

CATV Diplex Filter
5 - 30 / 46 - 870MHz

MAFLCT0066
V2P

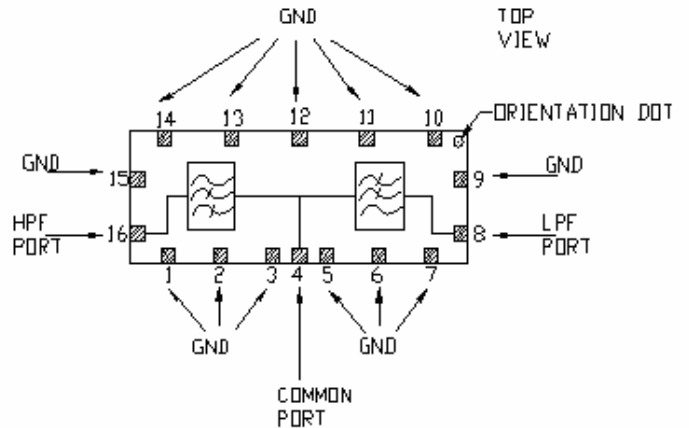
Features

- 75 Ohm
- SMT unit
- Excellent temperature stability
- Excellent repeatability

Description

M/A-COM's MAFLCT0066 is a low cost, surface mount diplex filter unit designed for CATV FTTx, Home Gateway and Distribution applications. The technology used in this design is patent pending.

Functional Schematic



Pin Configuration

Function	Pin Number
Common Port	4
Low Pass Port	8
High Pass Port	16
Ground	1-3, 5-7, 10-15
Not connected	-

Absolute Maximum Ratings ^{1,2}

Parameter	Absolute Maximum
RF Power	250mW
DC Current	30mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C

1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM does not recommend sustained operation near these survivability limits.

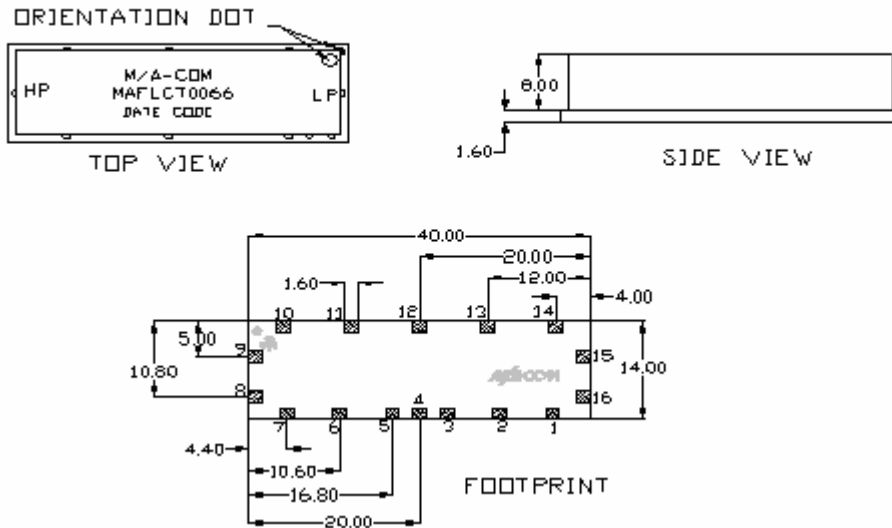
This PRELIMINARY Data Sheet contains information regarding a product M/A-COM has under development. Performance is based on measured results and target specifications. Commitment to produce in volume is not guaranteed.

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

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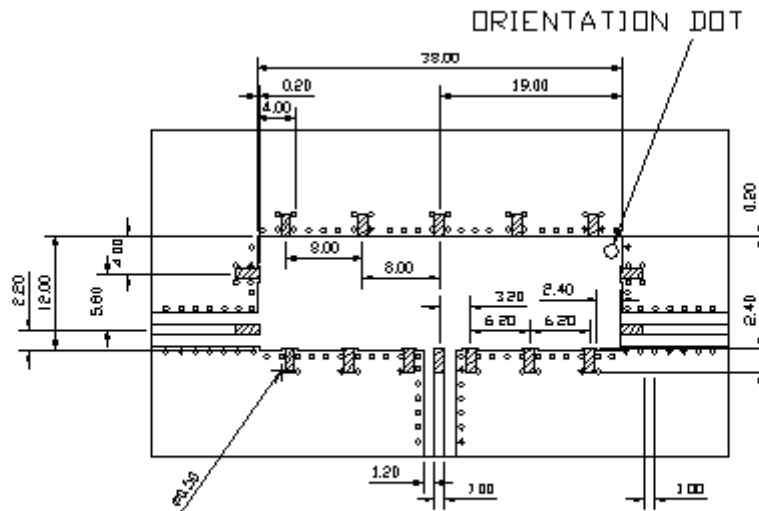
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SM-160 Case Style



