

SAW Components

SAW IF filter

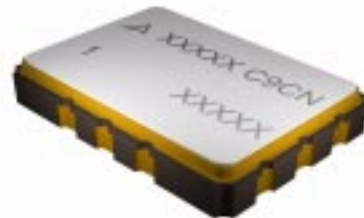
Satellite radio

Series/type:	B1726
Ordering code:	B39261B1726H810
Date:	December 20, 2012
Version:	2.2

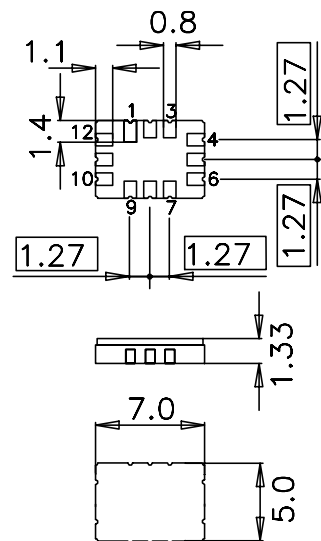
Data sheet

Application

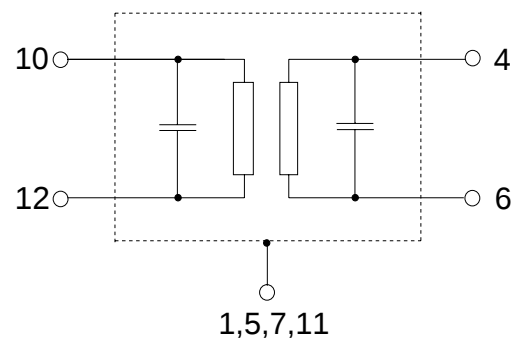
- IF filter for digital satellite radio
- Low insertion attenuation
- Constant group delay
- Unbalanced or balanced operation


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

- 10 Input
- 12 Input
- 4 Output
- 6 Output
- 1,5,7,11 Case – ground
- 2,3,8,9 To be grounded



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259.86 MHz
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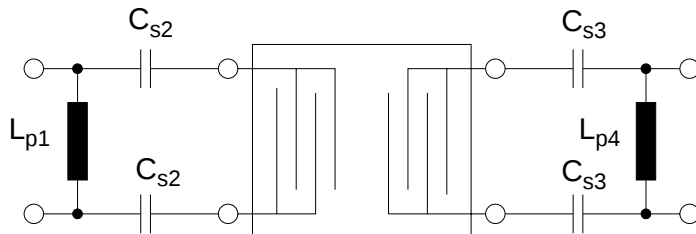
Characteristics

Temperature range for specification: $T = -40\text{ }^{\circ}\text{C} \dots 85\text{ }^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 150\text{ }\Omega$ and matching network
 Terminating load impedance: $Z_L = 150\text{ }\Omega$ and matching network

		min.	typ. @ 25 °C	max.	
Nominal frequency	f_N	—	259.86	—	MHz
Minimum insertion attenuation	$\alpha_{\min}$	—	14.5	15.5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
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					
$\alpha_{\text{rel}} \leq 1.5\text{ dB}$	$B_{1.5\text{dB}}$	12.5	14.1	15.0	MHz
$\alpha_{\text{rel}} \leq 3\text{ dB}$	$B_{3\text{dB}}$	14.4	14.9	15.4	MHz
$\alpha_{\text{rel}} \leq 15\text{ dB}$	$B_{15\text{dB}}$	—	17.4	—	MHz
Attenuation (relative to $\alpha_{\min}$)	α_{rel}				
Lower sidelobe					
230.00 ... $f_N - 12.00\text{ MHz}$		34.0	36.0	—	dB
$f_N - 12.00 \dots f_N - 10.50\text{ MHz}$		32.0	36.0	—	dB
Upper sidelobe					
$f_N + 9.00 \dots f_N + 10.30\text{ MHz}$		13.0	16.0	—	dB
$f_N + 10.30 \dots f_N + 12.00\text{ MHz}$		34.0	36.0	—	dB
$f_N + 12.00 \dots 290.00\text{ MHz}$		35.0	37.0	—	dB
Group delay ripple (p-p)	$\Delta\tau$				
$f_N \pm 6.24\text{ MHz}$		—	50	70	ns
Temperature coefficient of frequency	TC_f	—	-18	—	ppm/K

