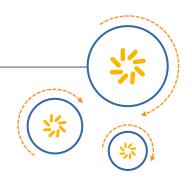


## RF360 Europe GmbH

## A Qualcomm - TDK Joint Venture



## **SAW Components**

## SAW IF filter

Satellite radio

Series/type: B1726

Ordering code: B39261B1726H810

Date: December 20, 2012

Version: 2.2

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# **SAW Components**

## SAW IF filter

Satellite radio

Series/type: B1726

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SAW Components B1726

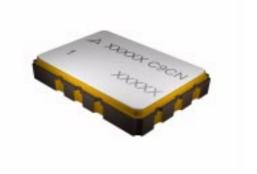
### SAW IF filter 259.86 MHz

#### **Data sheet**

### 

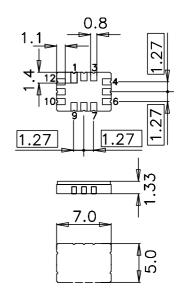
#### **Application**

- IF filter for digital satellite radio
- Low insertion attenuation
- Constant group delay
- Unbalanced or balanced operation



#### **Features**

- Package size 7.0 x 5.0 x 1.33 mm<sup>3</sup>
- Package code QCC12E
- Maximum package height 1.48 mm
- RoHS compatible
- Approximate weight 0.25 g
- Ceramic package for Surface Mount Technology (SMT)
- Ni, gold-plated terminals
- AEC-Q200 qualified component family
- Electrostatic Sensitive Device (ESD)



#### Pin configuration

<b>1</b> 0	Input

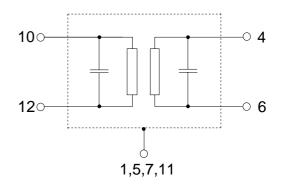
■ 12 Input

■ 4 Output

■ 6 Output

■ 1,5,7,11 Case – ground

■ 2,3,8,9 To be grounded





B1726

SAW Components

SAW IF filter 259.86 MHz

**Data sheet** 

 $\leq$ MD

#### Characteristics

Temperature range for specification:  $T = -40 \,^{\circ}\text{C} \dots 85 \,^{\circ}\text{C}$ 

Terminating source impedance:  $Z_{\rm S}=150~\Omega$  and matching network Terminating load impedance:  $Z_{\rm L}=150~\Omega$  and matching network

		min.	typ. @ 25°C	max.	
Nominal frequency	f <sub>N</sub>	_	259.86	_	MHz
Minimum insertion attenuation		_	14.5	15.5	dB
Amplitude ripple (p-p)	Δα				
253.61 266.11 MHz		_	0.8	1.4	dB
253.61 255.47 MHz		_	0.3	0.8	dB
255.47 257.33 MHz		_	0.3	0.8	dB
257.33 259.84 MHz			0.3	0.8	dB
259.89 262.40 MHz		_	0.3	0.8	dB
262.40 264.25 MHz		_	0.3	0.8	dB
264.25 266.11 MHz		_	0.7	1.0	dB
Pass bandwidth					
$\alpha_{rel} \le 1.5 \text{ dB}$	$B_{1.5dB}$	12.5	14.1	15.0	MHz
$\alpha_{rel} \leq 3$ dB	$B_{3dB}$	14.4	14.9	15.4	MHz
α <sub>rel</sub> ≤15 dB	B <sub>15dB</sub>	_	17.4		MHz
<b>Attenuation</b> (relative to $\alpha_{min}$ )					
Lower sidelobe					
230.00 f <sub>N</sub> –12.00 MHz		34.0	36.0	_	dB
$f_{\rm N} = 12.00 \dots f_{\rm N} = 10.50 \text{ MHz}$		32.0	36.0	_	dB
Upper sidelobe					
$f_{\rm N}$ + 9.00 $f_{\rm N}$ +10.30 MHz		13.0	16.0	_	dB
$f_{\rm N}$ +10.30 $f_{\rm N}$ +12.00 MHz		34.0	36.0	_	dB
f <sub>N</sub> +12.00 290.00 MHz		35.0	37.0	<u> </u>	dB
Group delay ripple (p-p)	$\Delta  au$				
$f_{\rm N} \pm 6.24~{ m MHz}$		<u> </u>	50	70	ns
Temperature coefficient of frequency	$TC_f$	_	-18	_	ppm/K



