

Satellite Triplex Filter 950 - 1450 / 1650 - 2150 / 2500 - 3000 MHz

Rev. V3

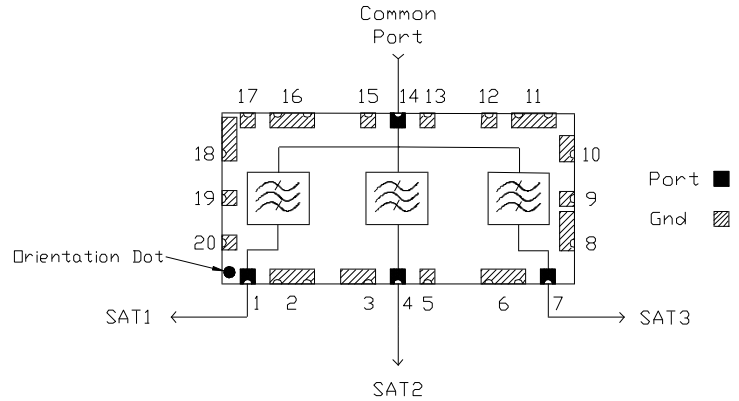
Description

- MACOM Technology Solutions MAFL-010609 is a surface mount triplex filter unit designed for Satellite applications.

Features

- 75 Ohm
- SMT unit
- RoHS* Compliant
- SAT1 BPF 950-1450 MHz
- SAT2 BPF 1650-2150 MHz
- SAT3 BPF 2500-3000 MHz

Functional Schematic



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

Parameter	Units	Min	Typ	Max	Parameter	Units	Min	Typ	Max
SAT1 Band					Isolation				
Insertion Loss					SAT1 - SAT2 / SAT2 - SAT1				
950 - 1450 MHz	dB	-	1.5	3.0	950 - 1450 MHz	dB	36	45	-
Rejection					1650 - 2150 MHz	dB	30	35	-
500 - 875 MHz	dB	30	-	-	SAT1 - SAT3 / SAT3 - SAT1				
1550 MHz	dB	9	15	-	950 - 1450 MHz	dB	37	45	-
1630 - 2150 MHz	dB	30	40	-	2500 - 3000 MHz	dB	35	43	-
2400 - 4500 MHz	dB	35	45	-	SAT2 - SAT3 / SAT3 - SAT2				
SAT2 Band					1650 - 2150 MHz	dB	37	45	-
Insertion Loss					2500 - 3000 MHz	dB	35	43	-
1650 - 2150 MHz	dB	-	2.0	3.0	Parameter Pass Band Flatness				
Rejection					Units				
500 - 1470 MHz	dB	36	45	-	Max				
1550 MHz	dB	9	15	-	P-P over the band				
2400 - 2420 MHz	dB	27	40	-	SAT1 / SAT2 / SAT3				
2420 - 2440 MHz	dB	31	40	-	dB				
2440 - 4500 MHz	dB	35	45	-	3				
SAT3 Band					P-P, Any 40MHz band for the				
Insertion Loss					SAT1 / SAT2 / SAT3				
2500 - 3000 MHz	dB	-	2.75	3.0	dB				
Rejection					1				
500 - 875 MHz	dB	40	60	-	Parameter Group Delay Flatness				
950 - 2230 MHz	dB	37	45	-	Units				
2230 - 2240 MHz	dB	33	40	-	Max				
2240 - 2250 MHz	dB	29	40	-	SAT 1 / SAT 2 / SAT 3				
3500 - 4500 MHz	dB	20	25	-	P-P, over each of the bands				
Return Loss					nSec				
Common Port					25				
950 - 1450MHz	dB	10	11	-	SAT 1 / SAT 2 / SAT 3				
1650 - 2150 MHz	dB	10	11	-	P-P, over any 40MHz band				
2500 - 3000 MHz	dB	10	11	-	nSec				
SAT1 Port					12				
950 - 1450 MHz	dB	10	11	-	Pin Configuration				
SAT 2 Port					Function				
1650 - 2150 MHz	dB	10	11	-	Pin Number				
SAT 3 Port					SAT1 Port				
2500 - 3000 MHz	dB	10	11	-	1				
Common Port					SAT2 Port				
Ground					4				
Ground					SAT3 Port				
Ground					7				
Ground					Common Port				
Ground					14				
Ground					Ground				
Ground					2, 3, 5, 6, 8-13, 15-20				

