

# SPECIFICATION OF SAW FILTER

YOKETAN CORP.

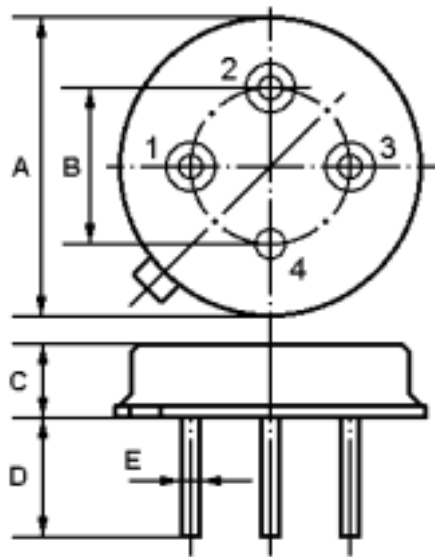
Spec no: TO39BF-04795-015-NJ-B

## 1. Features

For 2.4Ghz wireless surveillance/baby monitor application.

2. Type : TO39B

## 3. Product Dimension



Pin	Configuration
1	Input
2	Output
3	Output
4	Ground

Sign	Data ( unit: mm)	Sign	Data( unit: mm)
A	9.35±0.20	D	3±0.20
B	5.08±0.20	E	0.45±0.20
C	3.30±0.20		

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## 4. Performance

### 4-1. Maximum Ratings

Rating		Value	Units
AC Voltage Between Any Two Pins	$V_{PP}$	5	V
DC Voltage Between Any Two Pins	$V_{DC}$	0	V
Storage temperature range	$T_{stg}$	-40 to +85	
Operable temperature range	$T_A$	-25 to +85	

### 4-2. Electronic Characteristics

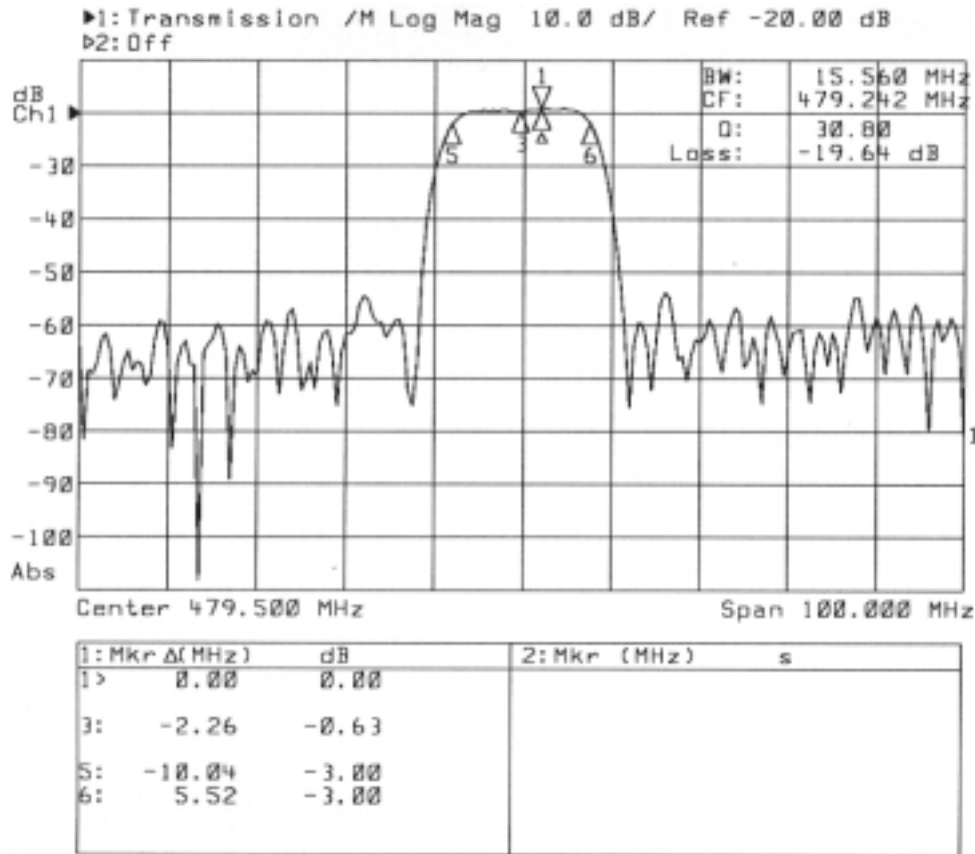
Reference temperature:  $T_A = 25$   
 Terminating source impedance:  $Z_S = 50 \Omega$   
 Terminating load impedance:  $Z_L = 50 \Omega$

Item	Min.	Typ.	Max.	Units
Center Frequency $f_c$	478.50	479.50	480.50	MHz
Insertion attenuation 479.50 MHz $\alpha$ (Reference level for the following data)	--	21.8	24.0	dB
Pass bandwidth $\alpha_{rel} \leq 3dB$ $B_{3dB}$	--	15.0	--	MHz
Relative attenuation $\alpha_{rel}$				
472.00 MHz	--	3.1	5.1	dB
487.00 MHz	--	3.0	5.0	dB
Lower sidelobe 430.00 ... 458.00 MHz	34.0	45.0	--	dB
Upper sidelobe 501.00 ... 530.00 MHz	34.0	44.0	--	dB
Reflected wave signal suppression 0.15 $\mu$ s ... 2.0 $\mu$ s after main pulse	40.0	46.0	--	dB
Amplitude ripple (p-p) 475.00 ... 484.00 MHz $\Delta \alpha$	--	0.5	1.0	dB
Group delay ripple (p-p) 472.00 ... 487.00 MHz $\Delta \tau$	--	10	15	ns
Impedance at 479.50MHz				
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$	--	180  3.8	--	$\Omega$    pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$	--	140  3.3	--	$\Omega$    pF
Temperature coefficient of frequency $TC_f$	--	-86	--	ppm/K

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## 5. Frequency Response



## 6. Notice

1. Unless noted otherwise, all measurements are made with the filter installed in the specified test fixture that is connected to a 50Ω test system with VSWR≤1.2:1. The test fixture L and C are adjusted for minimum insertion loss at the filter center frequency,  $f_c$ . Note that insertion loss, bandwidth, and passband shape are dependent on the impedance matching component values and quality.
2. Frequency aging is the change in  $f_c$  with time and is specified at +65°C or less. Aging may exceed the specification for prolonged temperatures above +65°C. Typically, aging is greatest the first year after manufacture, decreasing in subsequent years.
3. Turnover temperature,  $T_0$ , is the temperature of maximum (or turnover) frequency,  $f_0$ . The nominal frequency at any case temperature,  $T_c$ , may be calculated from:  

$$f = f_0 [1 - FTC (T_0 - T_c)^2].$$
4. The specifications of this device are based on the test circuit shown above and subject to change or obsolescence without notice.