



# SAW Components

## SAW RF filter

Short range devices

<b>Series/type:</b>	<b>B3727</b>
<b>Ordering code:</b>	<b>B39431B3727H110</b>
Date:	March 22, 2010
Version:	2.1



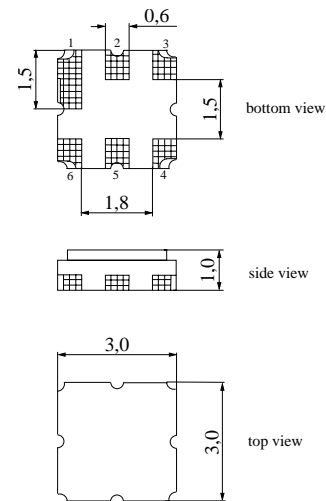
**Application**

- Low-loss RF filter for remote control receivers
- Balanced and unbalanced operation possible



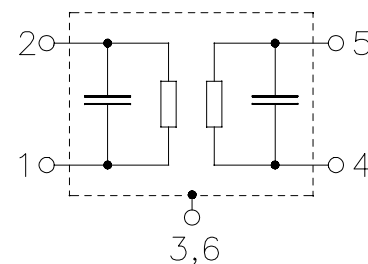
**Features**

- Package size 3.0 x 3.0 x 1.0 mm<sup>3</sup>
- Package code DCC6E
- RoHS compatible
- Approximate weight 0.037 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- Lead free soldering compatible with J - STD20C
- Passivation layer Elpas
- AEC-Q200 qualified component family
- **Electrostatic Sensitive Device (ESD)**



**Pin configuration<sup>1)</sup>**

- 1 Input (recommended) or input ground
- 2 Input ground (recommended) or input
- 4 Output (recommended) or output ground
- 5 Output ground (recommended) or output
- 3,6 Ground (case)



1) The recommended pin configuration usually offers best suppression of electrical crosstalk. The filter characteristics refer to this configuration.

Data sheet


**Characteristics**

Temperature range for specification:  $T = -40\text{ °C to }+85\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\Omega$   
 Terminating load impedance:  $Z_L = 50\Omega$

		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	$f_C$	—	433.92	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$				
433.22 ... 434.62 MHz		—	2.8	3.7	dB
433.12 ... 434.72 MHz		—	2.8	3.8	dB
433.10 ... 434.70 MHz <sup>1)</sup>		—	2.8	3.7	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
433.12 ... 434.72 MHz		—	0.4	1.3	dB
433.10 ... 434.70 MHz <sup>1)</sup>		—	0.4	1.3	dB
<b>Input VSWR</b>					
433.12 ... 434.72 MHz		—	1.6	2.0	
433.10 ... 434.70 MHz <sup>1)</sup>		—	1.6	1.9	
<b>Output VSWR</b>					
433.12 ... 434.72 MHz		—	1.6	2.0	
433.10 ... 434.70 MHz <sup>1)</sup>		—	1.6	1.9	
<b>Attenuation</b>	$\alpha$				
10.00 ... 400.00 MHz		57	62	—	dB
400.00 ... 415.00 MHz		50	57	—	dB
415.00 ... 425.00 MHz		43	48	—	dB
425.00 ... 429.00 MHz		21	27	—	dB
439.00 ... 442.00 MHz		12 <sup>2)</sup>	22	—	dB
442.00 ... 445.00 MHz		28	32	—	dB
445.00 ... 452.00 MHz		30	35	—	dB
452.00 ... 750.00 MHz		48	52	—	dB
750.00 ... 1900.00 MHz		43	48	—	dB
1900.00 ... 2500.00 MHz		32	37	—	dB

