



Product Change Notification / GBNG-02EIPE100

Date:

14-Jun-2023

Product Category:

Wireless IC

PCN Type:

Manufacturing Change

Notification Subject:

CCB 6067 Final Notice: Qualification of STAR as an additional final test site for MICRF221AYQS and MICRF221AYQS-TR catalog part numbers (CPN) available in 16L QSOP (3.90mm) package.

Affected CPNs:

[GBNG-02EIPE100_Affected_CPN_06142023.pdf](#)
[GBNG-02EIPE100_Affected_CPN_06142023.csv](#)

Notification Text:

PCN Status:Final Notification

PCN Type:Manufacturing Change

Microchip Parts Affected:Please open one of the files found in the Affected CPNs section.
Note: For your convenience Microchip includes identical files in two formats (.pdf and .xls)

Description of Change:Qualification of STAR as an additional final test site for MICRF221AYQS and MICRF221AYQS-TR catalog part numbers (CPN) available in 16L QSOP (3.90mm) package.

Pre and Post Change Summary:

	Pre Change	Post Change	
Final Test Site	Unisem (M) Berhad	Unisem (M) Berhad	Stars

		Perak, Malaysia (UNIS)	Perak, Malaysia (UNIS)	Microelectronics (Thailand) Public Company Limited (STAR)
Base Quantity Multiple (BQM)	Tape and Reel	2500 units	2500 units	2500 units
	Tube	98 units	98 units	98 units
Pin 1 orientation	Tape and Reel	Q1	Q1	Q1
	Tube	Pin 1 toward white stopper	Pin 1 toward white stopper	Pin 1 toward grey stopper
Carrier Tape		Minor dimension change. See pre and post change for comparison.		
Cover Tape		No dimension change. See pre and post change for comparison.		
Plastic Reel		No dimension change. See pre and post change for comparison.		
Plastic Reel Color		Blue	Blue	Blue
Tube Dimension		No dimension change. See pre and post change for comparison.		
Tube Plug Color		Full Tube: White – Black Partial Tube: White – Yellow	Full Tube: White – Black Partial Tube: White – Yellow	Grey-Grey
Packing Method		See pre and post change for comparison.		

Impacts to Data Sheet:None

Change Impact:None

Reason for Change:To improve manufacturability and on-time delivery performance by qualifying STAR as an additional final test site.

Change Implementation Status:In Progress

Estimated First Ship Date:July 10, 2023 (date code: 2328)

Note: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

Time Table Summary:

	March 2023					>	June 2023					July 2023				
Workweek	0 9	1 0	1 1	1 2	1 3		2 2	2 3	2 4	2 5	2 6	2 7	2 8	2 9	3 0	3 1
Initial PCN Issue Date			x													
Qual Report Availability									x							
Final PCN Issue Date									x							
Estimated Implementation Date													x			

Method to Identify Change:Traceability code

Qualification Report:Please open the attachments included with this PCN labeled as PCN_#_Qual_Report.

Revision History:March 14, 2023: Issued initial notification.

June 14, 2023: Issued final notification. Attached the Qualification Report. Provided estimated first ship date to be on July 10, 2023.

The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable products.

Attachments:

[PCN_GBNG-02EIPE100_Qual_Report.pdf](#)

[PCN_GBNG-02EIPE100_Pre and Post_Change_Summary.pdf](#)

Please contact your local **Microchip sales office** with questions or concerns regarding this notification.

Terms and Conditions:

If you wish to receive Microchip PCNs via email please register for our PCN email service at our **PCN home page** select register then fill in the required fields. You will find instructions about registering for Microchips PCN email service in the **PCN FAQ** section.

If you wish to change your PCN profile, including opt out, please go to the **PCN home page** select login and sign into your myMicrochip account. Select a profile option from the left navigation bar and make the applicable selections.

Affected Catalog Part Numbers (CPN)

MICRF221AYQS

MICRF221AYQS-TR



MICROCHIP

QUALIFICATION REPORT SUMMARY

PCN #: GBNG-02EIPE100

Date

May 31, 2023

**Qualification of STAR as an additional final test site for
MICRF221AYQS and MICRF221AYQS-TR catalog part
numbers (CPN) available in 16L QSOP (3.90mm) package.**

Purpose: Qualification of STAR as an additional final test site for MICRF221AYQS and MICRF221AYQS-TR catalog part numbers (CPN) available in 16L QSOP (3.90mm) package.