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

* Temperature Data available upon request

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MAFL-010609

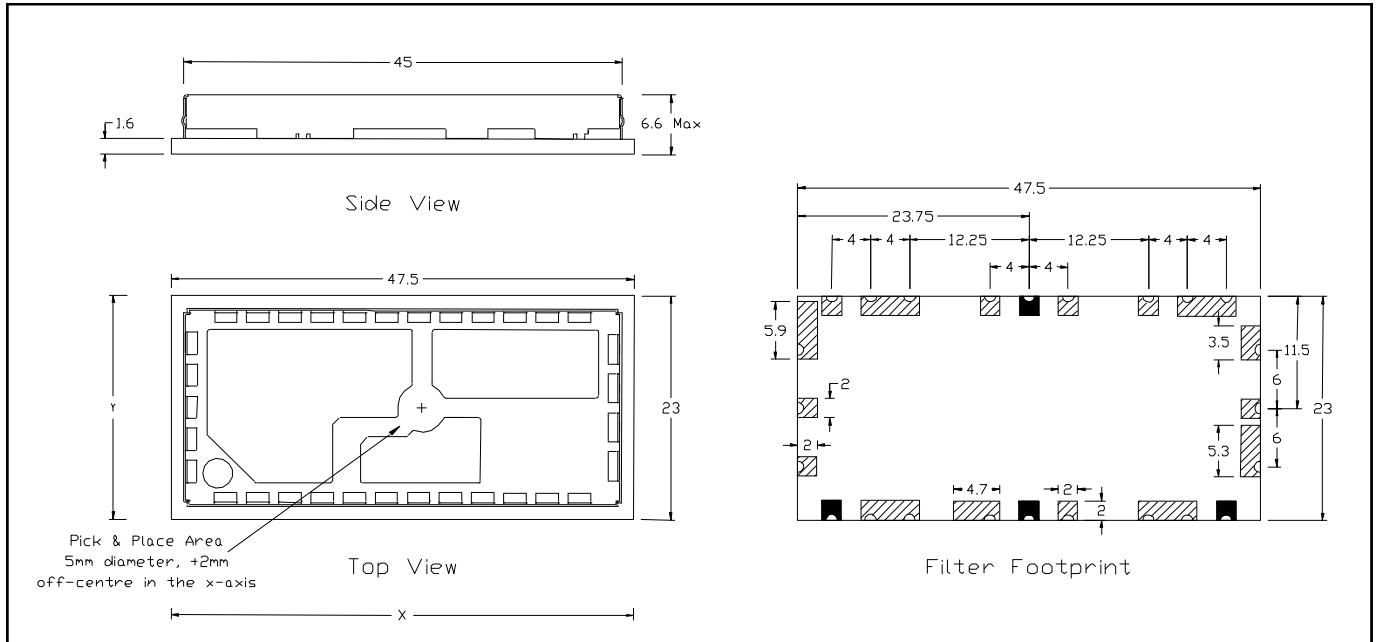


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Outline Drawing:



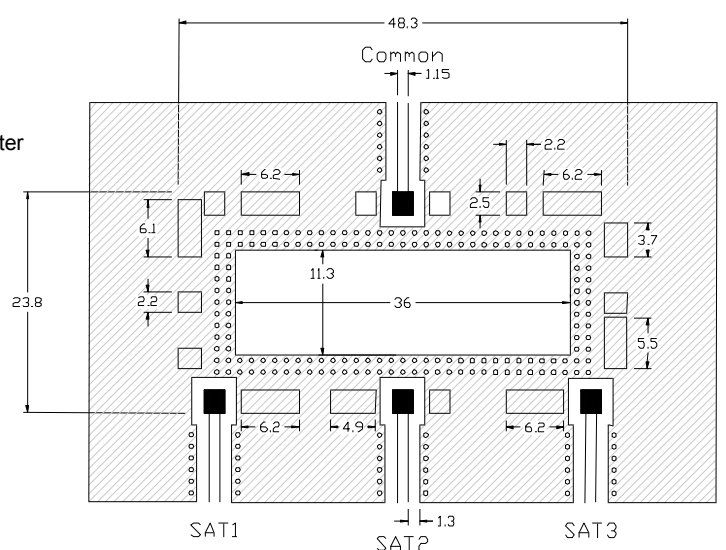
Dimensions in mm. Tolerance: $.x \pm 0.1$ unless otherwise noted