1) Temperature range for specification:  $T = -30\text{ °C to }+70\text{ °C}$

2)  $T = +25\text{ °C}$  : 20 dB



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B3727

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433.92 MHz

Data sheet



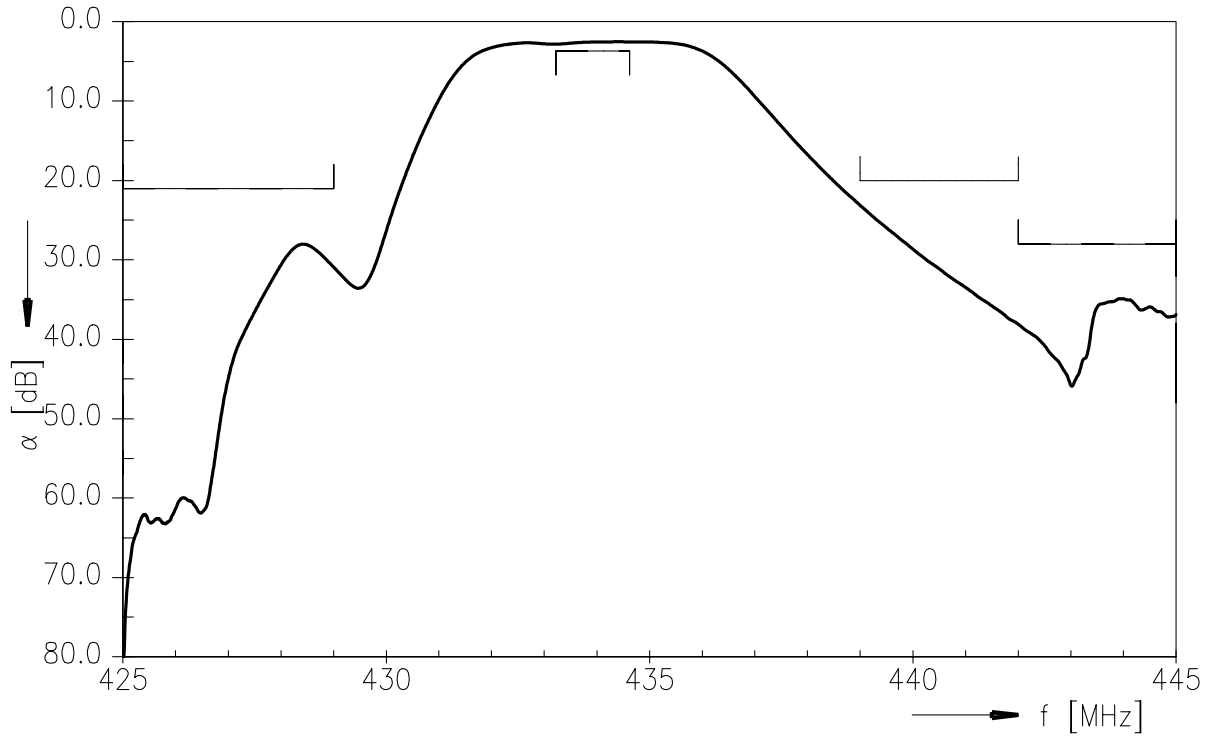
### Maximum ratings

Operable temperature range	T	-45/+125	°C	
Storage temperature range	T <sub>stg</sub>	-45/+125	°C	
DC voltage	V <sub>DC</sub>	6	V	
Source power	P <sub>S</sub>	13	dBm	source impedance 50 Ω

