

MOBICON

Electronic Components

PRODUCT SPECIFICATION

MEC

FREQUENCY COMPONENTS

SAW RESONATOR SPECIFICATION

This specifications is subject to change without notice.

MOBICON HOLDINGS LTD.		
Prepared By	Sign.	Approved By
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PART NO. :

HDF 315M

ELECTRICAL CHARACTERISTICS

1. SCOPE

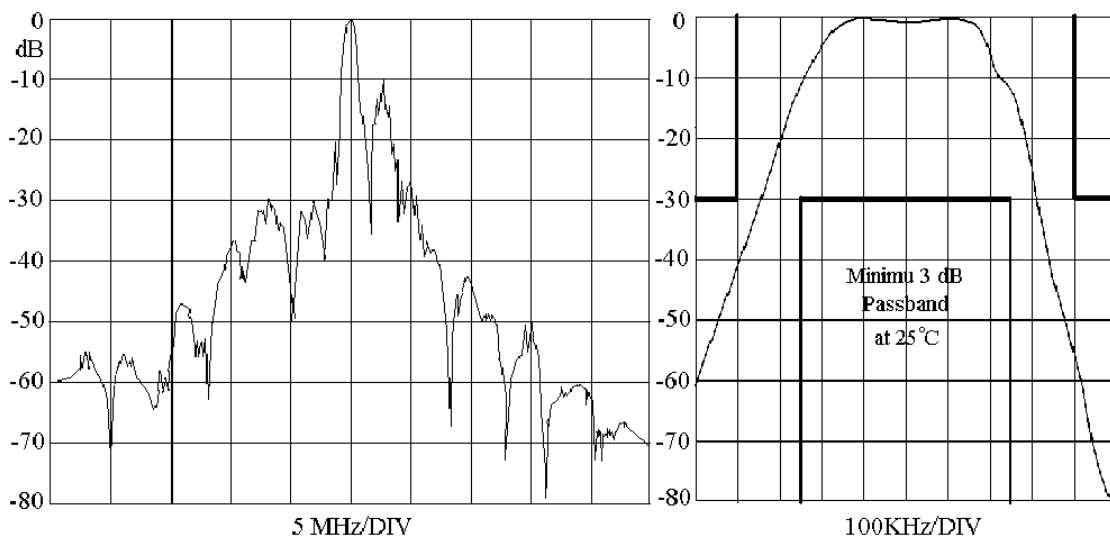
This specification shall cover the characteristics of SAW filter with used for remote-control security.

2. ELECTRICAL SPECIFICATION

DC Voltage VDC	10V
AC Voltage Vpp	10V50Hz/60Hz
Operation temperature	-40 to +85
Storage temperature	-45 to +85
RF Power Dissipation	0dBm

Electronic Characteristics

2-1.Type frequency response



2-2.Electrical characteristics

Characteristic	Sym	Notes	Min.	Typ.	Max.	Units
Nominal Frequency	Fc	2,3,4,5,6		315.00		MHz
Insertion Loss	IL	3,4,7		3.0	5.0	dB
3 dB Passband	BW3	2,3,4,7	± 85			KHz
3dB Reject	BW3	2,3,4,7			± 500	KHz
Rejection	At fc-21.4MHz(image) At fc-10.7MHz(LO) Ultimate	4	40			dB
			15			
Temperature	Operating Case temp.	3,7,8	-35		+85	
	Turnover Temperature		22		52	
	Turnover Frequency		Fc			MHz
	Freq.Temp. Coefficient		FTC		0.032	
Frequency Aging	Absolute Value during The First Year	fA	3	10		ppm/yr
External Impedance	Series Inductance	L	1,7	86nH(Pin 1),82nH(Pin 2)		
	Shunt Capacitance	C		9		pF

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DOC. No: HDF315M

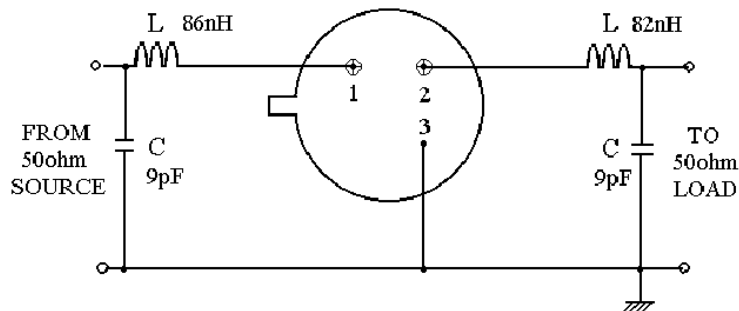
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CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

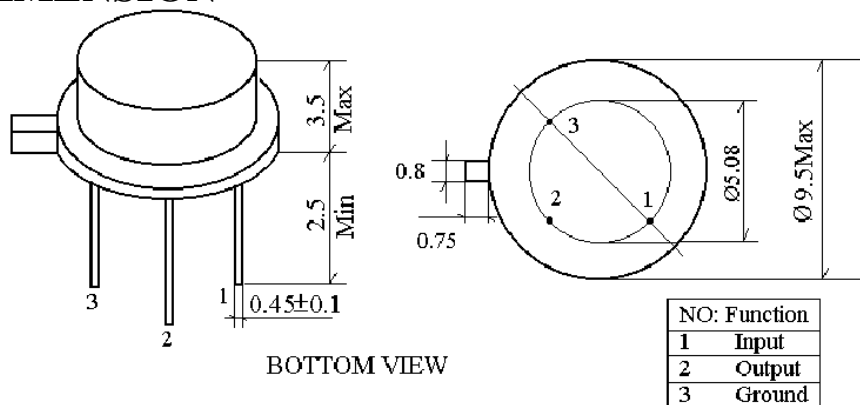
Note:

