

**M/A-COM Technology Solutions, Inc.**

4 East Gate Road,  
Little Island,  
Co. Cork,  
Ireland.  
www.macomtech.com



Oct 12th, 2015

Digi-Key Corporation  
701 Brooks Ave South  
Thief River Falls, Minnesota 56701

ATTN: Quality/Purchasing Manager

**Subject: MAFL-011026 Data Sheet Spec update**

**PCN-00782**

Dear Valued Customer:

Please accept this PCN letter as formal notification for the change of M/A-COM Technology Solutions part number(s) shown below.

The device(s) listed on this page are the affected device(s).

According to our records, this device has been purchased by your company within the past twenty-four (24) months.

**M/A-COM Part Number(s):**

MAFL-011026

Technical details of this change notice follow on the next page(s).

Please contact me if you have any questions.

Sincerely,

**John Fenton**

Product Line Manager  
M/A-COM Technology Solutions  
Ph: +353212446358

Email: [John.Fenton@macom.com](mailto:John.Fenton@macom.com)

***M/A-COM TECHNOLOGY SOLUTIONS CONFIDENTIAL & PROPRIETARY***



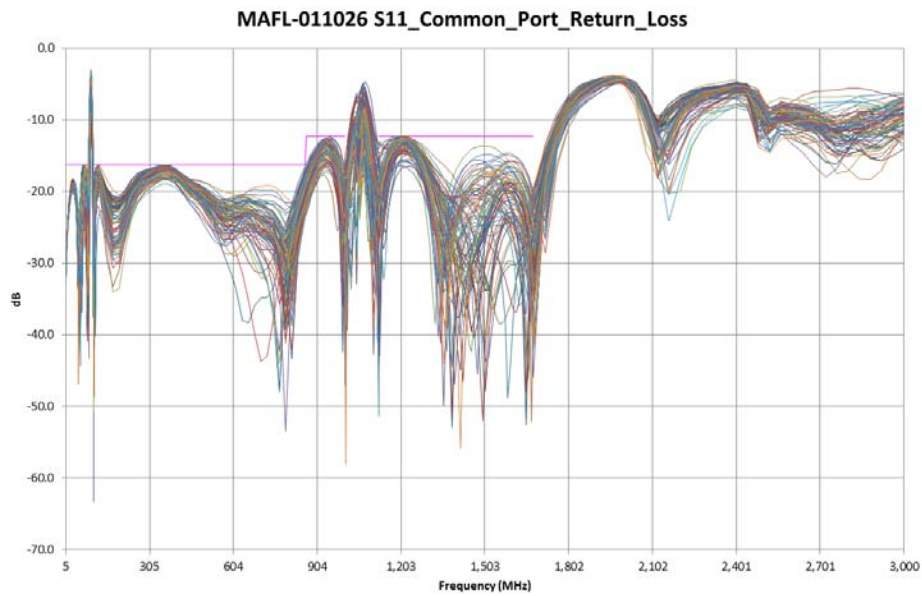
<b>PCN Number: 00782</b>		<b>PCN Date:</b>	09 October 2015
<b>Title:</b> Tightening of Forward path return loss rejection & Isolation Forward to Reverse specifications to reflect improved performance.			
<b>Proposed 1st Ship Date:</b>		<b>Estimated Sample Availability:</b>	
N/A		N/A	
<b>Change Type:</b>			
Assembly Site X	Design X	<u>Electrical Specification X</u>	
Test Site X	Assembly Process X	Mechanical Specification X	
Test Process X	Assembly Materials X	Packing/Shipping/Labeling X	
<b>PCN Details</b>			
<b>Description of Change:</b>			
Data Sheet electrical specifications updated to reflect improved performance. Details outlined below. Draft of updated Data Sheet is shown in Appendix II			
<b>Spec update</b> Update Forward path return loss rejection: 38-85 From 43 to 50dB(Min) 45 to 53(typical) Update Isolation Forward to Reverse: 38-85 43 to 50 MHz(Min) 45 to 53(typical)			
<b>Reason for Change:</b>			
To comply with market requirement			
<b>Products Affected:</b>			
MAFL-011026			
<b>Anticipated impact on Fit, Form, Function:</b>			
None. DS updated to reflect improved performance.			
<b>Changes to product identification resulting from this PCN:</b>			