Recommended Maximum Ratings

Parameter	Value
Storage Temperature	-25°C to +70°C
Operating Temperature	0°C to +70°C

Recommended PCB Configuration

- Track dimension = 1.15mm
- Gap dimension = 1.3mm
- It is not recommended to run tracks under the filter unless they are greater than 1.6mm below the base.
- RF shield should be kept a minimum of 10mm above the filter



NOTE: Substrate is 1.6mm thick FR4

2 Dimensions in mm. Tolerance: $.x \pm 0.1$ unless otherwise noted

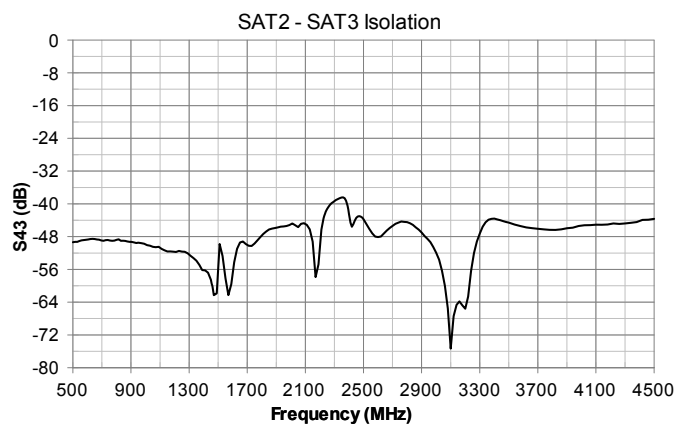
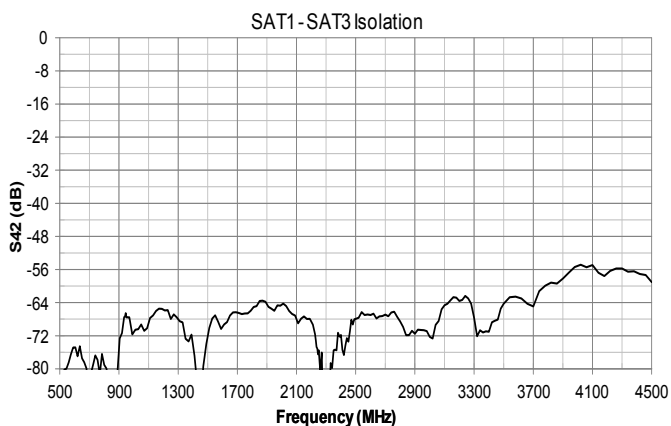
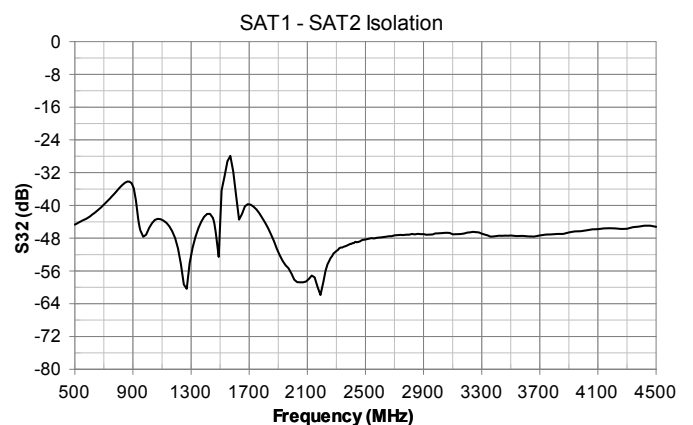
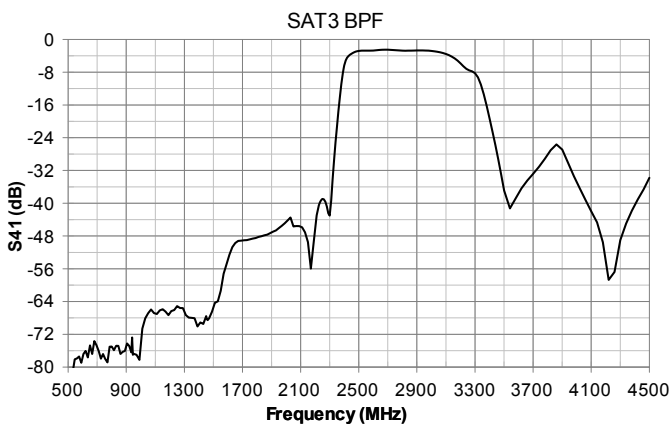
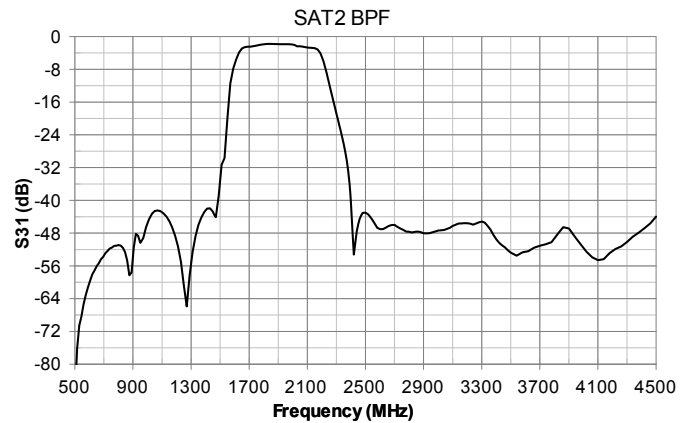
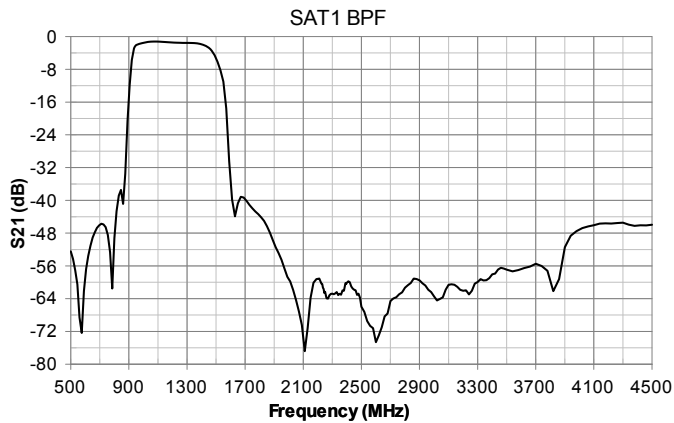
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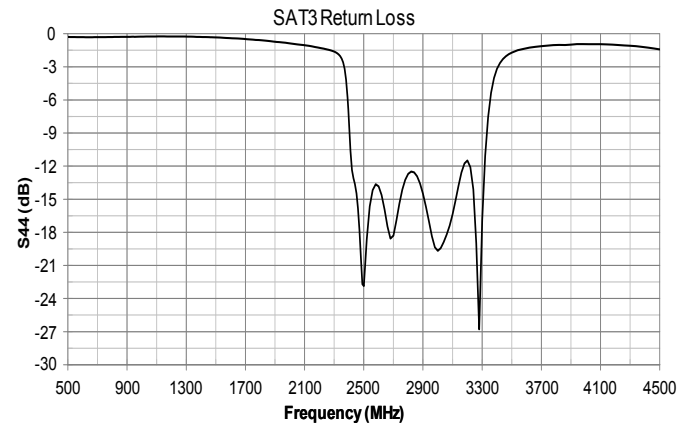
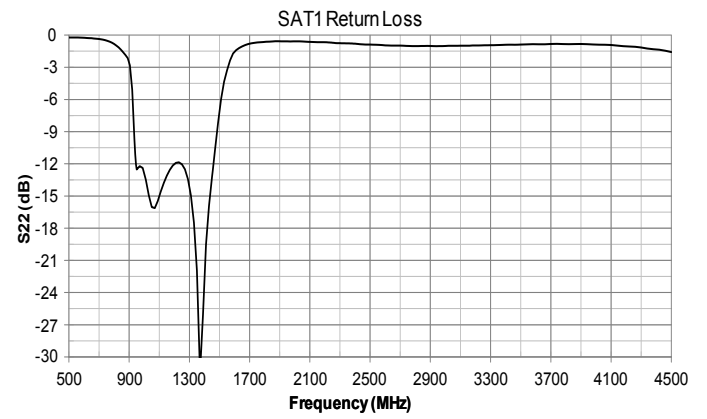
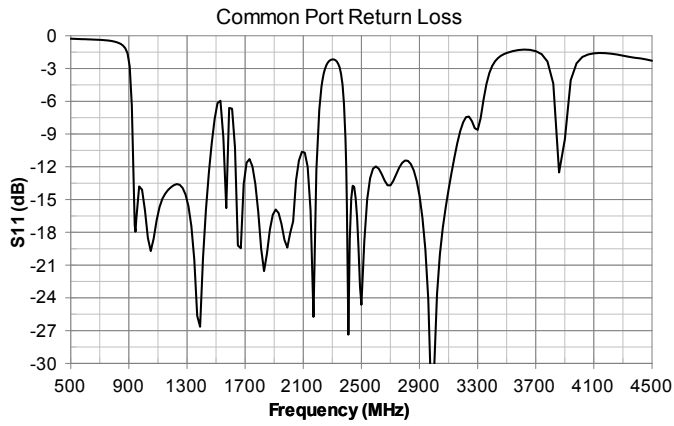
Typical Performance Curves at +25°C