CCB No.: 6067

Test Name	Test Conditions	Sample Size	Qty of Lots	Fail/Accept Criteria	Result
Bin and Yield Comparison	Test the same units at existing and destination locations and compare BIN and Yield data.	3000	1	$\leq 0.1\%$	Passed
Parametric / Characterization Comparison	Characterize the same units at existing and destination locations and compare data.	33	1	$\leq 10\%$	Passed
Test flow	Final Test Room 100% -> QA Sample Room.	3000	1	1% LTPD	Passed

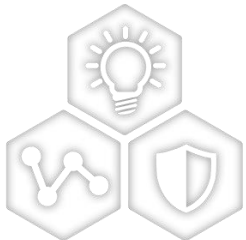
CCB 6067

Pre and Post Change Summary

PCN #: GBNG-02EIPPE100

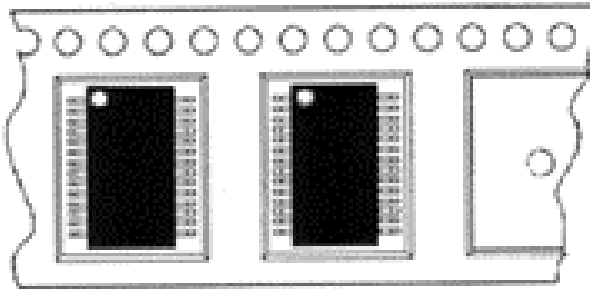
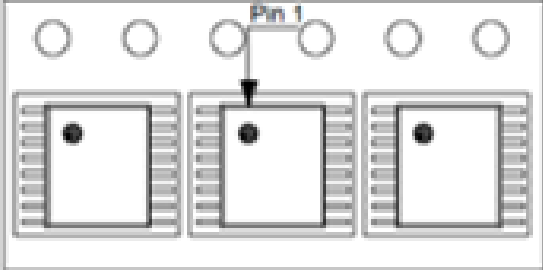


A Leading Provider of Smart, Connected and Secure Embedded Control Solutions



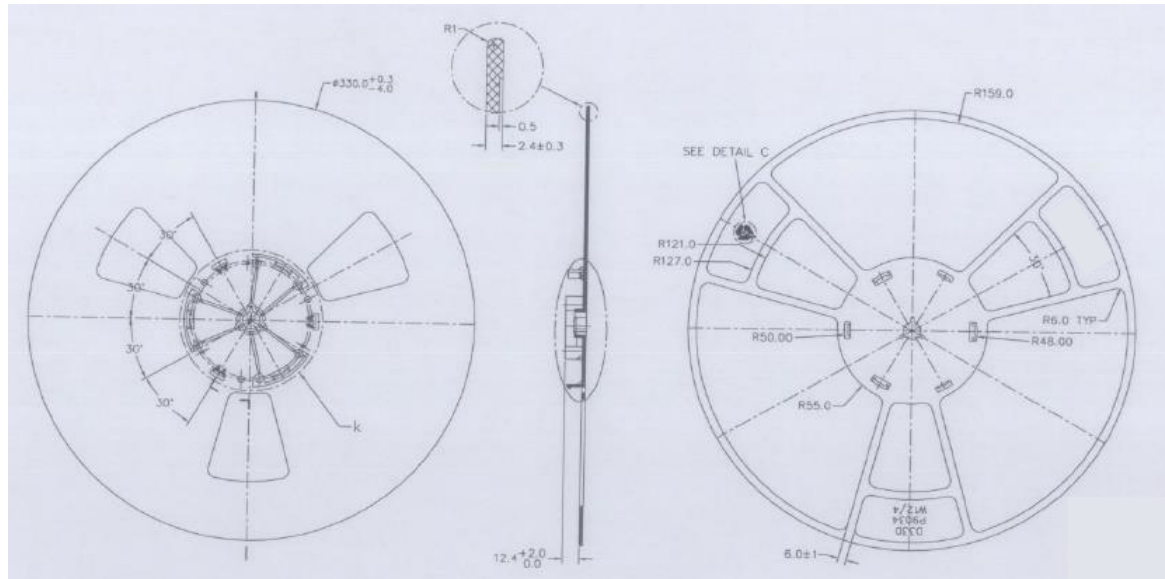
SMART | CONNECTED | SECURE

Pre and Post Change – Tape and Reel

	UNIS	STAR
BQM (Base Quantity Multiple)	2500 per reel	2500 per reel
Pin 1 orientation	 <p>Quadrant 1</p>	 <p>Quadrant 1</p>