None

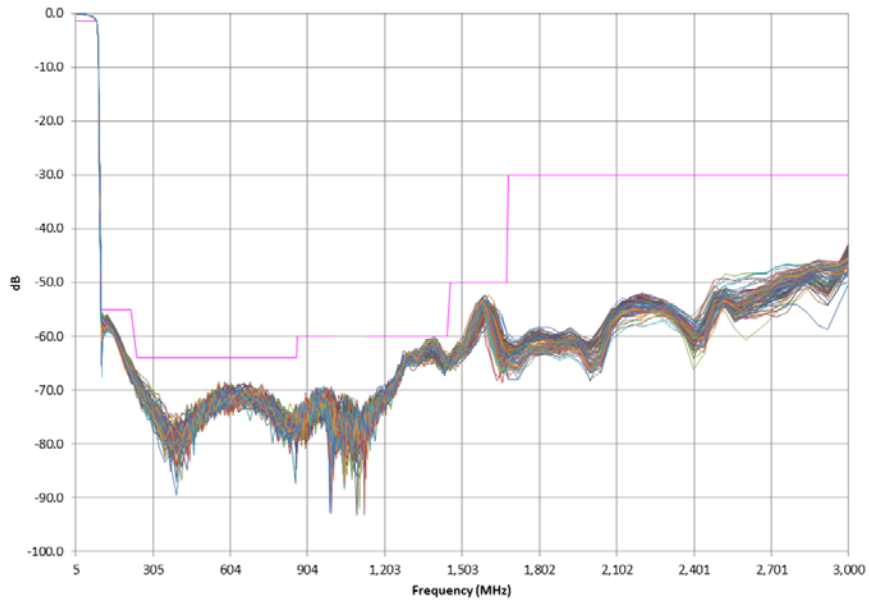
**Qualification: Test Results – See Appendix I**

Test	Conditions	Sample Size
All DS Parameters	Ambient	Pass

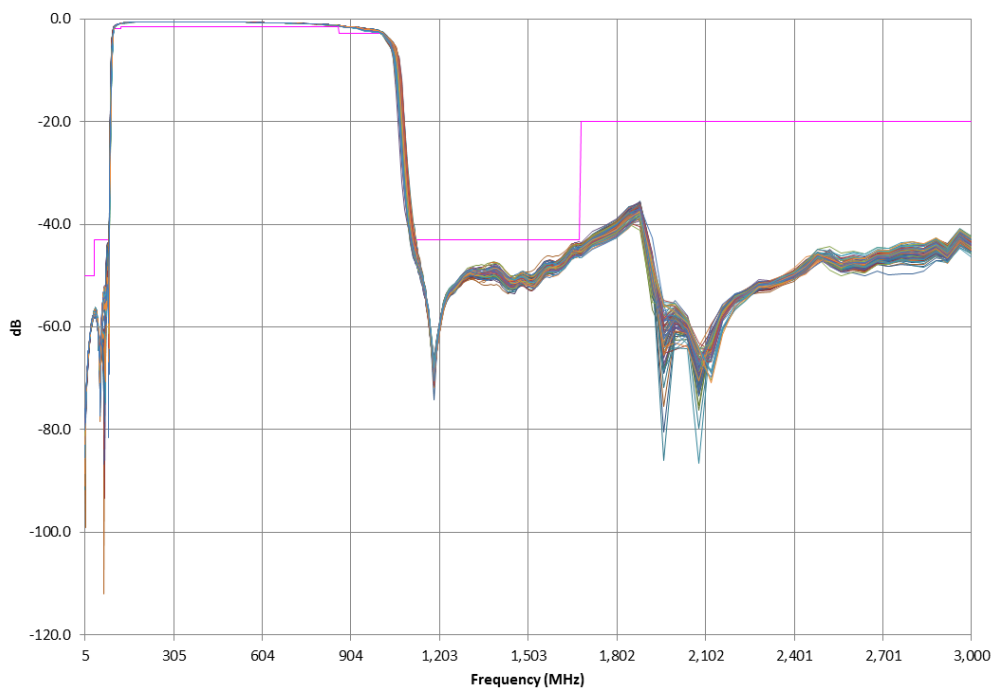
**Appendix I**  
**MAFL-011026 pernmance to updated Specifiacion**



