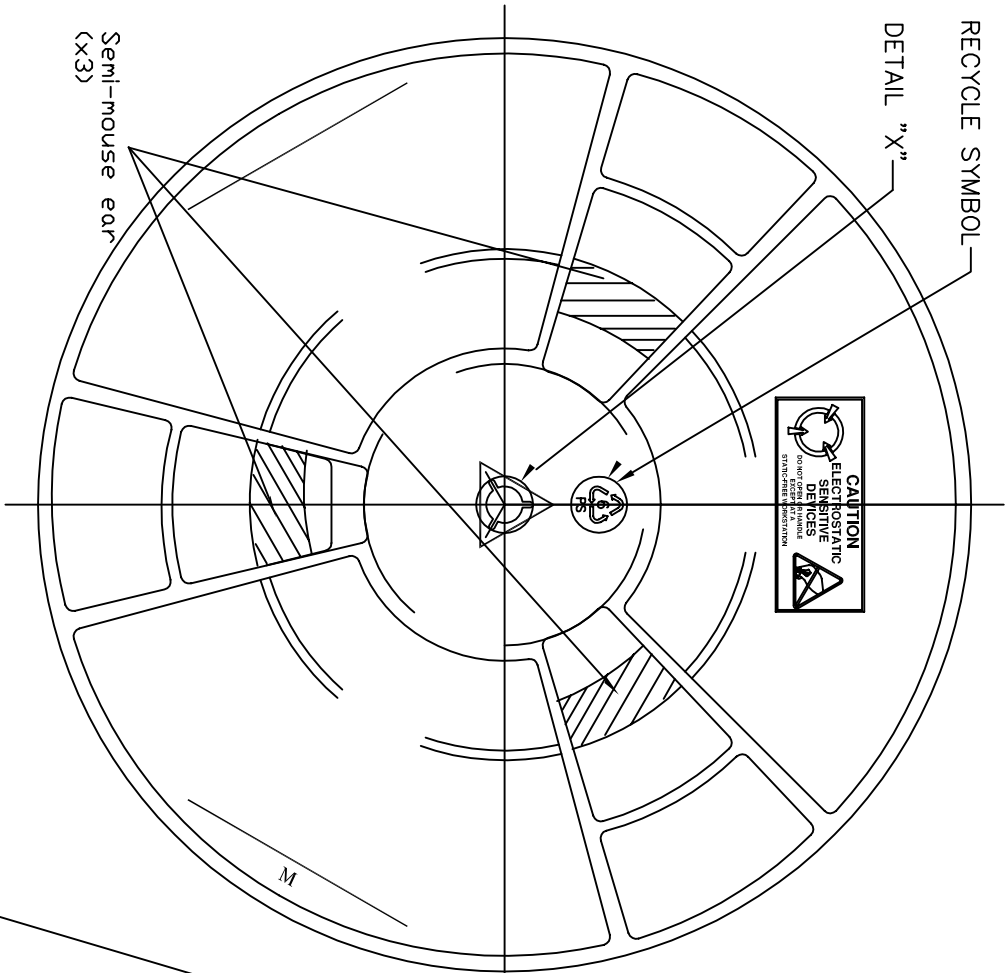


- NOTES : (UNLESS OTHERWISE SPECIFIED)
1. MATERIAL : HIPS (ANTISTATIC POLYSTYRENE)
 2. ALL DIMENSIONS ARE IN mm.
 3. REEL & ESD SURFACE RESISTIVITY SHALL CONFORM TO IDT SPEC MSA-3018.
 4. ESD LOGO MUST BE DIRECTLY OPPOSITE EACH OTHER.
 5. SUPPLIER : TAPEX
 6. FLANGE AND HUB WELDED TOGETHER.
 7. * MEASURED AT HUB AREA.
 8. ** MEASURED AT OUTER EDGE.

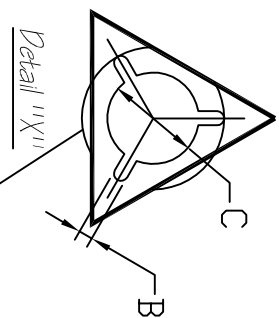
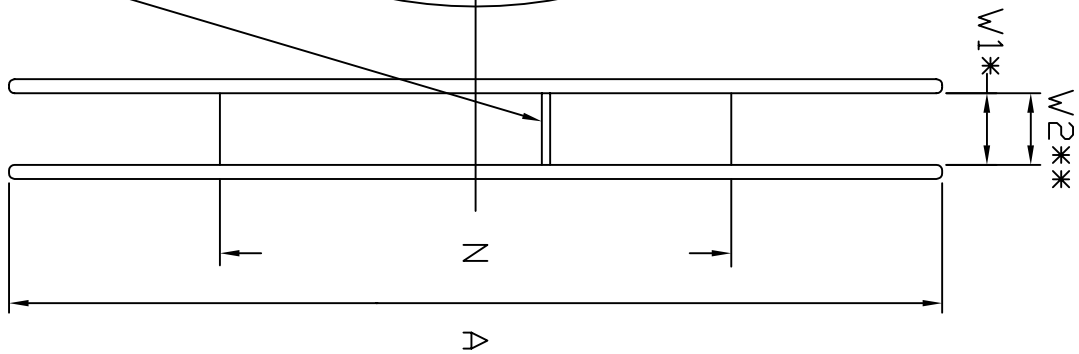
TOLERANCES UNLESS OTHERWISE SPECIFIED		DECIMAL		ANGLE	
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.XX	± .13				
.XXX	± .13				
APPROVALS	DATE				
DRAWN					
TITLE:		PLASTIC REEL (7" HUB)			
STOCK NO.		DRAWING NO.			
SEE TABLE		MSC-4796			
DO NOT SCALE DRAWING		SHEET 1 OF 3			

6024 Silver Creek Valley Road,
San Jose, CA 95138
PHONE: (408) 284-8200
FAX: (408) 284-3572

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BACK VIEW



TOLERANCES UNLESS OTHERWISE SPECIFIED	ANGLE
DECIMAL 25	±.5°
X ± .13	
XX ± .13	
XXX ± .13	
APPROVALS	DATE
DRAWN	

JIDT
 6024 Silver Creek Valley Road,
 San Jose, CA 95138
 PHONE: (408) 284-8200
 FAX: (408) 284-5572
 WWW.IDT.COM

TITLE:		SCALE
PLASTIC REEL (7" HUB)		N/A
STOCK NO.	DRAWING NO.	REV
SEE TABLE	MSC-4796	03
DO NOT SCALE DRAWING	SHEET 2 OF 3	