

RF360 Europe GmbH

A Qualcomm – TDK Joint Venture

SAW Components

SAW IF filters for base stations

Series/type: B5262
Ordering code: B39181B5262H810
Date: January 07, 2014
Version: 2.0

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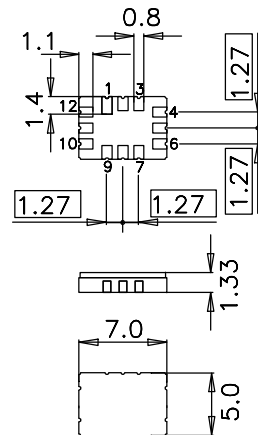
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Application

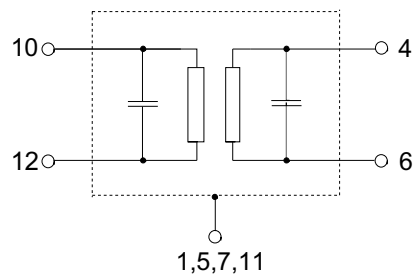
- Low-loss IF filter for base stations
- Usable passband 25 MHz
- Unbalanced or balanced operation possible


Features

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


Pin configuration

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



Data sheet

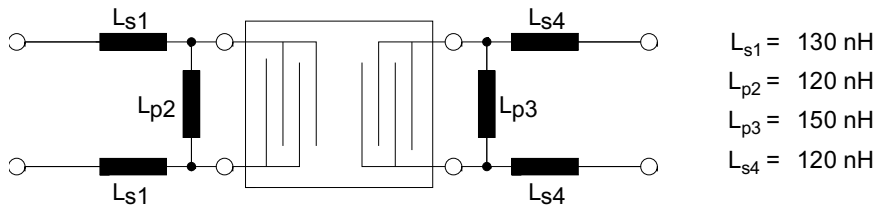
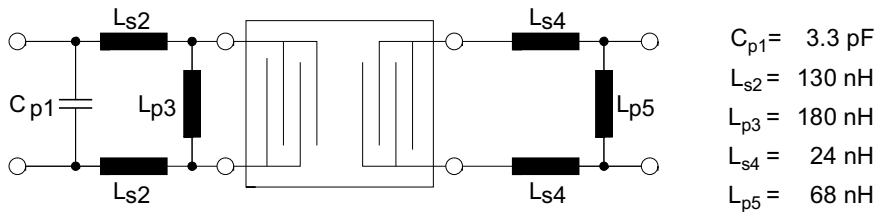
Characteristics

Temperature range for specification: $T = -40\text{ °C to }+85\text{ °C}$
 Terminating source impedance: $Z_S = 200\ \Omega$ balanced and matching network
 Terminating load impedance: $Z_L = 150\ \Omega$ balanced and matching network

		min.	typ. @ 25 °C	max.	
Nominal frequency	f_N	—	184.32	—	MHz
Minimum insertion attenuation (including matching network)	α_{\min}	—	8.2	9.5	dB
Passband width	$\alpha_{\text{rel}} \leq 1.0\text{ dB}$ $B_{1.0\text{ dB}}$	25	28	—	MHz
Amplitude ripple (p-p)	$\Delta\alpha$				
	$f_N \pm 12.50\text{ MHz}$	—	0.5	1.0	dB
	in any segment of 5 MHz in $f_N \pm 12.50\text{ MHz}$	—	0.3	0.8	dB
Average error vector magnitude¹⁾	EVM	—	1.8	2.5	%
Absolute group delay	τ				
	$f_N \pm 12.50\text{ MHz}$	—	0.5	0.55	μs
Group delay ripple (p-p)	$\Delta\tau$				
	$f_N \pm 12.50\text{ MHz}$	—	30	50	ns
Return loss (input / output)		7.5	14.5	—	dB
Relative attenuation (relative to α_{\min})	α_{rel}				
	10.00 ... 75.00 MHz	55	65	—	dB
	75.00 ... 151.82 MHz	40	55	—	dB
	151.82 ... 161.82 MHz	30	43	—	dB
	161.82 ... 166.82 MHz	10	32	—	dB
	201.82 ... 206.82 MHz	10	25	—	dB
	206.82 ... 216.82 MHz	30	37	—	dB
	216.82 ... 290.00 MHz	40	50	—	dB
	290.00 ... 330.00 MHz	50	64	—	dB
	330.00 ... 410.00 MHz	40	60	—	dB
	410.00 ... 1000.00 MHz	45	62	—	dB

