



## **SAW Components**

### **SAW RF filter**

Short range devices

<b>Series/type:</b>	<b>B3729</b>
<b>Ordering code:</b>	<b>B39311B3729H110</b>
<b>Date:</b>	<b>July 27, 2009</b>
<b>Version:</b>	<b>2.0</b>



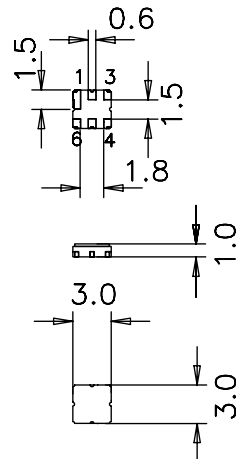
**Application**

- Low-loss RF filter for remote control receivers
- No matching network required for operation at 50 Ω



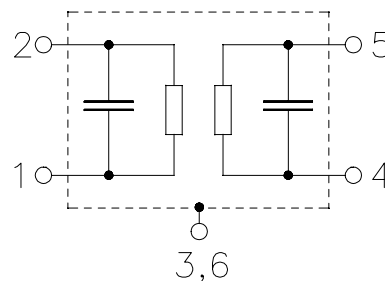
**Features**

- 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.



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**B3729**

**SAW RF filter**

**313.85 MHz**

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>	$f_C$	—	313.85	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$	—	1.5	1.9	dB
	313.35 ... 314.35 MHz				
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	0.4	1.0	dB
	313.35 ... 314.35 MHz				
<b>Input VSWR</b>		—	1.3	1.6	
	313.35 ... 314.35 MHz				
<b>Output VSWR</b>		—	1.3	1.6	
	313.35 ... 314.35 MHz				
<b>Attenuation</b>	$\alpha$				
	270.00 ... 286.00 MHz	60	68	—	dB
	293.00 ... 293.90 MHz	56	64	—	dB
	302.85 ... 303.45 MHz	45	52	—	dB
	324.25 ... 324.85 MHz	29	31	—	dB
	336.10 ... 337.00 MHz	52	60	—	dB
	357.50 ... 358.70 MHz	55	63	—	dB



<b>SAW Components</b>	<b>B3729</b>
<b>SAW RF filter</b>	<b>313.85 MHz</b>

Data sheet



**Characteristics**

Temperature range for specification:  $T = -45\text{ °C to }+105\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
<b>Center frequency</b> $f_C$		—	313.85	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$				
313.35 ... 314.35 MHz		—	1.5	2.0	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
313.35 ... 314.35 MHz		—	0.4	1.0	dB
<b>Input VSWR</b>					
313.35 ... 314.35 MHz		—	1.3	1.6	
<b>Output VSWR</b>					
313.35 ... 314.35 MHz		—	1.3	1.6	
<b>Attenuation</b>	$\alpha$				
270.00 ... 286.00 MHz		60	68	—	dB
293.00 ... 293.90 MHz		56	64	—	dB
302.85 ... 303.45 MHz		45	52	—	dB
324.25 ... 324.85 MHz		29	31	—	dB
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313.85 MHz