Pre and Post Change – Plastic Reel

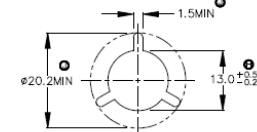
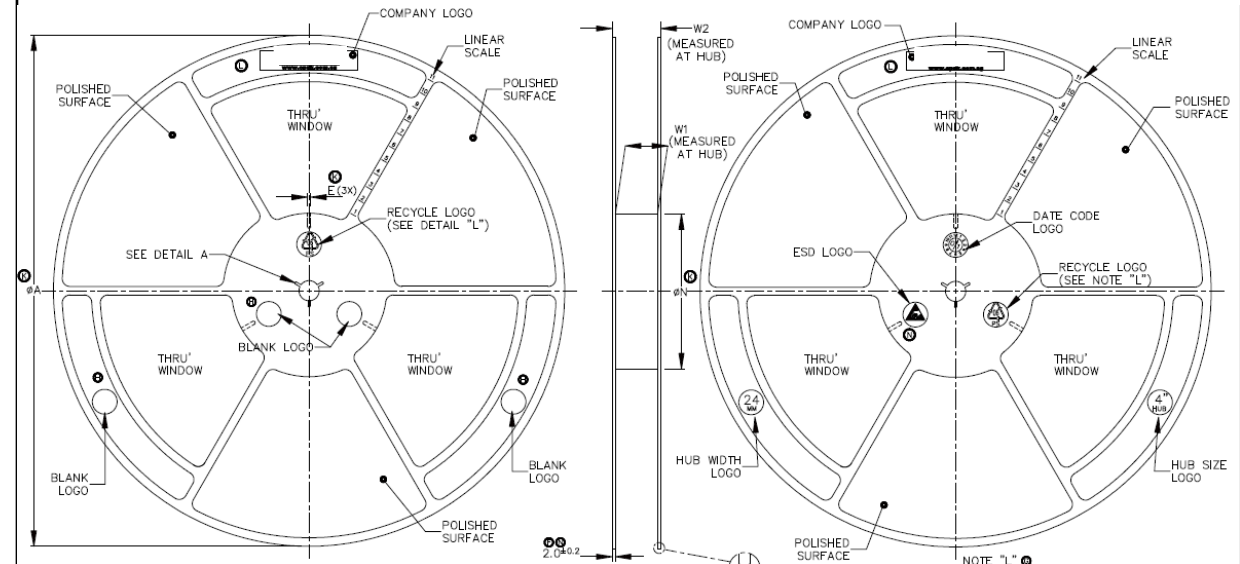
UNIS



NOTES:

- UNLESS OTHERWISE SPECIFIED
1. MATERIAL: POLYSTYRENE(BLUE)
2. ANTISTATIC COATED
3. FLANGE WARPAGE : 3 MM MAXIMUM
4. ALL DIMENSIONS ARE IN MM
5. ESD - SURFACE RESISTIVITY
- 10^8 TO 10^{11} OHMS/SQ
6. GENERAL TOLERANCE : -X.X \pm 0.4, -X.XX \pm 0.20
7. TOTAL THICKNESS OF REEL: 18.4 MAX
8. PART NO: P9034

STAR



ARBOR HOLE
DETAIL A
SCALE 3:1

PRODUCT SPECIFICATIONS					
TAPE WIDTH	W1	W2	E	MIN	MAX
08MM	330	100	8.4	2.5	14.4
12MM	330	100	12.4	2.5	18.4
16MM	330	100	16.4	2.5	22.4
24MM	330	100	24.4	2.5	30.4
32MM	330	100	32.4	2.5	38.4

