

SAW Components

SAW IF filter for base stations LTE

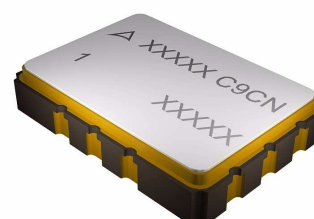
Series/type:	B5272
Ordering code:	B39231B5272H810
Date:	November 25, 2015
Version:	2.0

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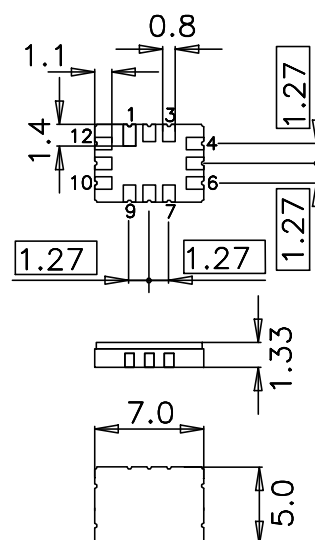
Application

- Low-loss IF filter for LTE base stations
- Usable passband 65 MHz
- Unbalanced or balanced operation possible



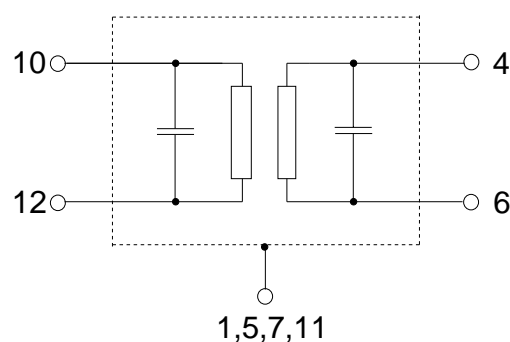
Features

- Package size 7.0 x 5.0 x 1.33 mm³
- Package code QCC12E
- RoHS compatible
- Approximate weight 0.25 g
- Ceramic Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- Filter surface passivated
- **Moisture Sensitivity Level 1**



Pin configuration

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

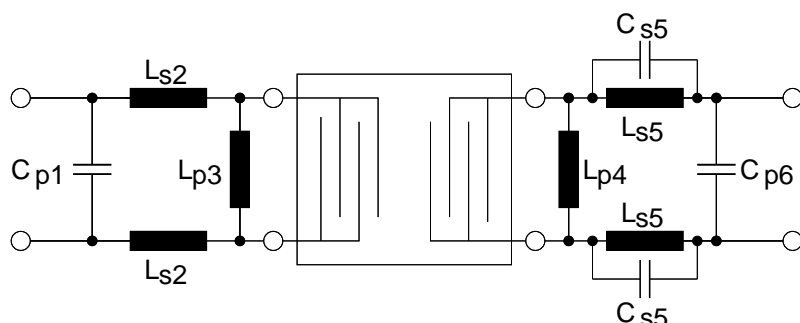


SAW Components
B5272
SAW IF filter
230.4 MHz
Data sheet

Characteristics

Temperature range for specification: $T = -40\text{ }^{\circ}\text{C to }+95\text{ }^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 200\text{ }\Omega$ balanced and matching network
 Terminating load impedance: $Z_L = 150\text{ }\Omega$ balanced and matching network

		B5272			
		min.	typ. @ 25 °C	max.	
Nominal frequency	f_N	—	230.4	—	MHz
Minimum insertion attenuation (including matching network)	α_{\min}	—	10.3	12.0	dB
Passband width	$\alpha_{\text{rel}} \leq 1.3\text{ dB}$ $B_{1.3\text{dB}}$	65	73	—	MHz
Amplitude ripple (p-p)	$\Delta\alpha$ $f_N \pm 32.5\text{ MHz}$	—	0.9	1.3	dB
Group delay ripple (p-p)	$\Delta\tau$ $f_N \pm 32.5\text{ MHz}$	—	55	90	ns
Absolute group delay (mean)	$\bar{\tau}$ $f_N \pm 32.5\text{ MHz}$	—	0.3	—	μs
Relative attenuation (relative to α_{\min})	α_{rel}				
10.0 MHz ... 110.0 MHz		40	55	—	dB
350.0 MHz ... 573.0 MHz		45	52	—	dB
573.0 MHz ... 612.0 MHz		38	40	—	dB
612.0 MHz ... 842.0 MHz		41	44	—	dB
842.0 MHz ... 1000.0 MHz		45	55	—	dB

