



# SAW Components

Data Sheet B3855





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B3855

Low Loss Filter

169,00 MHz

Data Sheet

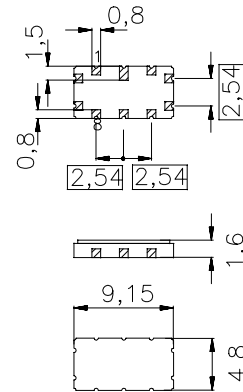
Ceramic package QCC10B

Features

- IF filter for WCDMA
- Low insertion loss
- Ceramic SMD package

Terminals

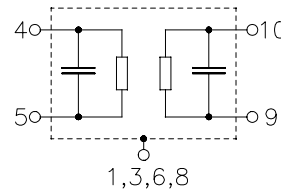
- Gold plated



Dimensions in mm, appr. weight 0,23 g

Pin configuration

- |            |                 |
|------------|-----------------|
| 9, 10      | Balanced Input  |
| 4, 5       | Balanced Output |
| 1, 3, 6, 8 | Case ground     |
| 2, 7       | To be grounded  |



Type	Ordering code	Marking and Package according to	Packing according to
B3855	B39171-B3855-Z710	C61157-A7-A49	F61074-V8172-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	$T_A$	-40 / +85	°C	
Storage temperature range	$T_{stg}$	-40 / +85	°C	
DC voltage	$V_{DC}$	0	V	
Source power	$P_s$	10	dBm	


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**B3855**
**Low Loss Filter**
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**Characteristics**

Operating temperature:

$T_A = -40 \dots +85 \text{ }^\circ\text{C}$

Terminating source impedance:

$Z_S = 200 \ \Omega \text{ and matching network}$

Terminating load impedance:

$Z_L = 200 \ \Omega \text{ and matching network}$

Group delay aperture:

