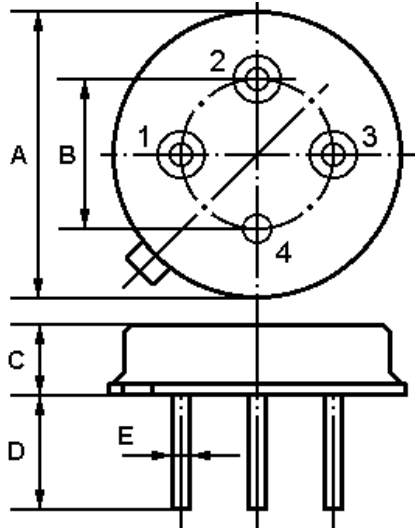


The ACTF480-2/479.5/TO39 is a two channel IF filter for DSB receivers with constant group delay.

1.Package Dimension (TO-39)

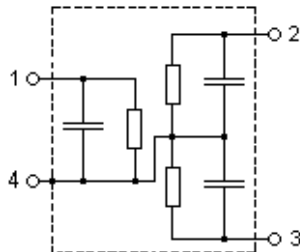


2.

Pin	Configuration
1	Input / Output
2	Output 2 / Input2
3	Output 1 / Input1
4	Ground

Dimensions	Data (Unit: mm)
A	9.35±0.10
B	5.08±0.10
C	3.40±0.10
D	3.00±0.20
E	4-Φ0.45±0.20

3.Equivalent LC Model



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	°C
Operable temperature range	T_A	-25 to +85	°C

In keeping with our ongoing policy of product evolution and improvement, the above specification is subject to change without notice.

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Issue : 1.1 C1

Date : March 2010

4-2.Electronic Characteristics

Reference temperature: $T_A = 25\text{ }^\circ\text{C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$
 Group delay aperture: 0.25MHz

Characteristics of Channel1

Characteristic	Min.	Typ.	Max.	Units
Center Frequency f_c	478.50	479.50	480.50	MHz
Insertion attenuation 479.50 MHz (Reference level for the following data)	--	21.0	22.5	dB
Pass bandwidth $\alpha_{rel} \leq 3\text{dB}$ $B_{3\text{dB}}$	--	27.0	--	MHz
Relative attenuation α_{rel}				
466.00 MHz	--	3.3	4.5	dB
493.00 MHz	--	2.5	4.5	dB
Lower sidelobe 430.00 ... 452.00 MHz	32.0	38.0	--	dB
Upper sidelobe 507.00 ... 530.00 MHz	30.0	36.0	--	dB
Reflected wave signal suppression 0.13 μs ... 2.0 μs after main pulse	40.0	49.0	--	dB
Amplitude ripple (p-p) 471.00 ... 488.00 MHz $\Delta \alpha$	--	0.6	1.2	dB
Group delay ripple (p-p) 466.00 ... 493.00 MHz Δt	--	11	18	ns
Temperature coefficient of frequency TC_f	--	-86	--	ppm/K

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Issue : 1.1 C1
 Date : March 2010

Characteristics of Channel2

Characteristic		Min.	Typ.	Max.	Units
Center Frequency	f_c	478.50	479.50	480.50	MHz
Insertion attenuation (Reference level for the following data)	479.50 MHz α	--	21.0	22.5	dB
Pass bandwidth	$\alpha_{rel} \leq 3\text{dB}$ $B_{3\text{dB}}$	--	18.0	--	MHz
Relative attenuation	α_{rel}	--	3.5	4.5	dB
	470.50 MHz	--	2.3	4.5	dB
	488.50 MHz	--	2.3	4.5	dB
Lower sidelobe	430.00 ... 457.50 MHz	32.0	38.0	--	dB
Upper sidelobe	500.50 ... 530.00 MHz	30.0	36.0	--	dB
Reflected wave signal suppression 0.13 μs ... 3.0 μs after main pulse		40.0	44.0	--	dB
Amplitude ripple (p-p)	476.00 ... 483.00 MHz $\Delta \alpha$	--	0.6	1.2	dB
Group delay ripple (p-p)	470.50 ... 488.50 MHz Δt	--	11	18	ns
Temperature coefficient of frequency	TC_f	--	-86	--	ppm/K