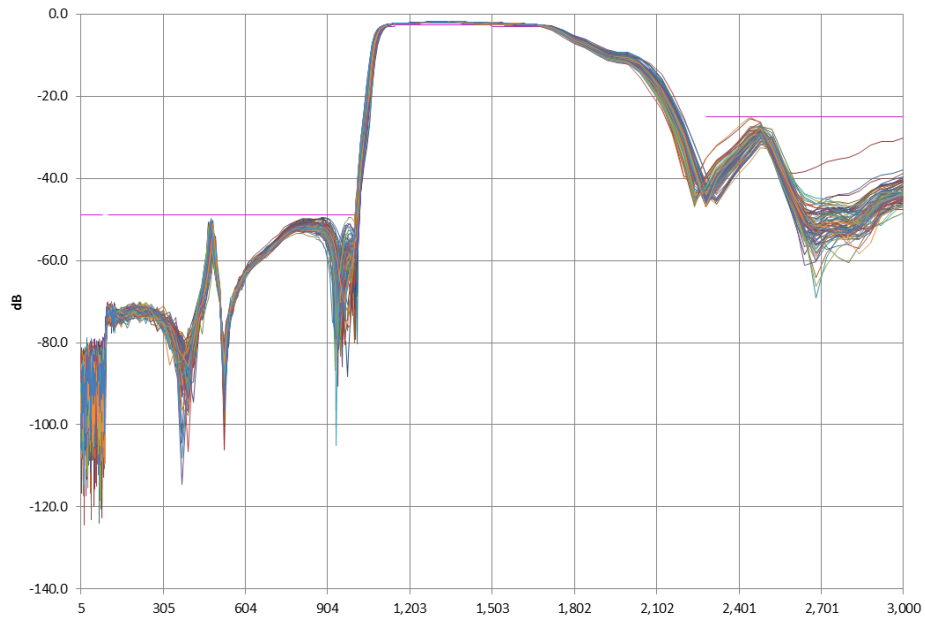
MAFL-011026 S21\_Reverse\_Path



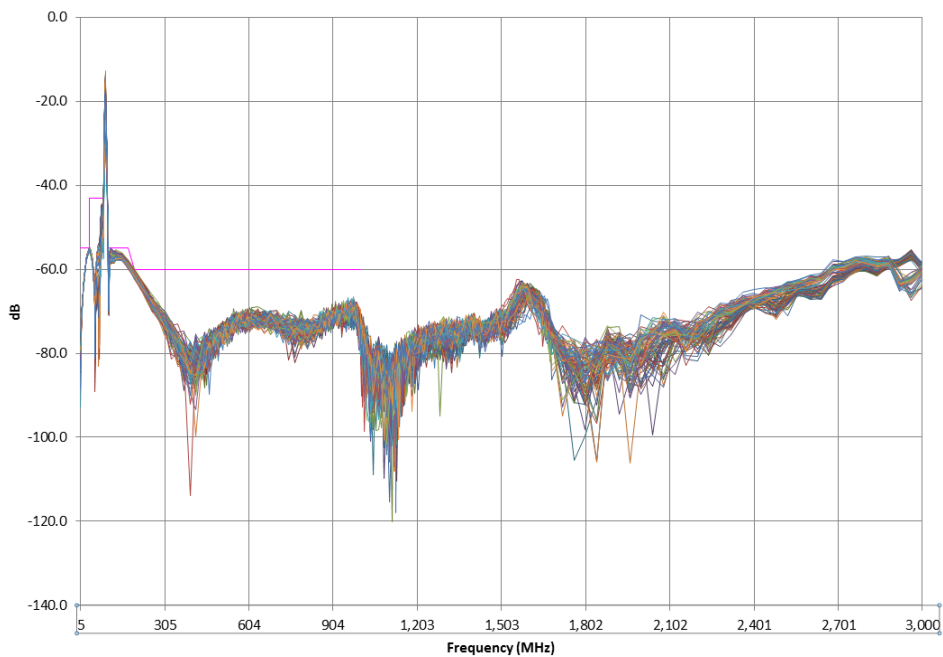
MAFL-011026 S31\_Foward\_Path

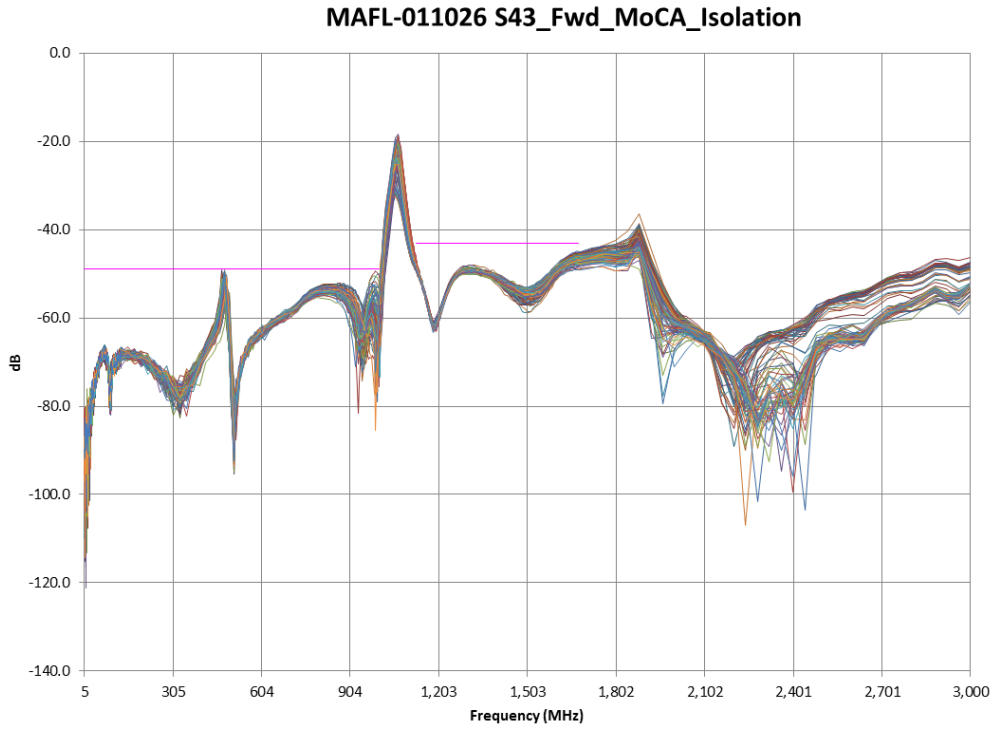


MAFL-011026 S41\_MoCA\_Path



MAFL-011026 S32\_Fwd\_Rev\_Isolation





Appendix II  
 Updated Data Sheet Revision V5

# MAFL-011026



**MoCA Triplex Filter**  
 5 - 85 / 105 - 1002 / 1125 - 1675 MHz

Rev. V5

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**Description**

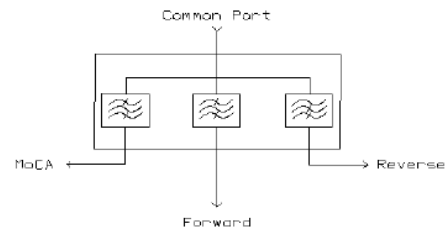
- MACOM Technology Solution's MAFL-011026 is a surface mount triplex filter designed for MoCA applications