SURFACE RESISTIVITY			
LEGEND	SR RANGE	TYPE	COLOR
A	BELOW 10^{12}	ANTISTATIC	ALL TYPES
B	10^9 TO 10^{11}	STATIC DISSIPATIVE	BLACK ONLY
C	10^5 & BELOW 10^9	CONDUCTIVE (GENERIC)	BLACK ONLY
D	10^5 TO 10^9	CONDUCTIVE (CUSTOM)	BLACK ONLY
E	BELOW 10^{12}	COATED ANTISTATIC	ALL COLOR

NOTE:

1. GENERIC PRODUCT
2. FOR PRODUCT DRAWING ONLY.
3. SANDBLAST ALL SURFACE UNLESS OTHERWISE STATED.
4. MOLD 2

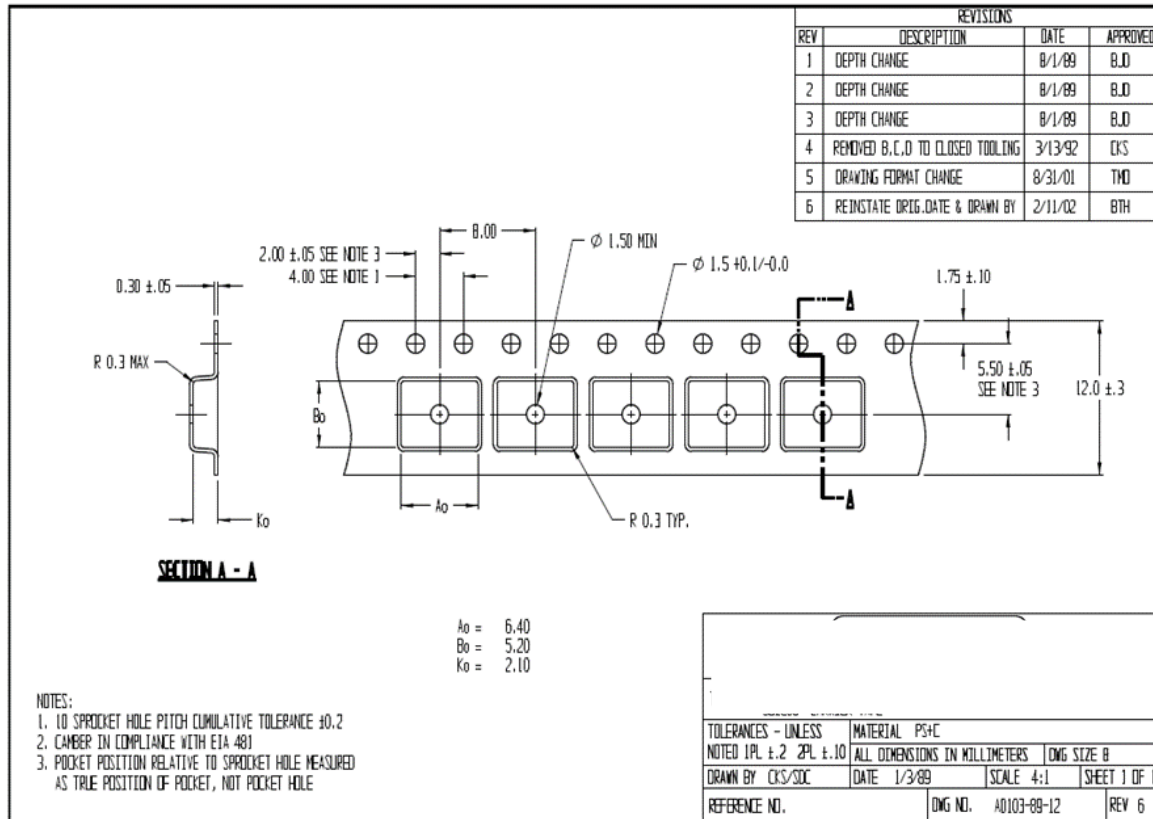
1. TITLE : 13X4 WELDED REEL

S.R. : 13X4	TOOL NO. : 13X4/2003	PDI
SCALE : NTS	SHRINKAGE : 0.45%	TOLERANCE : X.X \pm 0.25
REV. : 1	MATERIAL : PS	X.XX \pm 0.13
UNIT : MM	WARPAGE : -	DATE : 150605
SHT : 1/1	NAME : AFIZAH	ANGLE : X \pm 30°
DRAWN : AFIZAH	CHECK : SHUKRI	150605