**SAW Components** 

B1726

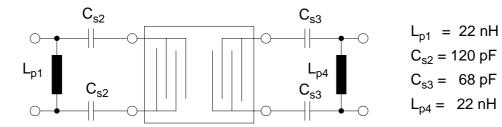
**SAW IF filter** 

259.86 MHz

**Data sheet** 



Matching network (based on four port measurement, quality factors  $Q_L = 40$ ,  $Q_C = 90$ )



$$C_{s2} = 120 \text{ pF}$$

### **Maximum ratings**

Source power	$P_S$	0	dBm
DC voltage	$V_{DC}$	6	V
Storage temperature range	$T_{stg}$	-40 / +85	°C
Operable temperature range	Т	-40 / +85	°C



SAW Components

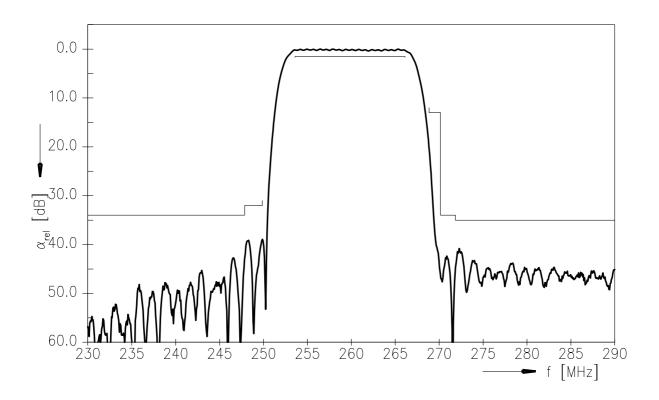
SAW IF filter

Data sheet

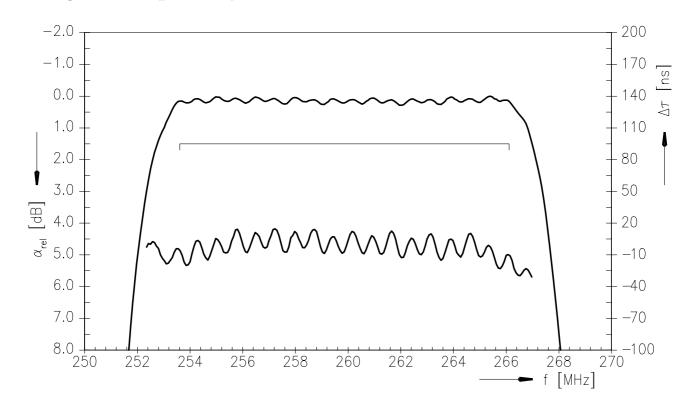
B1726

259.86 MHz

#### **Transfer function**



#### **Transger function (passband)**





SAW Components B1726
SAW IF filter 259.86 MHz

Data sheet



#### References

Туре	B1726
Ordering code	B39261B1726H810
Marking and package	C61157-A7-A103
Packaging	F61074-V8170-Z000
Date codes	L_1126
S-parameters	B1726_NB.s4p See file header for port/pin assignment table.
Soldering profile	S_6001
RoHS compatible	RoHS-compatible means that products are compatible with the requirements according to Art. 4 (substance restrictions) of Directive 2011/65/EU of the European Parliament and of the Council of June 8th, 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment ("Directive") with due regard to the application of exemptions as per Annex III of the Directive in certain cases.
Matching coils	See Inductor pdf-catalog <a href="http://www.tdk.co.jp/tefe02/coil.htm#aname1">http://www.tdk.co.jp/tefe02/coil.htm#aname1</a> and Data Library for circuit simulation <a href="http://www.tdk.co.jp/etvcl/index.htm">http://www.tdk.co.jp/etvcl/index.htm</a> for a large variety of matching coils.

For further information please contact your local EPCOS sales office or visit our webpage at  $\underline{www.epcos.com}$  .

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