Dimensions in mm. Tolerance: .xx ± 0.02, .xxx ± 0.010

Recommended PCB Configuration



NOTE: SUBSTRATE IS 1.6MM THICK FR4 WITH GND CLEARANCE UNDER UNIT ON TOP LAYER AND FULL GND PLANE ON BOTTOM LAYER

Dimensions in mm. Tolerance: .xx ± 0.02, .xxx ± 0.010

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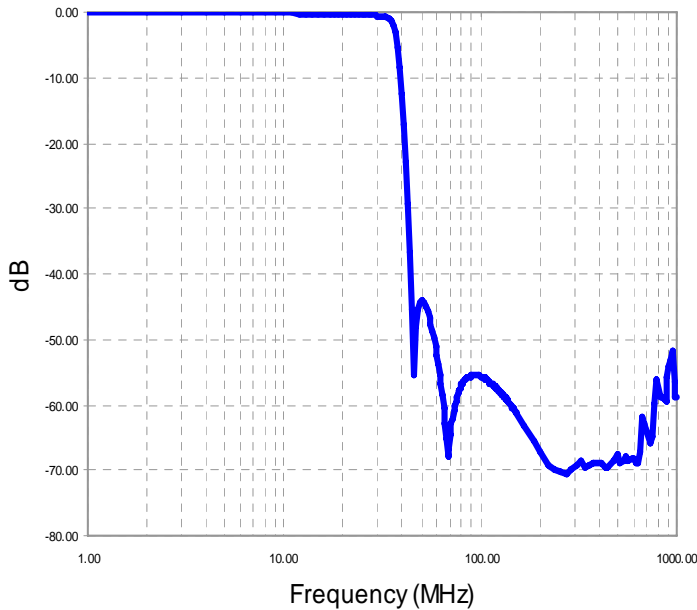
Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 75\Omega$

Parameter	Test Conditions	Units	Min	Typ	Max
Frequency Range	5 - 30MHz / 46 - 870MHz				
Insertion Loss	5 - 30MHz	dB		-0.7	-0.9
Insertion Loss	46 - 870MHz	dB		-0.75	-0.9
Isolation	5 - 30MHz	dB	-45	-47	
Isolation	31 - 45MHz	dB	-15	-20	
Isolation	46 - 870MHz	dB	-45	-46	
Input Return Loss	5 - 30MHz	dB	-17	-18	
Input Return Loss	46 - 870MHz	dB	-20	-20	

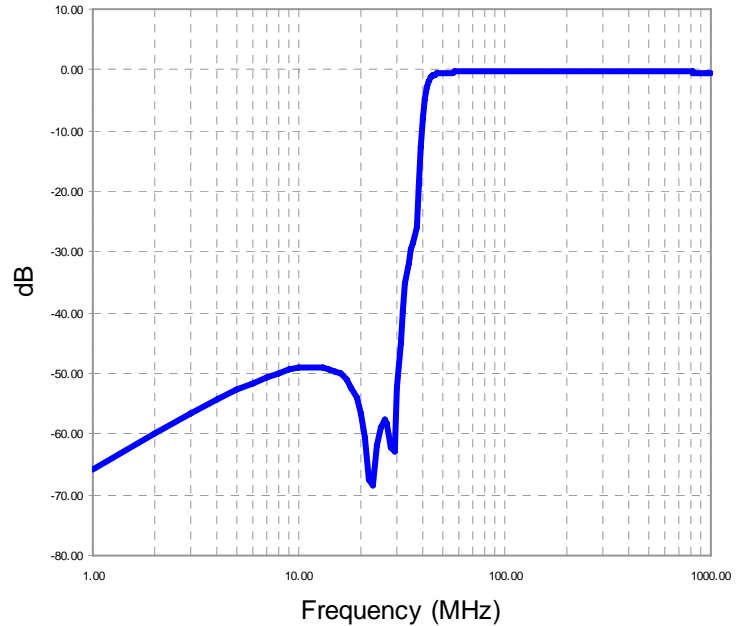
Additional Specifications	Group Delay (nSec)	
	TYP	MAX
28.5 – 30MHz	5ns	10ns
46 – 47.5MHz	10ns	15ns
55.25 – 58.83MHz	5ns	10ns
61.25 – 64.83MHz	5ns	10ns

Typical Performance Curves

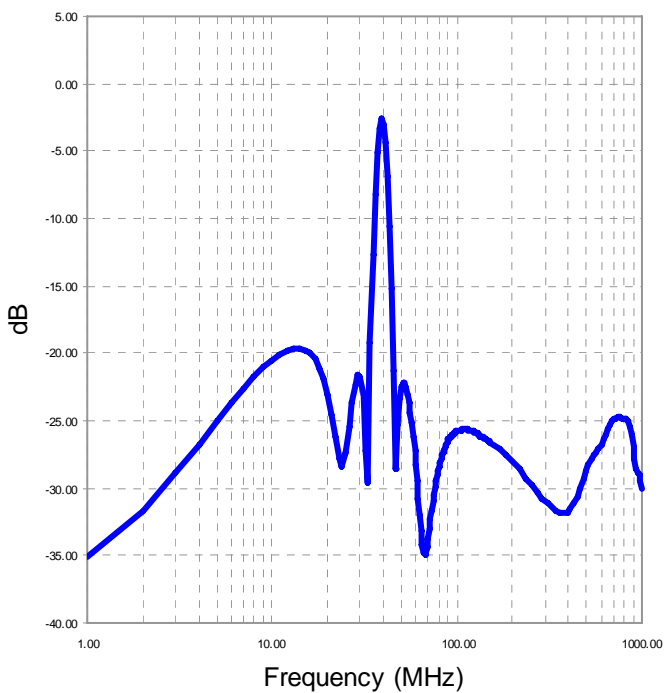
Low Pass Filter Insertion Loss



High Pass Filter Insertion Loss



Input Return Loss



Isolation