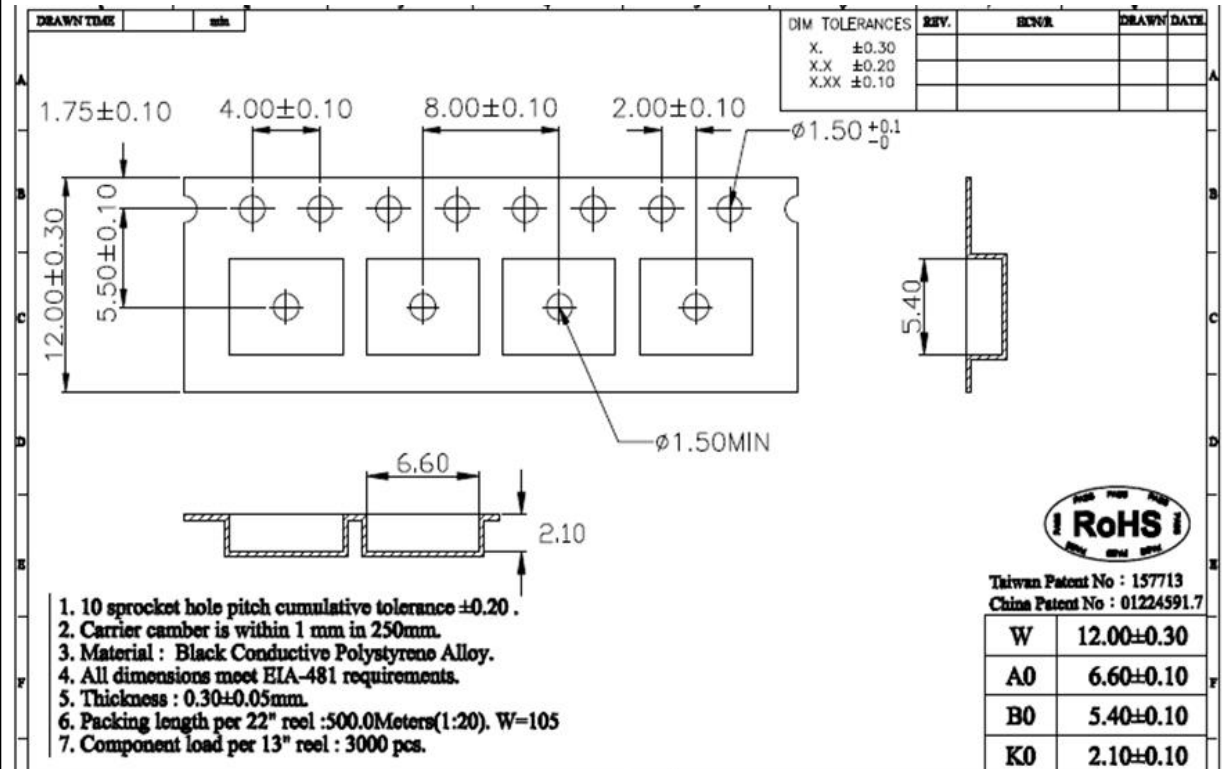
No dimension change.