**Features**

- 75 Ohm
- SMT unit
- RoHS compliant

Electrical specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 75\Omega$

**Block Diagram**

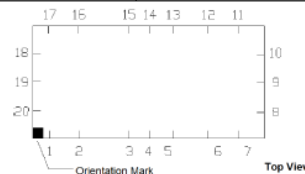


Parameter	Units	Min	Typ	Max
<b>Reverse Path</b>				
<b>Insertion loss</b>				
5-85 MHz	dB	-	1.2	1.5
<b>Rejection</b>				
105-126 MHz	dB	62	70	-
126-860 MHz	dB	64	70	-
860-1002 MHz	dB	64	70	-
1125-1675 MHz	dB	60	64	-
1675-3000 MHz	dB	30	50	-
<b>Forward path</b>				
<b>Insertion loss</b>				
105-126 MHz	dB	-	1.5	2.0
126-860 MHz	dB	-	0.75	1.5
860-1002 MHz	dB	-	2.5	2.75
<b>Rejection</b>				
5-38 MHz	dB	50	55	-
38-85 MHz	dB	50	52	-
1125 - 1675 MHz	dB	43	45	-
1675-3000 MHz	dB	20	30	-
<b>MoCA Path</b>				
<b>Insertion Loss</b>				
1125-1150 MHz	dB	-	2.8	3.0
1150-1650 MHz	dB	-	2.5	2.7
1650-1675 MHz	dB	-	2.5	3.0
<b>Rejection</b>				
5-85 MHz	dB	49	70	-
85-1002 MHz	dB	49	55	-
2300-3000 MHz	dB	25	35	-

Parameter	Units	Min	Typ	Max
<b>Input Return Loss</b>				
5-85 MHz	dB	16	18	-
105-860MHz	dB	16	18	-
860-1002MHz	dB	12	16	-
1125-1675 MHz	dB	12	16	-
<b>Isolation</b>				
<b>Forward to Reverse</b>				
5-38 MHz	dB	55	58	-
38-85 MHz	dB	50	52	-
105-126 MHz	dB	60	65	-
126-860 MHz	dB	60	65	-
860-1002 MHz	dB	60	65	-
<b>Forward to MoCA</b>				
5-85 MHz	dB	49	70	-
105-126 MHz	dB	49	70	-
126-860 MHz	dB	49	53	-
860-1002 MHz	dB	49	55	-
1125-1150 MHz	dB	43	45	-
1150-1650 MHz	dB	43	50	-
1650-1675 MHz	dB	43	50	-

**Pin Configuration**

Function	Pin Number
MoCA Port	1
Forward Port	4
Reverse Port	7
Common Port	14
Ground	2, 3, 5, 6, 8-13, 15-20



**Recommended Maximum Ratings**

Parameter	Absolute maximum
RF power	250mW
DC current	30mA
Operating temperature	-40°C to +85°C
Storage temperature	-40°C to +85°C

\* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

M/A-COM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. Visit www.macomtech.com for additional data sheets and product information.

- North America Tel: 800.366.2266 / Fax: 978.366.2266
- Europe Tel: 44.1908.574.200 / Fax: 44.1908.574.300
- Asia/Pacific Tel: 81.44.844.8296 / Fax: 81.44.844.8298