Matching network to 200 Ω balanced input and 150 Ω balanced output


$$C_{p1} = 4.7 \text{ pF}$$

$$L_{s2} = 3.6 \text{ nH}$$

$$L_{p3} = 39.0 \text{ nH}$$

$$L_{p4} = 91.0 \text{ nH}$$

$$L_{s5} = 11.0 \text{ nH}$$

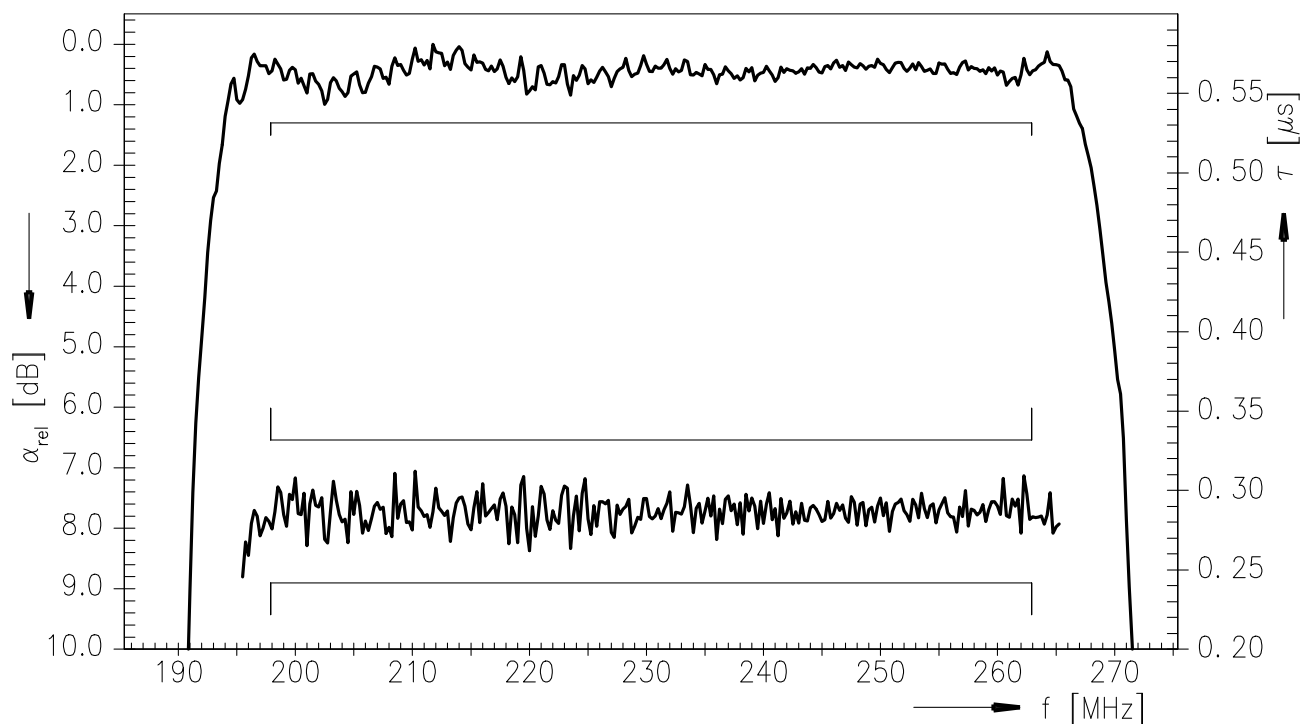
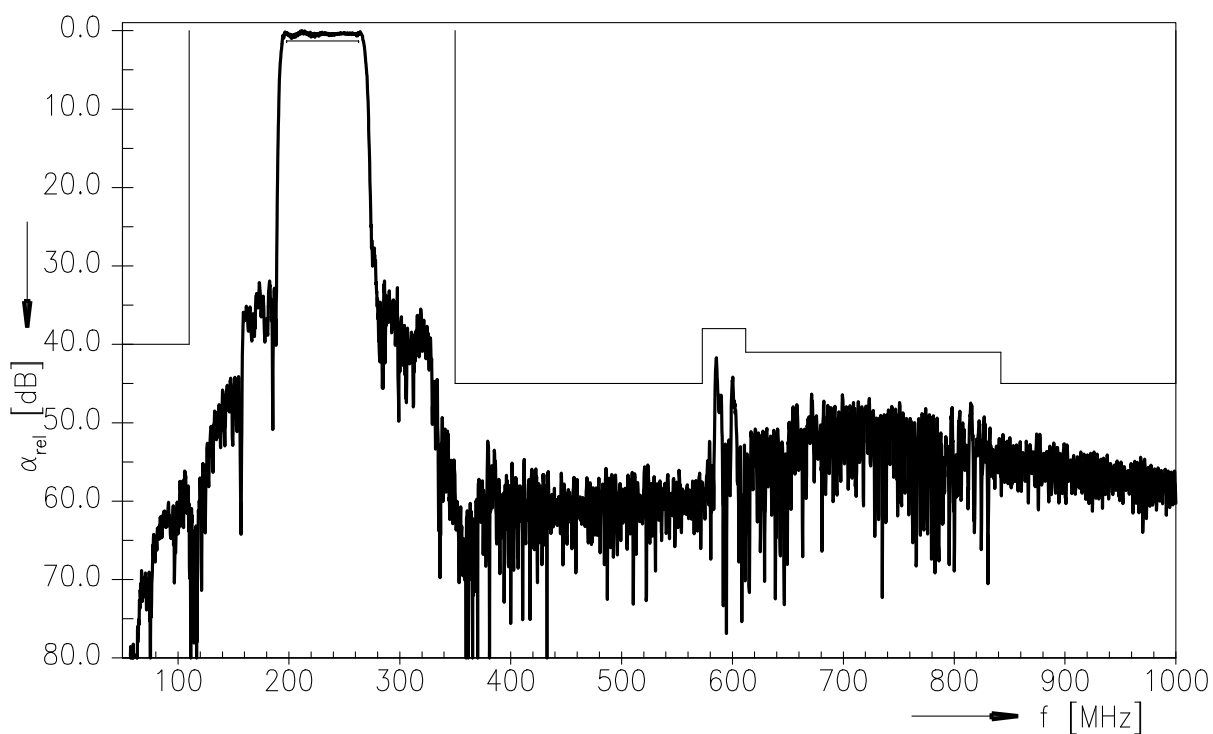
$$C_{s5} = 18.0 \text{ pF}$$

$$C_{p6} = 1.0 \text{ pF}$$

Element values depend upon board layout and properties.

Maximum ratings

Operable temperature range	T	-40/+95	°C	
Storage temperature range	T _{stg}	-40/+95	°C	
DC voltage	V _{DC}	0	V	
Input power (passband)	P _{IN}	10	dBm	

Transfer function (S21, narrowband, normalized)

Transfer function (S21, wideband, normalized)


References

Type	B5272
Ordering code	B39231B5272H810
Marking and package	C61157-A7-A103
Packaging	F61074-V8170-Z000
Date codes	L_1126
S-parameters	B5272_NB.s4p, B5272_WB.s4p, B5272_NB_UN.s4p, B5272_WB_UN.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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