SAW Components

SAW Filter
WCDMA

Series/Type: **B5017**
Ordering code: **B39171-B5017-U310**

Date: Dec 09, 2005
Version: 1

SAW Components	B5017
Low-Loss Filter for WCDMA	**168.5 MHz**

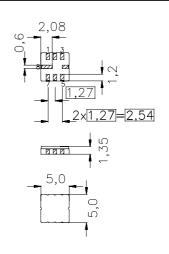**Data Sheet**   SMD

Application

■ Low-loss IF filter for UMTS base stations
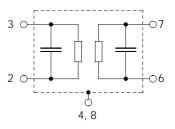■ 20 MHz usable bandwidth
■ Ceramic SMD package

Features

■ Package size 5.0 x 5.0 x 1.35 mm^3
■ Package code QCC8C
■ RoHS compatible
■ Approx. weight 0.1 g
■ Package for **S**urface **M**ount **T**echnology (**SMT**)
■ Ni, gold-plated terminals

Pin configuration

■ 3   Input
■ 2   Input ground
■ 7   Output
■ 6   Output ground
■ 4, 8   Case ground
■ 1, 5   To be grounded

Please read *cautions and warnings and important notes* at the end of this document.

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Characteristics

Operating temperature range: T = $-20\,°C\ ...+80\,°C$
Terminating source impedance: Z_S = $50\,\Omega$ and matching circuit
Terminating load impedance: Z_L = $50\,\Omega$ and matching circuit

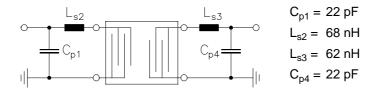|		min.	typ. @ 25 °C	max.	
Nominal frequency	f_N	—	168.5	—	MHz
Minimum insertion attenuation	α_{min}	—	8.3	9.5	dB
Pass bandwidth $\alpha_{rel} \leq 1.0$ dB	$B_{1.0dB}$	—	23	—	MHz
Amplitude ripple (p-p) $f_N \pm$ 10.0 MHz	$\Delta\alpha$	—	0.6	1.0	dB
Group delay ripple (p-p) $f_N \pm$ 10.0 MHz	$\Delta\tau$	—	40	80	ns
Mean value of absolute group delay $f_N \pm$ 10.0 MHz	$\bar{\tau}$	398	408	418	ns

Relative attenuation (relative to α_{min})
    1.0 ... 100.0 MHz
    100.0 ... 149.0 MHz
    190.0 ... 250.0 MHz
    250.0 ... 310.0 MHz
    310.0 ... 410.0 MHz
    410.0 ... 1000.0 MHz
	α_{rel}	
		40
		33
		33
		40
		50
		40
			
			50
			40
			36
			60
			60
			70
				
				—
				—
				—
				—
				—
				—
					
					dB
					dB
					dB
					dB
					dB
					dB

Temperature coefficient of frequency	TC_f	—	−87	—	ppm/K

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important notes* at the end of this document.

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Matching network to 50 Ω

C_{p1} = 22 pF

L_{s2} = 68 nH

L_{s3} = 62 nH

C_{p4} = 22 pF

Maximum ratings

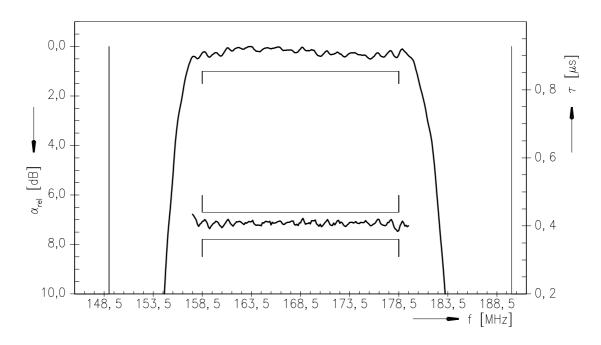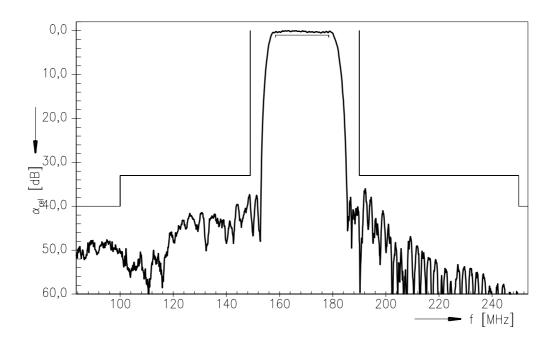|				
Operable temperature range	T	−40/+85	˚C	
Storage temperature range	T_{stg}	−40/+85	˚C	
DC voltage	V_{DC}	0	V	
ESD voltage	V_{ESD}	200[1]	V	machine model, 1 pulse
Input power	P_{IN}	5	dBm	
Input power	P_{IN}	20	dBm	for <= 100 hours

[1] acc. to J-STD22A-0115A (machine model. 1 pulse +/-).

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Transfer function

Transfer function (wideband)

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Type	B5017	
Ordering code	B39171-B5017-U310	
Marking and Package	C61157-A7-A56	
Packaging	F61074-V8169-Z000	
Date Codes	L_1126	
S-Parameters		
Soldering profile	S_6001	

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