¹⁾ EVM calculation based on root raised cosine filtered QPSK signal
 (f_{CRRRC} within 174.32 ... 194.32 MHz, $\text{bw}_{\text{RRC}} = 3.84\text{ MHz}$)

Data sheet


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

Alternative matching network to 200 Ω balanced input and 150 Ω balanced output


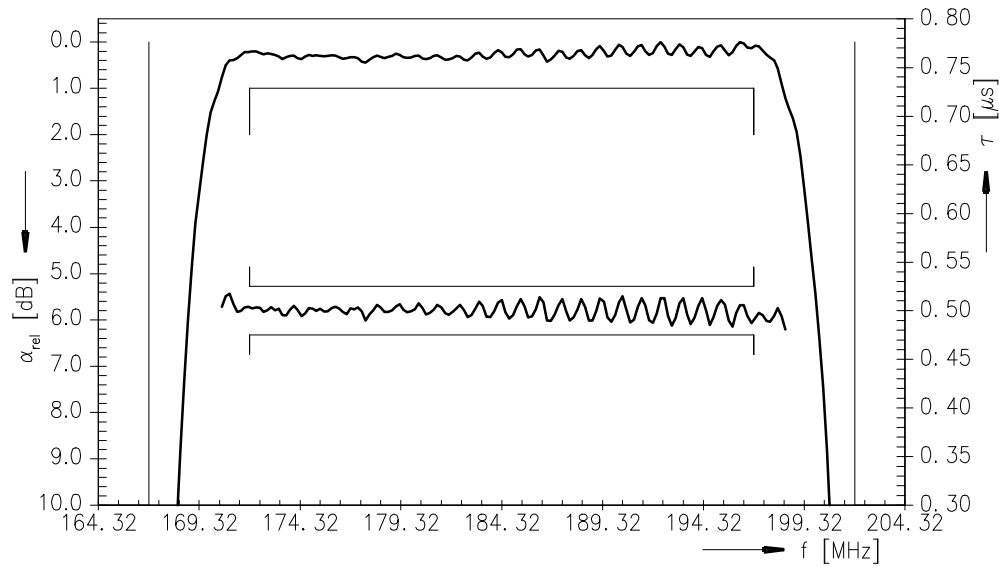
Element values depend upon board layout and properties.

Maximum ratings

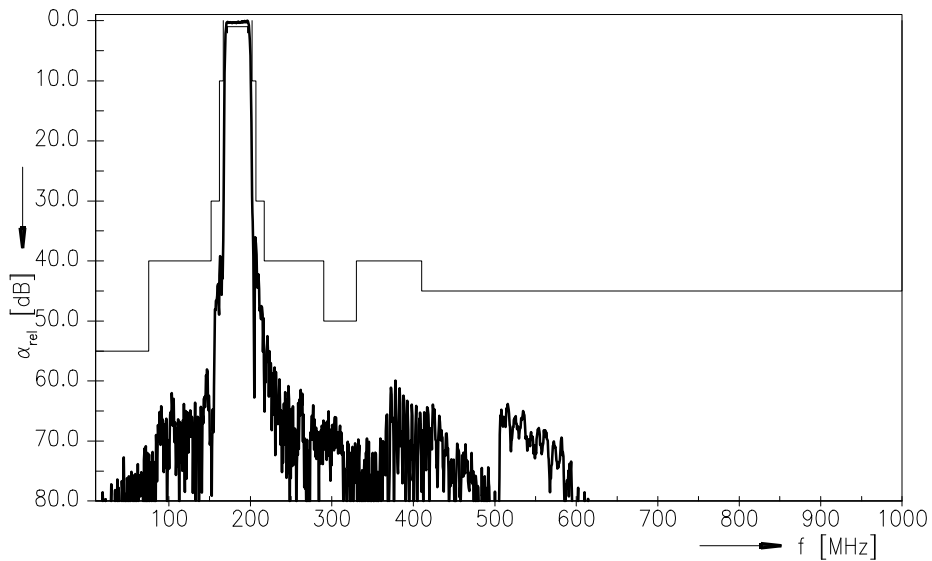
Operable temperature range	T	-40/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	0	V	
Input power	P _{IN}	10	dBm	
		171.82 ... 196.82 MHz		



Transfer function (S21, narrowband, normalized)



Transfer function (S21, wideband, normalized)



SAW Components	B5262
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SAW IF filter	184.32 MHz
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Data sheet



References

Type	B5262
Ordering code	B39181B5262H810
Marking and package	C61157-Z7-A103
Packaging	F61074-V8170-Z000
Date codes	L_1126
S-parameters	B5262_UN_NB.s4p, B5262_UN_WB.s4p, B5262_NB.s4p, B5262_WB.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

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