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


$$L_{p1} = 22 \text{ nH}$$

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

$$C_{s3} = 68 \text{ pF}$$

$$L_{p4} = 22 \text{ nH}$$

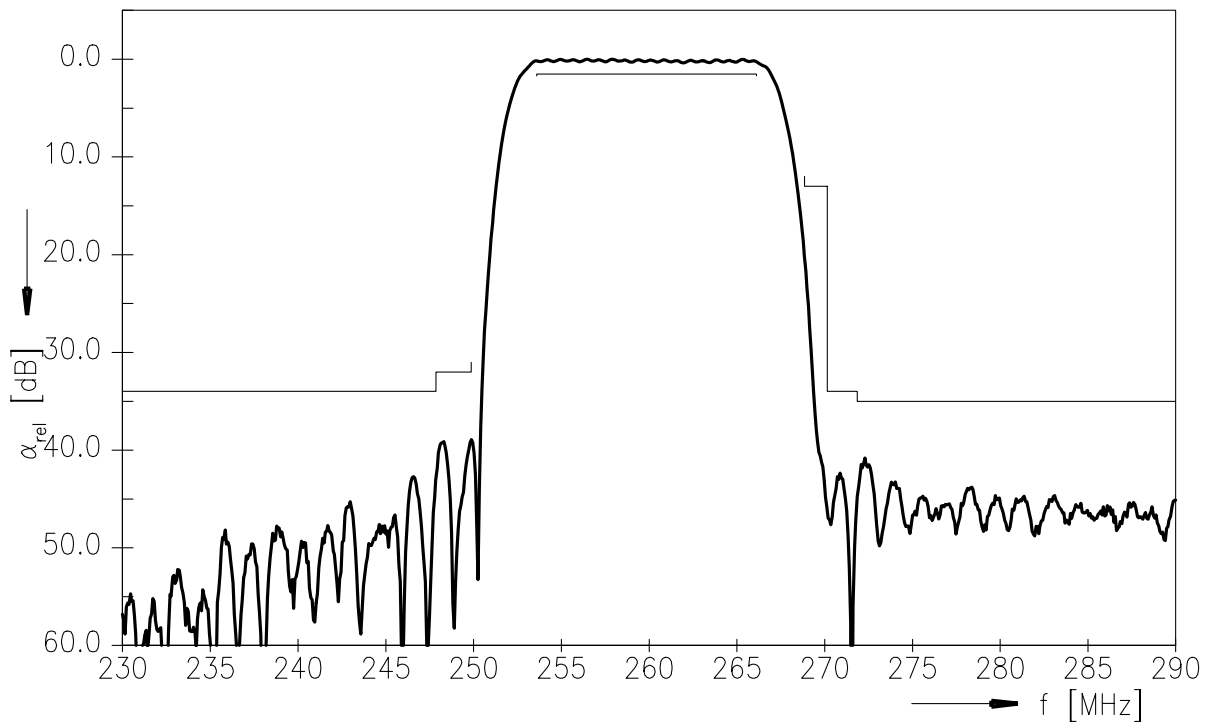
Maximum ratings

Operable temperature range	T	-40 / +85	°C	
Storage temperature range	T _{stg}	-40 / +85	°C	
DC voltage	V _{DC}	6	V	
Source power	P _S	0	dBm	

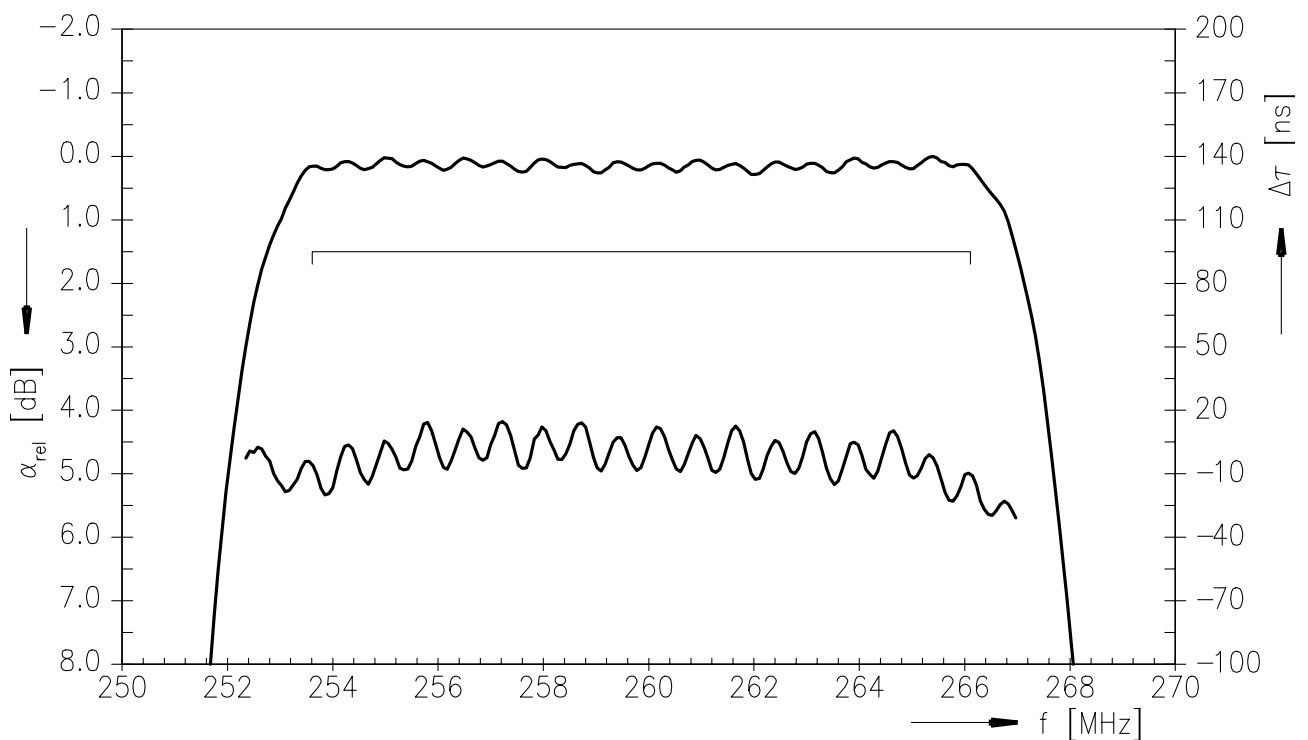
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Transfer function



Transfer function (passband)



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References

Type	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 8 th , 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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