Pre and Post Change – Carrier Tape

UNIS



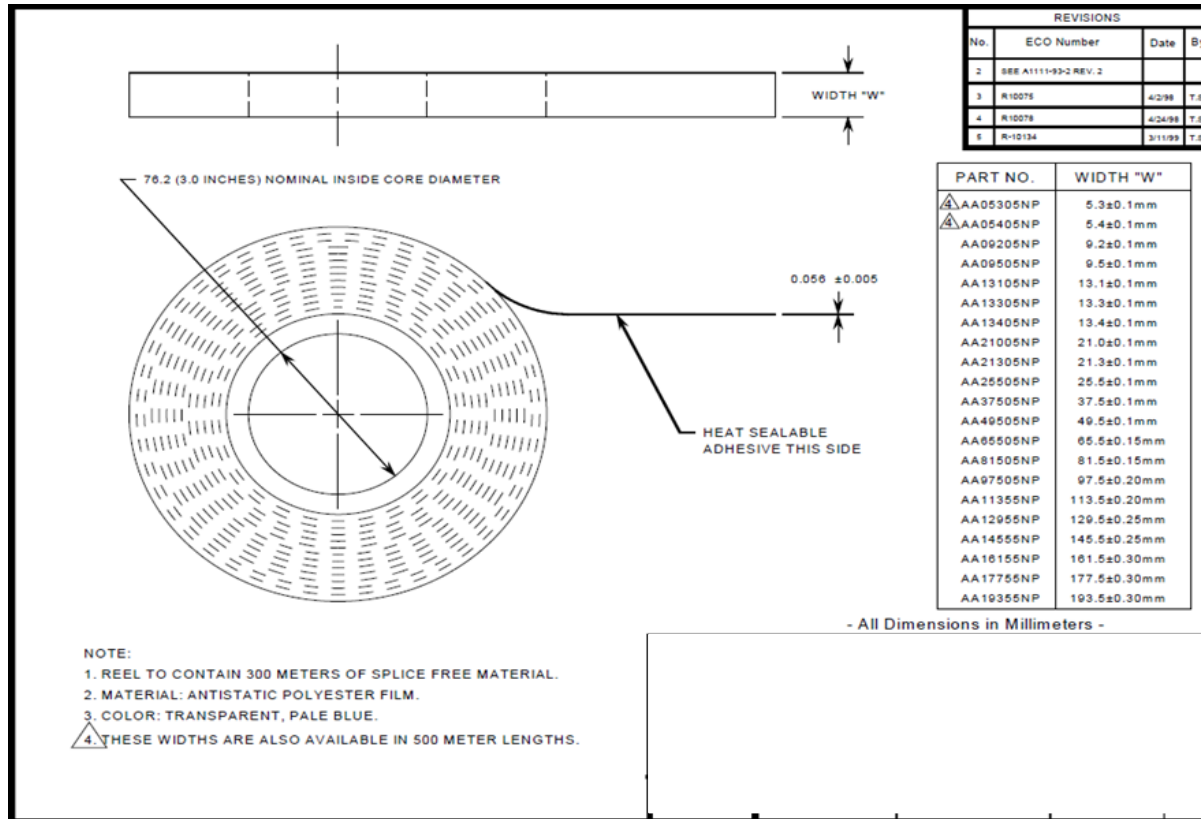
STAR



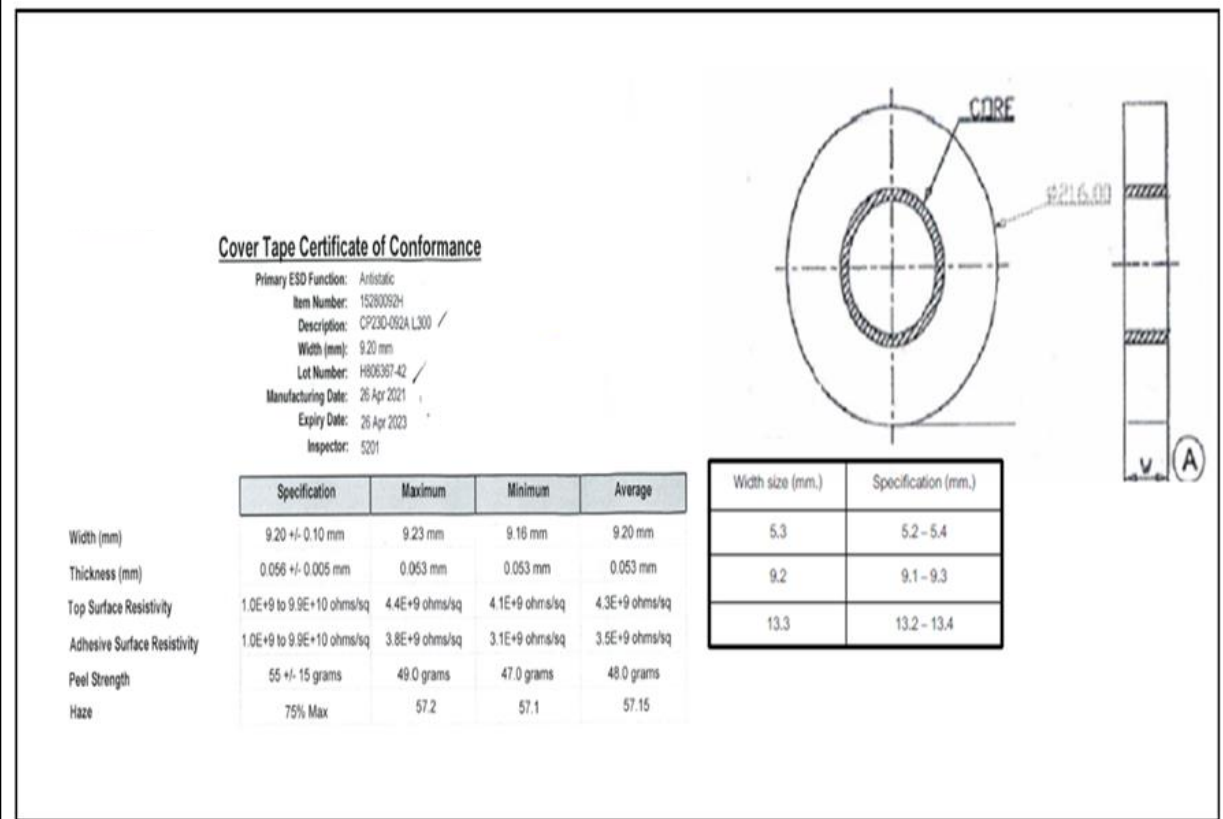
Plant	W (mm.) ± 0.3 or Specific	P (mm.) ± 0.1 or Specific	A ₀ ± 0.1 or Specific	B ₀ ± 0.1 or Specific	K ₀ ± 0.1 or Specific
UNIS	12	8	6.40	5.20	2.10
STAR	12	8	6.60	5.40	2.10