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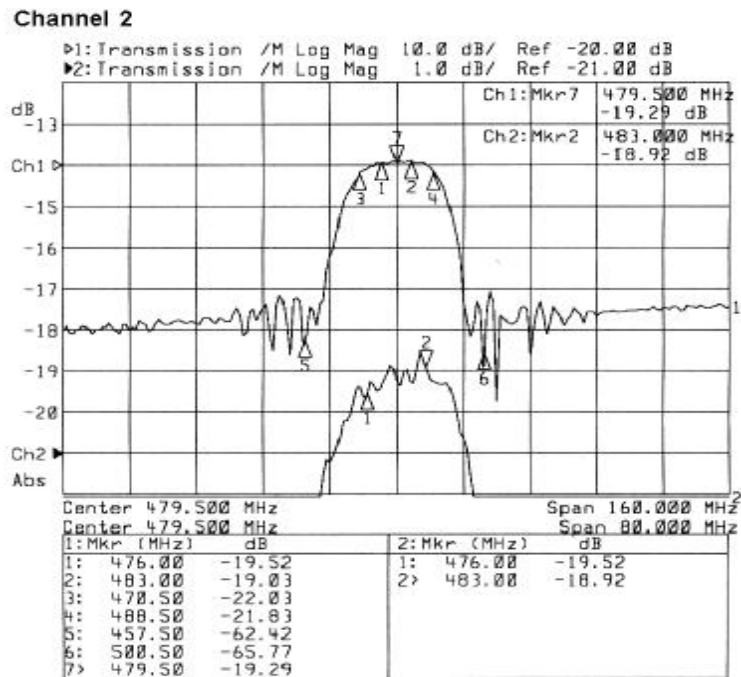
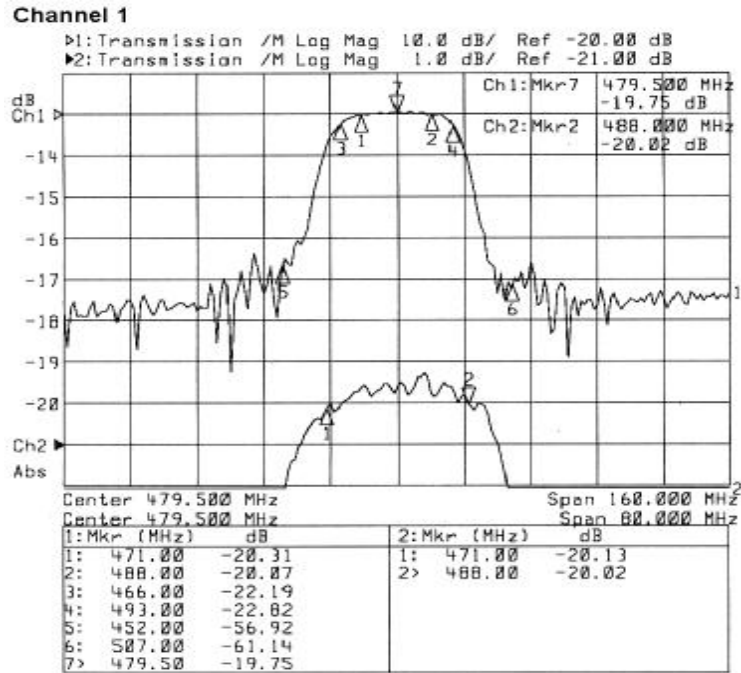
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Issue : 1.1 C1

Date : March 2010

5. Typical Frequency Response



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Issue : 1.1 C1

Date : March 2010

i CAUTION: Electrostatic Sensitive Device. Observe precautions for handling!

1. The frequency f_c is defined as the midpoint between the 3dB frequencies.
2. 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 $VSWR \leq 1.2:1$. The test fixture L and C are adjusted for minimum insertion loss at the filter centre frequency, f_c . Note that insertion loss, bandwidth, and passband shape are dependent on the impedance matching component values and quality.
3. Unless noted otherwise, specifications apply over the entire specified operating temperature range.
4. The specifications of this device are based on the test circuit shown above and subject to change or obsolescence without notice.
5. All equipment designs utilizing this product must be approved by the appropriate government agency prior to manufacture or sale.
6. Our liability is only assumed for the Surface Acoustic Wave (SAW) component(s) per se, not for applications, processes and circuits implemented within components or assemblies.

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