1. Typical test circuit is shown for TO-39 RF filter.
2. Passband and reject bands are specified in reference to f_c .
3. All characteristics are specified over the operating temperature range and typical aging for 10 years.
4. Unless noted otherwise, all measurements are made with the filter installed in the specified test fixture. Note that insertion loss, bandwidth, and passband shape are dependent on the impedance matching component values and quality. Demonstration circuits are available for confirmation of device performance.
5. One or more of the following U.S. Patents apply: 4,454,448; 4,616,197; and other pending.
6. All equipment designs utilizing this product must be approved by the appropriate government agency prior to manufacture or sale.
7. The design, manufacturing process, and specifications of this device are subject to change without notice.
8. The turnover temperature, T_o , is the temperature of maximum (or turnover) frequency, f_o . The nominal frequency at any case temperature, T_c , outside the operating temperature range may be calculated from: $f = f_o [1 - FTC(T_o - T_c)]^2$.

3. TEST CIRCUIT



4. DIMENSION



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5. ENVIRONMENTAL CHARACTERISTICS

5-1 High temperature exposure

Subject the device to +85 for 16 hours. Then release the filter into the room conditions for 24 hours prior to the measurement. It shall fulfill the specifications in table 1.

5-2 Low temperature exposure

Subject the device to -20 for 16 hours. Then release the device into the room conditions for 24 hours prior to the measurement. It shall fulfill the specifications in table 1.

5-3 Temperature cycling

Subject the device to a low temperature of -40 for 30 minutes. Following by a high temperature of +80 for 30 Minutes. Then release the device into the room conditions for 24 hours prior to the measurement. It shall meet the specifications in table 1.

5-4 Resistance to solder heat

Dip the device terminals no closer than 1.5mm into the solder bath at 260 ± 10 for 10 ± 1 sec. Then release the device into the room conditions for 4 hours. The device shall meet the specifications in table 1.

5-5 Solderability

Subject the device terminals into the solder bath at 245 ± 5 for 5s, More than 95% area of the terminals must be covered with new solder. It shall meet the specifications in table 1.

5-6 Mechanical shock

Drop the device randomly onto the concrete floor from the height of 1m 3 times. the device shall fulfill the specifications in table 1.

5-7 Vibration

Subject the device to the vibration for 1 hour each in x,y and z axes with the amplitude of 1.5 mm at 10 to 55 Hz. The device shall fulfill the specifications in table 1.

5-8 Lead fatigue

5-8-1 Pulling test

Weight along with the direction of lead without an shock 1kg. The device shall satisfy all the initial Characteristics.

5-8-2 Bending test

Lead shall be subject to withstand against 90 bending with 450g weight in the direction of thickness. This operation shall be done toward both direction. The device shall show no evidence of damage and shall satisfy all the initial electrical characteristics.

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6. REMARK

6.1 Static voltage

Static voltage between signal load & ground may cause deterioration & destruction of the component. Please avoid static voltage.

6.2 Ultrasonic cleaning

Ultrasonic vibration may cause deterioration & destruction of the component. Please avoid ultrasonic cleaning

6.3 Soldering

Only leads of component may be solded. Please avoid soldering another part of component.

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REVIEW OF SPECIFICATIONS

- 1) When something get doubtful with this specifications, we shall jointly work to get an agreement.
- 2) This specification limits the quality of the components as a single unit. Please insure the component is thoroughly evaluated in your application circuit.
- 3) Please do not use this component in any application that deviates from its intended use as noted within the specification. It may cause any mishaps.
- 4) Please return one of this specification after your signature of acceptance. In case of no return within 3 months from submission date. This specification should be treated as accepted.

When using our products, the following precautions should be taken.

- (1) Safety designing of apparatus or a system allowing for failures of electronic components used in the system

In general, failures will occur in electronic components at a certain probability. MOBICON HOLDINGS LTD makes every effort to improve the quality and reliability of electronic component products. However, it is impossible to completely eliminate the probability of failures. Therefore, when using MOBICON HOLDINGS LTD electronic component products, systems should be carefully designed to ensure redundancy in the event of an accident which would result in injury or death, fire, or social damage, to ensure the prevention of the spread of fire, and the prevention of faulty operation.
- (2) Quality Level of various kinds of parts, and equipment in which the parts can be utilized

Electronic components have a standard quality level unless otherwise specified.
- (3) This specifications is subject to change without notice.

The contents of this specifications are based on data which is correct as of 2002, and they may be changed without notice. If our products are used for mass-production design, please enquire consult with a member of our company's sales staff by way of precaution.
- (4) Reprinting and copying of this specifications without prior written permission from MOBICON HOLDINGS LTD are not permitted.
- (5) Industrial Property Problems

In the event any problems associated with industrial property of a third party arising as a result of the use of our products. MOBICON HOLDINGS LTD assumes no responsibility for problems other than problems directly associated with the constitution and manufacturing method of the products.



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