Pre and Post Change – Cover Tape

UNIS













STAR

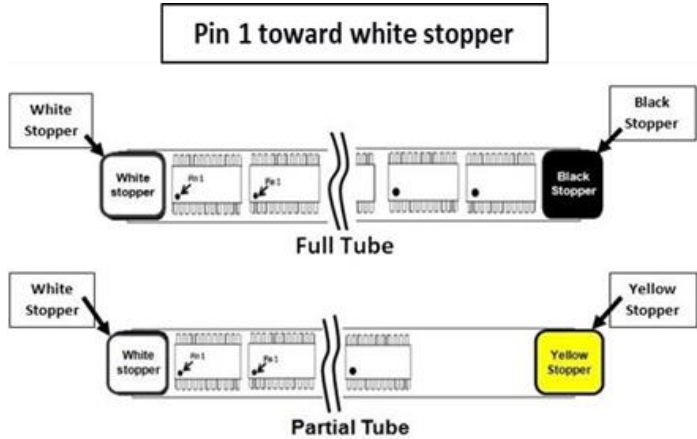
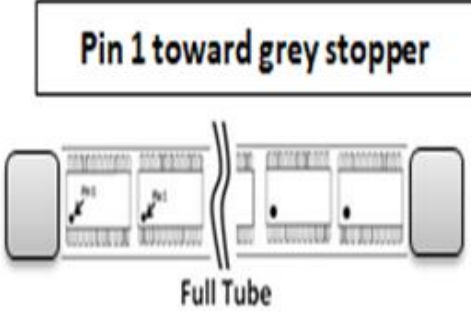


Plant	Carrier Tape Width	Cover Tape Width	Thickness	Color	Sealing mythology
UNIS	16mm	13.3 +/-0.1mm	0.056+/-0.005	Clear	Heat sealing
STAR	16mm	13.3 +/-0.2mm	0.050+/-0.005	Clear	Heat sealing