# MAFL-011026



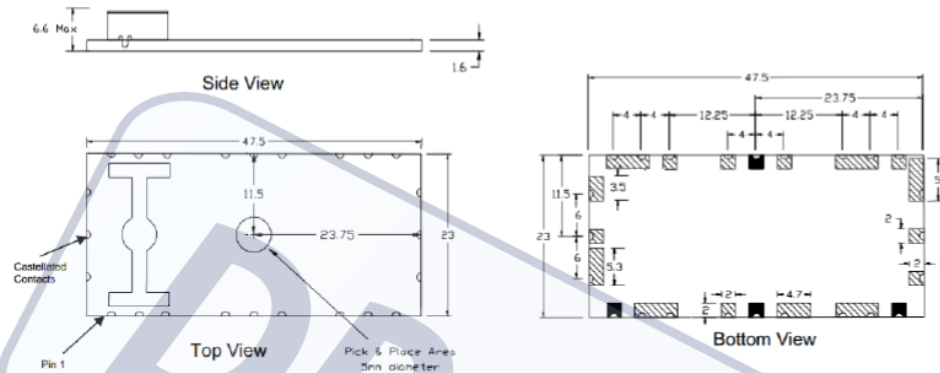
## MoCA Triplex Filter

5 - 85 / 105 - 1002 / 1125 - 1675 MHz

Rev. V5

DRAFT

### Filter Dimensions

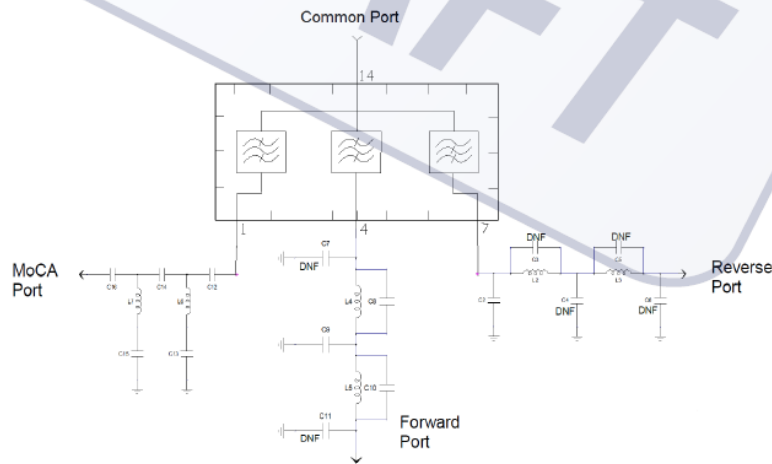


Dimensions in mm. Tolerance: .x ± 0.1 unless otherwise noted

Solder Resist Colour: Black

PCB Pad Finish: ENIG

### Application Schematic



DNF: Do Not Fit

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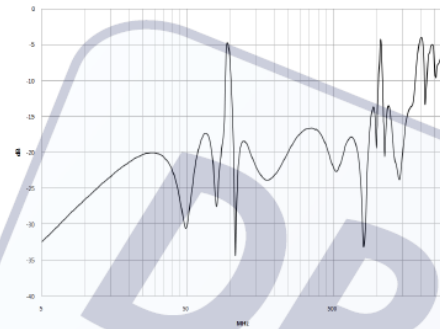
## MAFL-011026