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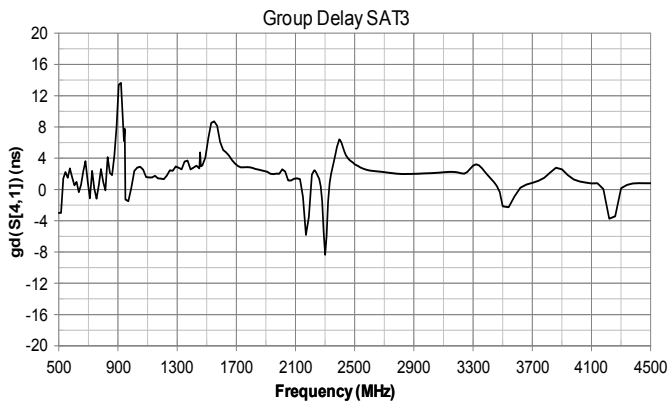
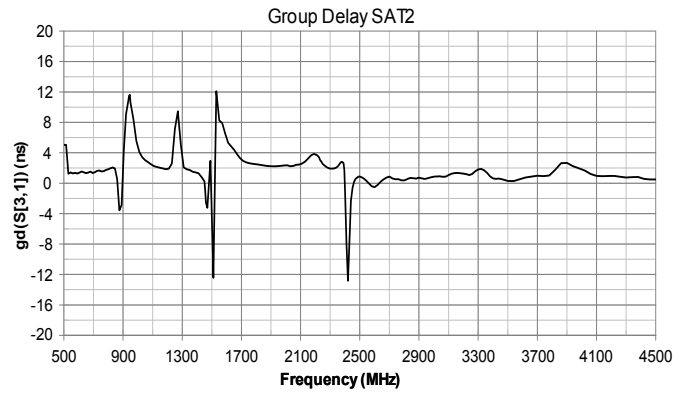
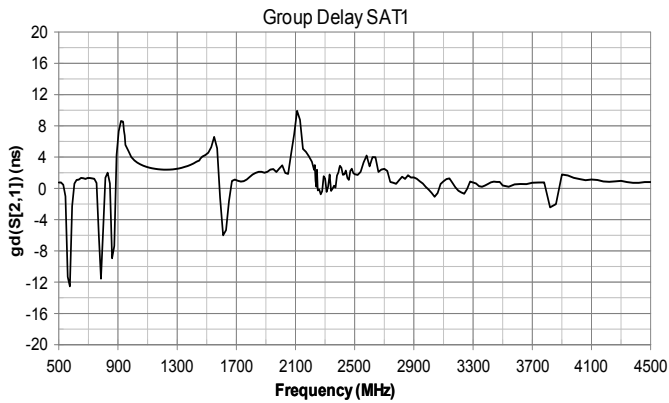
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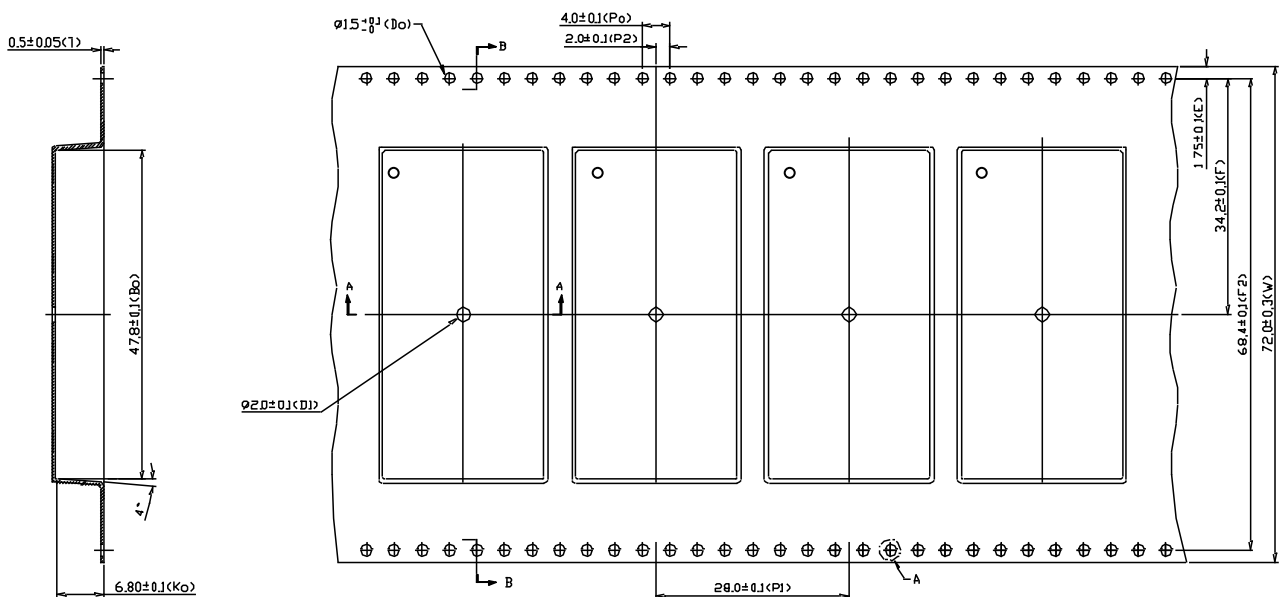
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Tape & Reel Information

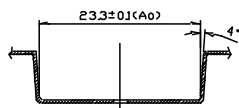
Parameter	Units	Value
Qty per reel	-	200
Reel Size	mm	330
Tape Width	mm	72.0
Pitch	mm	28.0
Ao	mm	23.3
Bo	mm	47.8
Ko	mm	6.8
Orientation	-	F30
Reference Application Note ANI-019 for orientation		

Ordering Information

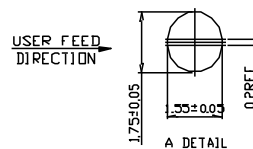
Part Number	Package
MAFL-010609	Tape & Reel



Section B-B



Section A-A



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