Data sheet

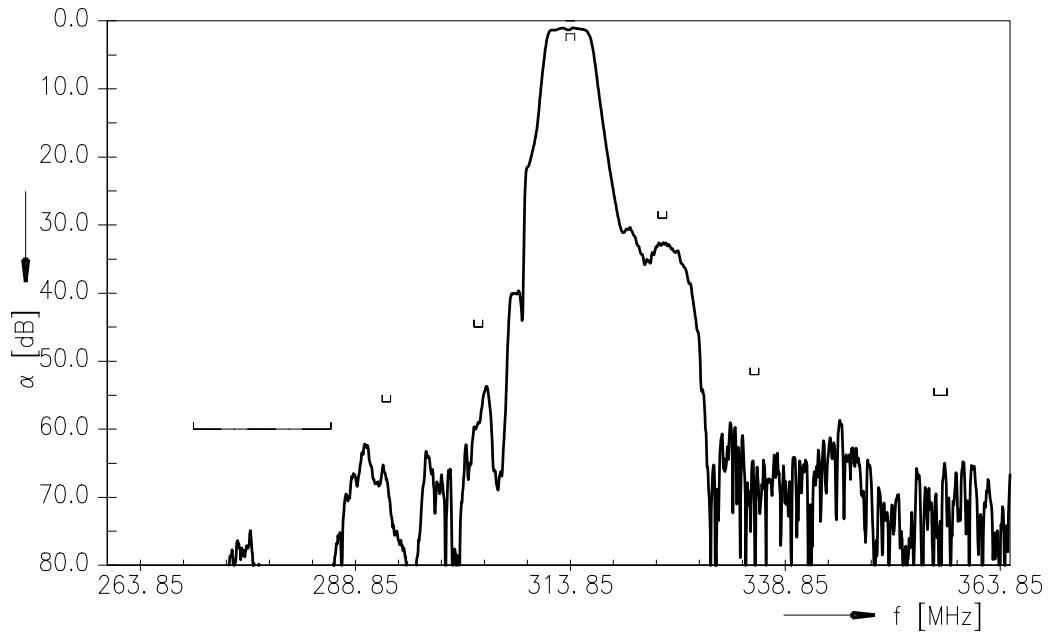


### Maximum ratings

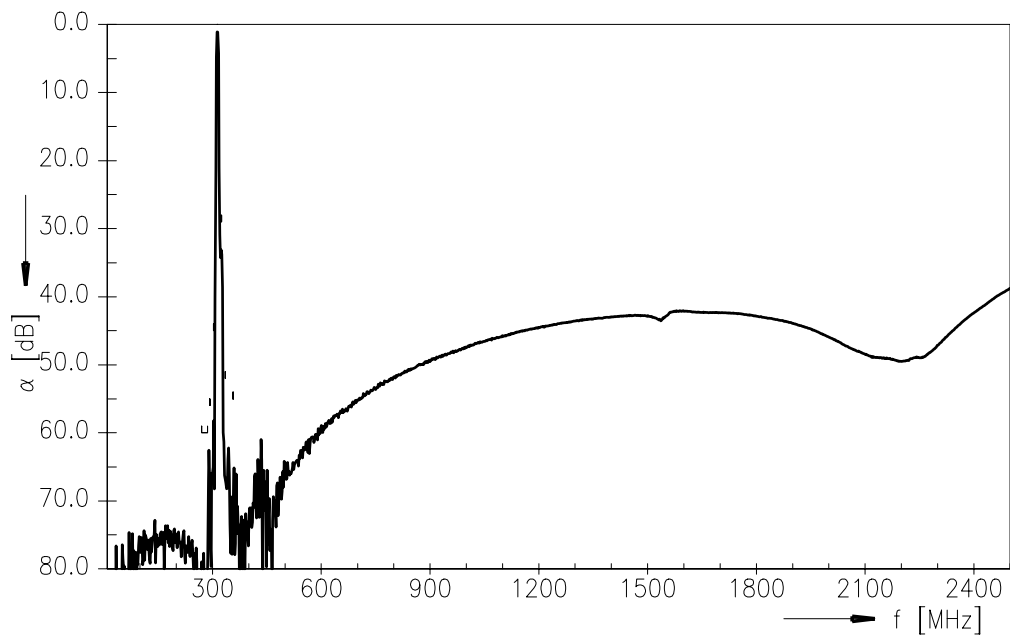
Operable temperature range	T	-45/+125	°C	
Storage temperature range	T <sub>stg</sub>	-45/+125	°C	
DC voltage	V <sub>DC</sub>	6	V	
Source power	P <sub>S</sub>	13	dBm	source impedance 50 Ω



Transfer function (wideband)



Transfer function (ultimate rejection)





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## References

<b>Type</b>	B3729
<b>Ordering code</b>	B39311B3729H110
<b>Marking and package</b>	C61157-A7-A143
<b>Packaging</b>	F61074-V8228-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B3729_NB.s2p B3729_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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