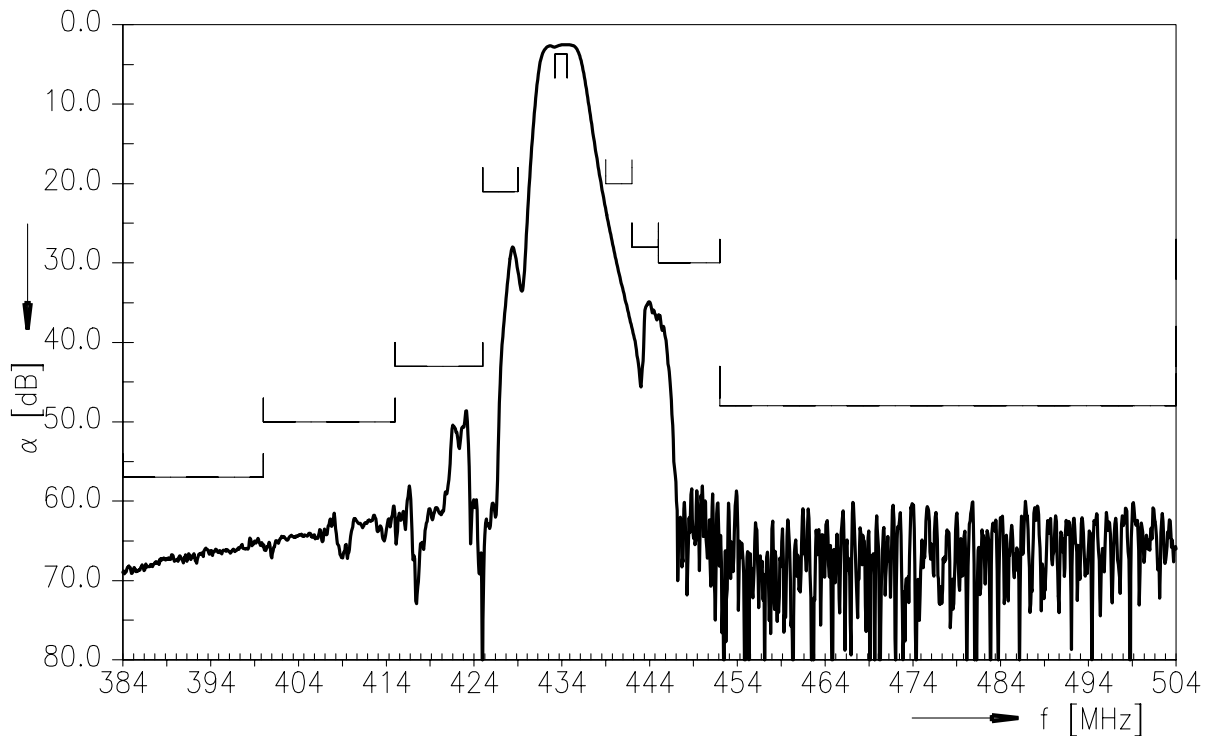
Data sheet



Transfer function



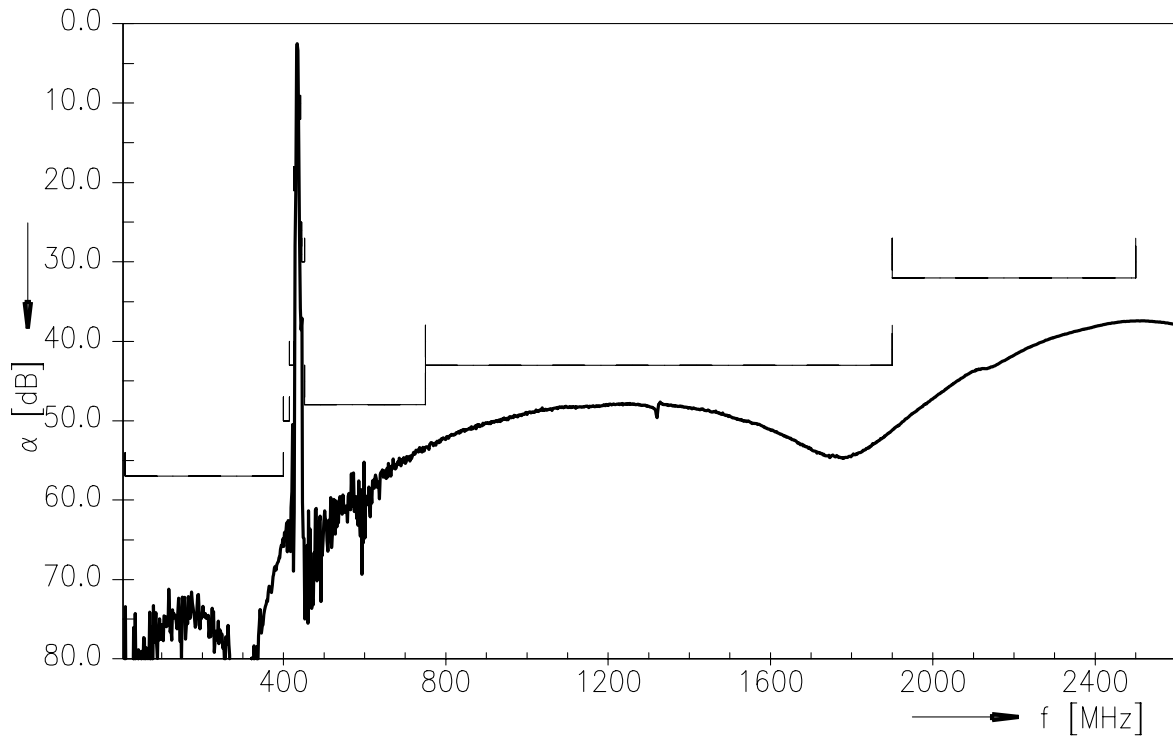
Transfer function (wideband)



Data sheet



Transfer function (ultimate rejection)



**References**

<b>Type</b>	B3727
<b>Ordering code</b>	B39431B3727H110
<b>Marking and package</b>	C61157-A7-A143
<b>Packaging</b>	F61074-V8168-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B3727_NB.s2p B3727_WB.s2p See file header for port/pin assignment table.
<b>Soldering profile</b>	S_6001
<b>RoHS compatible</b>	defined as compatible with the following documents: "DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment. 2005/618/EC from April 18th, 2005, amending Directive 2002/95/EC of the European Parliament and of the Council for the purposes of establishing the maximum concentration values for certain hazardous substances in electrical and electronic equipment."

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