MoCA Triplex Filter  
5 - 85 / 105 - 1002 / 1125 - 1675 MHz

Rev. V5

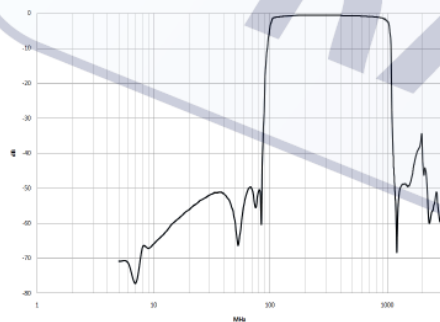
**DRAFT**  
Common Port Return Loss



Reverse Path



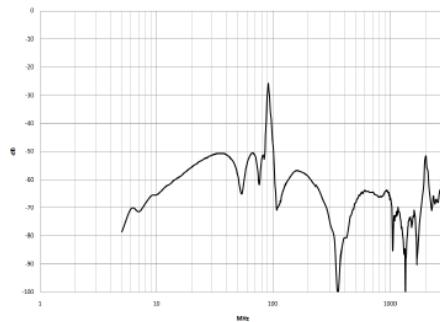
Forward Path



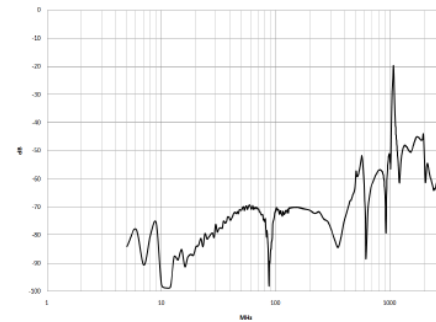
MoCA Path



Reverse to Forward Path Isolation



Forward to MoCA Path Isolation



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# MAFL-011026



**MoCA Triplex Filter**  
**5 - 85 / 105 - 1002 / 1125 - 1675 MHz** Rev. V5

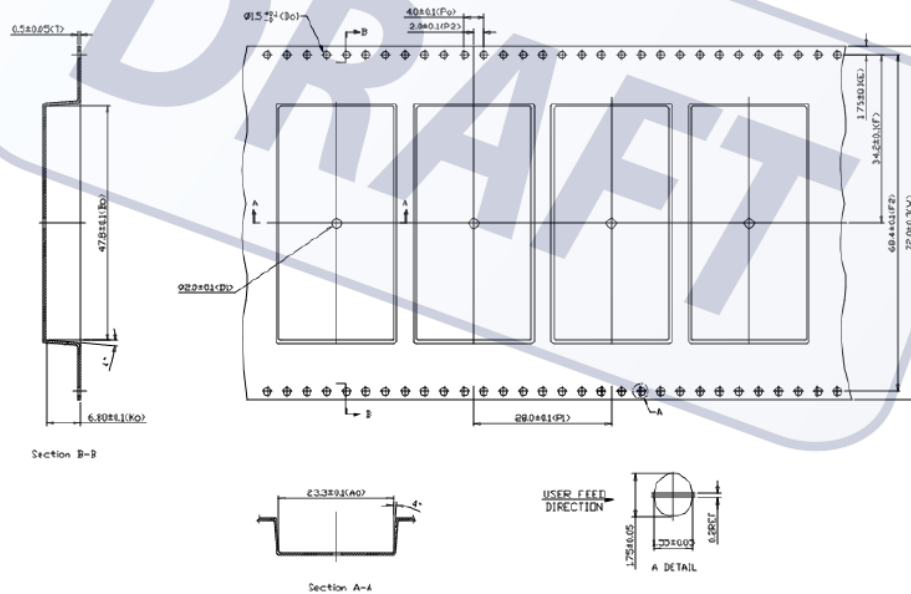
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**Tape & Reel Information**

Parameter	Units	Value
Qty per reel	-	200
Reel Size	mm	330
Tape Width	mm	72.0
Pitch	mm	28.0
Ao	mm	23.3
Bo	mm	47.8
Ko	mm	6.8
Orientation	-	F54
Reference Application Note ANI-019 for orientation		

**Ordering Information**

Part Number	Package
MAFL-011026	Tape & Reel



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# MAFL-011026



MoCA Triplex Filter  
 5 - 85 / 105 - 1002 / 1125 - 1675 MHz

Rev. V5

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### Tray Information

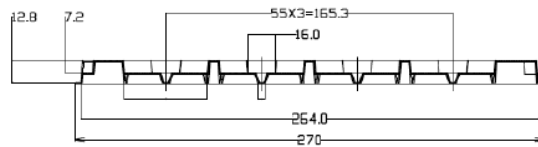
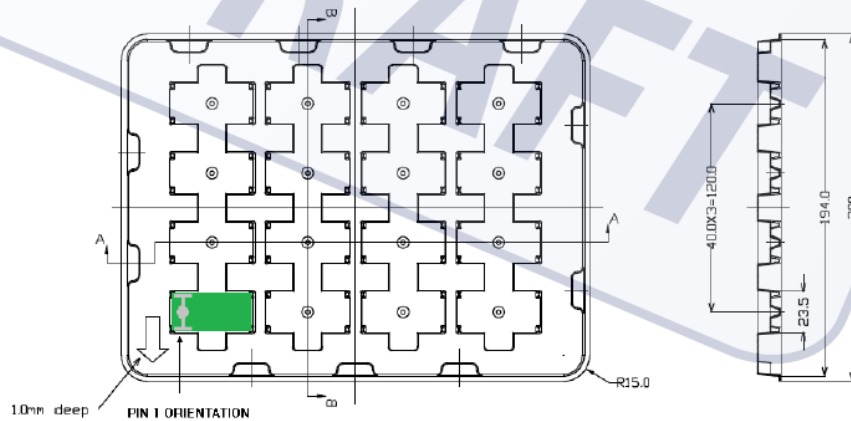
Parameter	Units	Value
Min Order Qty	-	480
Tray Length	mm	270
Tray Width	mm	200
Height	mm	20.8
Ao	mm	40
Bo	mm	55
Ko	mm	7.2
Orientation	-	See below

### Ordering Information

Part Number	Package
MAFL-011026-Tray	Tray

### Packaging notes

Consecutive trays will be stacked alternately at 180 degrees.



\*

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