SAW Components

SAW IF filter

Digital satellite radio

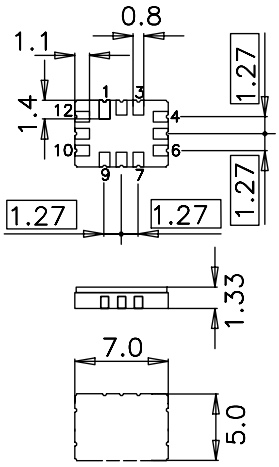
Series/type:	**B1726**
Ordering code:	**B39261B1726H810**
Date:	February 19, 2010
Version:	2.1

Application

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

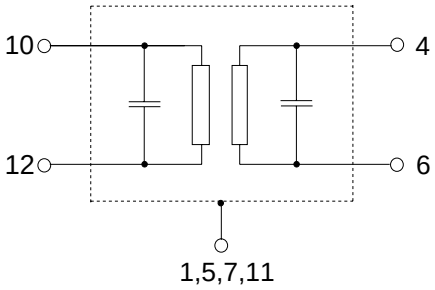
Features

- 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 **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- AEC-Q200 qualified component family
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)



Pin configuration

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



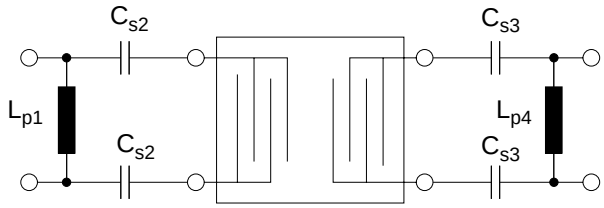
Data sheet SMD

Characteristics

Temperature range for specification: T = –40 ˚C ... 85 ˚C
Terminating source impedance: Z_S = 150 Ω and matching network
Terminating load impedance: Z_L = 150 Ω and matching network

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

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

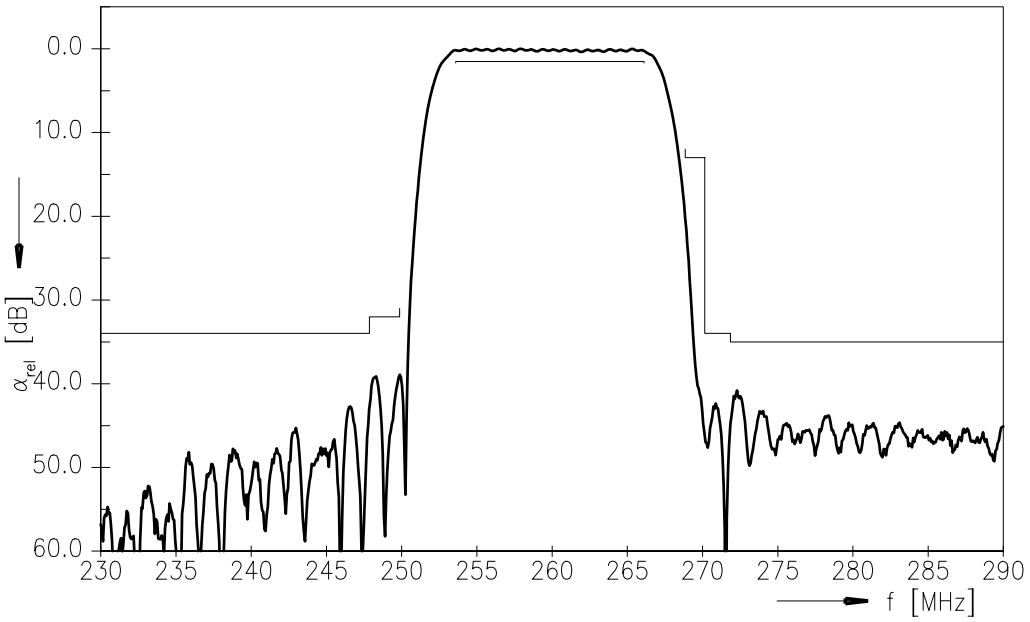


L_{p1} = 22 nH
C_{s2} = 120 pF
C_{s3} = 68 pF
L_{p4} = 22 nH

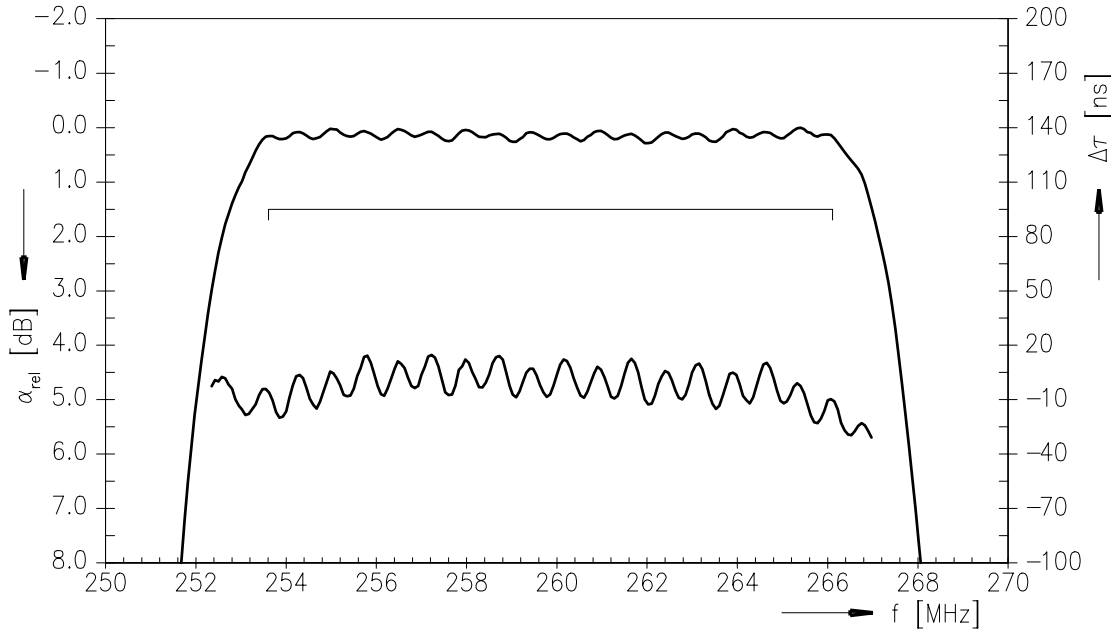
Maximum ratings

Operable temperature range	T	–40 / +85	˚C	
Storage temperature range	T_{stg}	–40 / +85	˚C	
DC voltage	V_{DC}	0	V	between any terminals
Source power	P_S	0	dBm	

Transfer function



Transger function (passband)



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
Soldering profile	S_6001
RoHS compatible	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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