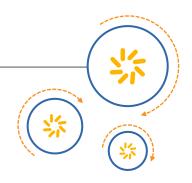


RF360 Europe GmbH

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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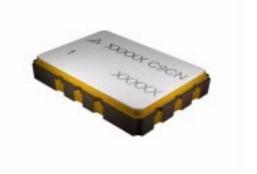
SAW Components B1726

SAW IF filter 259.86 MHz

Data sheet

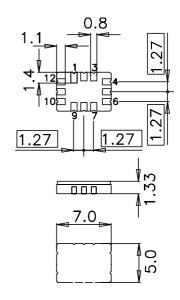
Application

- 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 mm³
- 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

1 0	Input

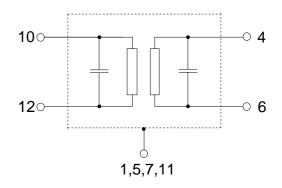
■ 12 Input

■ 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 _N	_	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 _{rel} ≤15 dB	B _{15dB}	_	17.4		MHz
Attenuation (relative to α_{min})					
Lower sidelobe					
230.00 f _N –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 _N +12.00 290.00 MHz		35.0	37.0	<u> </u>	dB
Group delay ripple (p-p)	Δau				
$f_{\rm N} \pm 6.24~{ m MHz}$		<u> </u>	50	70	ns
Temperature coefficient of frequency	TC_f	_	-18	_	ppm/K



SAW Components

B1726

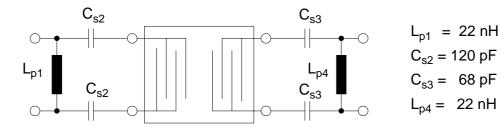
SAW IF filter

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

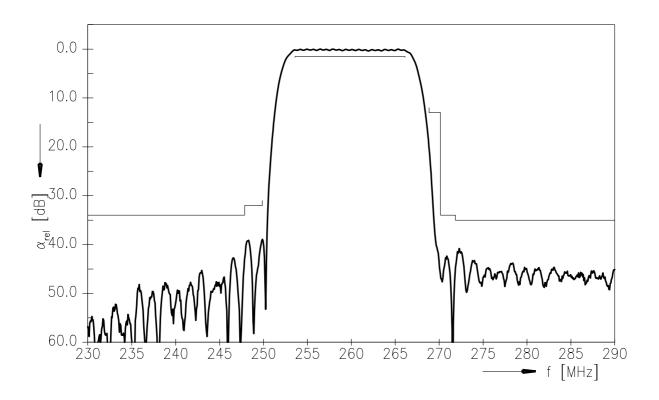
SAW IF filter

Data sheet

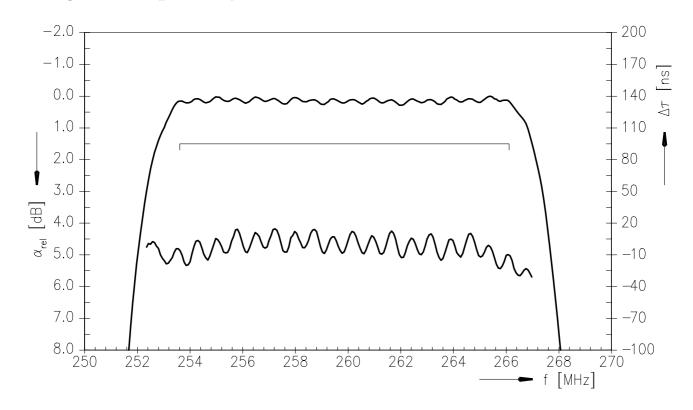
B1726

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 http://www.tdk.co.jp/tefe02/coil.htm#aname1 and Data Library for circuit simulation http://www.tdk.co.jp/etvcl/index.htm for a large variety of matching coils.

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