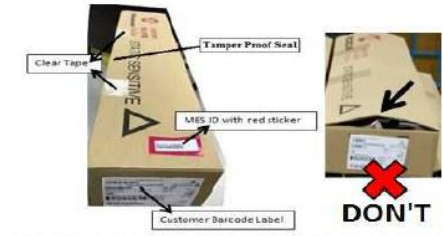

Pre and Post Change – Tape and Reel Packing Method

UNIS	STAR
 <p>Microchip Barcode label</p> <ol style="list-style-type: none"> 1) 13" Blue Reel - D330-P9034-W12/4 (P/N: 47370032) 2) Microchip Barcode label (P/N: 50320185) 3) 12mm Protective band (P/N: 47560001) 	
<div> <div> <p>Front</p>  <p>ESD LOGO</p> <p>Customer Barcode Label</p> </div> <div> <p>Back</p>  <p>Adhesive ESD tape</p> </div> </div> <ol style="list-style-type: none"> 1) Static Shield Bag 16"X16" (P/N: 50020046) 2) Microchip Standard Barcode Label (P/N:50320185) at below ESD Logo <p>Back:</p> <ol style="list-style-type: none"> 1)Seal Antistatic shield bag with adhesive ESD tape. 	
<div> <div>  <p>ESD LOGO</p> <p>Customer Barcode Label</p> </div> <div>  <p>Antistatic Bubble bag</p> </div> </div> <ol style="list-style-type: none"> 1)Quantity/box = 1 reel 2) Use antistatic bubble bag sheet fill in the space if much space inside the box 	
 <p>MES ID with red sticker</p> <p>Customer Barcode Label</p> <p>Clear Tape</p> <ol style="list-style-type: none"> 1) Microchip Box = M02-009 Brown-Pizza-13" (P/N: 50080187) 2) Microchip Standard Barcode Label (P/N:50320185) at left side of box opening 3) Red sticker with MES ID at right side of box opening 4) Seal box opening with clear tape at the middle <p>(Note: Remove red sticker with MES ID before ship to customer)</p>	<div>  <p>Packing in Reel 13 Inch</p>  <p>Insert Reel in static shelding ba</p>  <p>Packing in box</p>  <p>Put label</p> </div>

Pre and Post Change – Tube

	UNIS	STAR
BQM (Base Quantity Multiple)	98 units	98 units
Pin 1 orientation	 <p>Pin 1 toward white stopper</p> <p>White Stopper</p> <p>Black Stopper</p> <p>Full Tube</p> <p>White Stopper</p> <p>Yellow Stopper</p> <p>Partial Tube</p>	 <p>Pin 1 toward grey stopper</p> <p>Full Tube</p>
Tube Color	Clear tube	Clear tube
Plug Color	Full Tube: White – Black Partial Tube: White – Yellow	Grey-Grey

Pre and Post Change – Tube Packing Method

UNIS	STAR
 <p>Meratakan sebelum balut bubble bag</p> <p>1) 1 Bundle = Max 150 Tubes 2) Bubble bag sheet wrap on both end side of tube and seal with adhesive ESD tape</p> <p>Note: Meratakan tube sebelum balut bubble bag.</p>	
 <p>Customer Barcode Label</p> <p>Front</p> <p>ESD 1090</p> <p>Back</p> <p>ESD adhesive tape</p> <p>1) Antistatic Shield Bag 12"X32" (P/N: 50020053) 2) 1 Bag = 1 bundle = Max 150 Tubes 3) Microchip Barcode Label (P/N: 50320185) on front of Antistatic Shield Bag 4) Seal the excess Antistatic shield bag with ESD adhesive tape at the back</p>	
 <p>1) Microchip Box = M02-011 Big Tube Inner" Brown (P/N: 50080188) 2) 1 box = Max 1 bag 3) Use anti-static bubble bag sheet to fill the space if much space inside the box</p>	
 <p>Clear Tape</p> <p>Tamper-Proof Seal</p> <p>MES ID with red sticker</p> <p>Customer Barcode Label</p> <p>DON'T</p> <p>1) Microchip Barcode Label (P/N: 50320185) at the right side of box 2) Seal the box opening with 2 x clear tapes 3) Tamper-Proof Seal at the middle of box opening</p> <p>(Note: Remove MES ID with red sticker before ship to customer)</p>	 <p>Packing units in tube</p> <p>Insert Tube in ESD bag</p> <p>Insert bag in inner box</p>