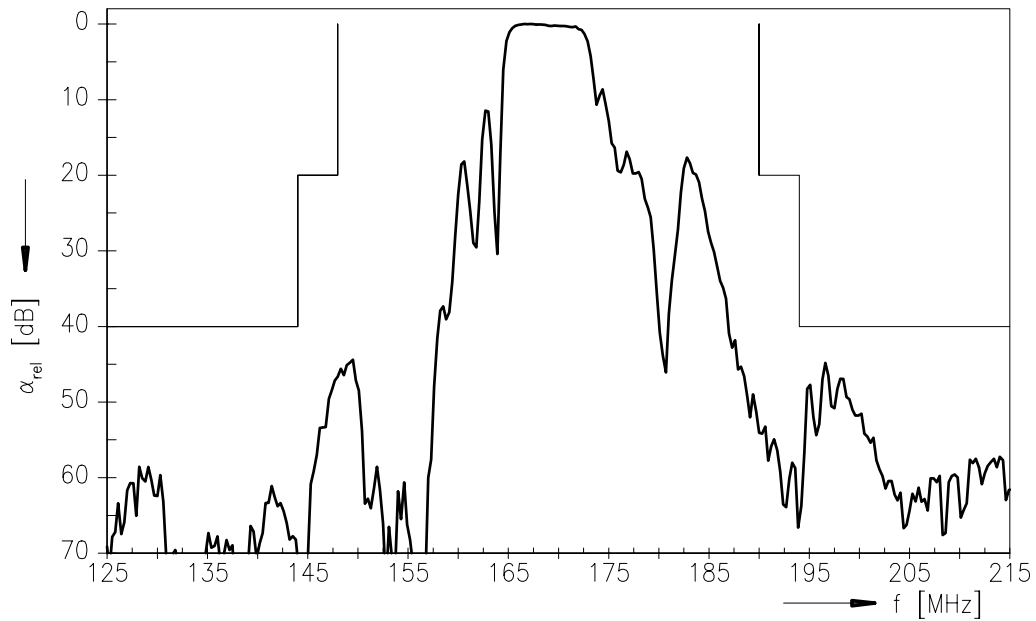
$150 \text{ kHz}$

		min.	typ.	max.	
<b>Nominal frequency</b>	$f_N$	—	169,00	—	MHz
<b>Minimum insertion attenuation</b> (including matching network)	$\alpha_{\min}$	1,5	2,0	3,5	dB
<b>Passband width</b>					
	$\alpha_{\text{rel}} \leq 1 \text{ dB}$	$B_{1\text{dB}}$	—	7,5	— MHz
<b>Amplitude ripple (p-p)</b>					
	$f_N \pm 2,0 \text{ MHz}$	$\Delta\alpha$	—	0,2	0,5 dB
<b>Group delay ripple (p-p)</b>					
	$f_N \pm 2,0 \text{ MHz}$	$\Delta\tau$	—	40	80 ns
<b>Absolute group delay</b> mean value within $f_N \pm 2,0 \text{ MHz}$		$\tau$	127	130	137 ns
<b>Relative attenuation (relative to <math>\alpha_{\min}</math>)</b>		$\alpha_{\text{rel}}$			
10 MHz ... 144 MHz			40	50	— dB
144 MHz ... 148 MHz			20	40	— dB
190 MHz ... 194 MHz			20	50	— dB
194 MHz ... 2,0 GHz			40	45	— dB
2,0 GHz ... 2,5 GHz			35	40	— dB
<b>VSWR</b>			—	2,0:1	2,5:1
<b>Impedance at <math>f_N</math> (without matching)</b>					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$			—	690 $\parallel$ 1,3	— $\Omega \parallel \text{pF}$
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$			—	580 $\parallel$ 1,1	— $\Omega \parallel \text{pF}$
<b>Temperature coefficient of frequency</b>		$TC_f$	—	-70	— ppm/K

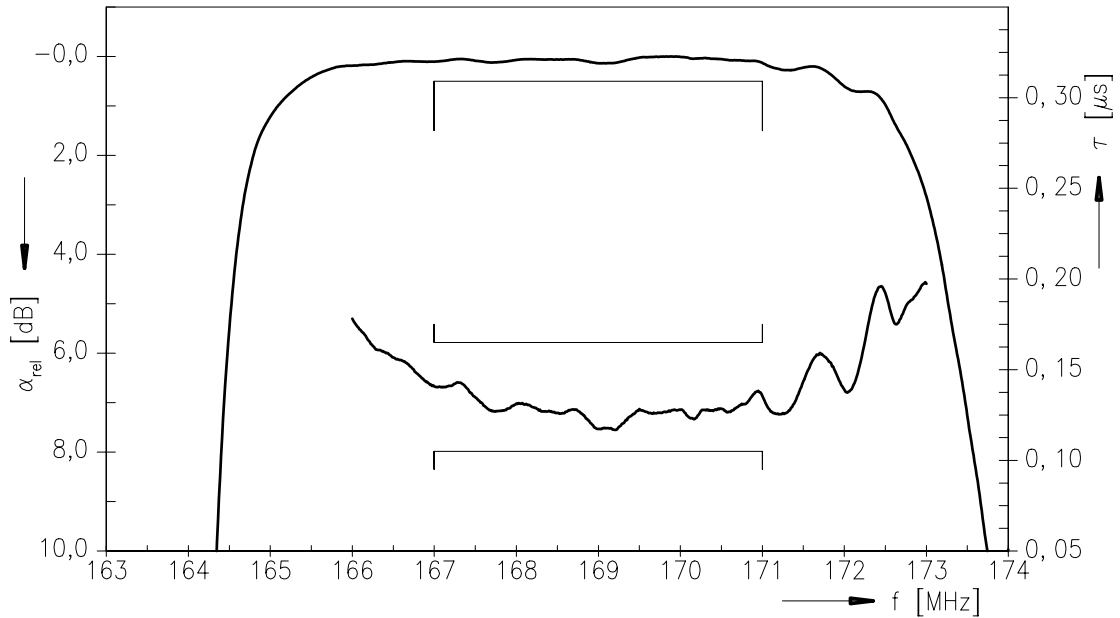


Data Sheet

Normalized frequency response

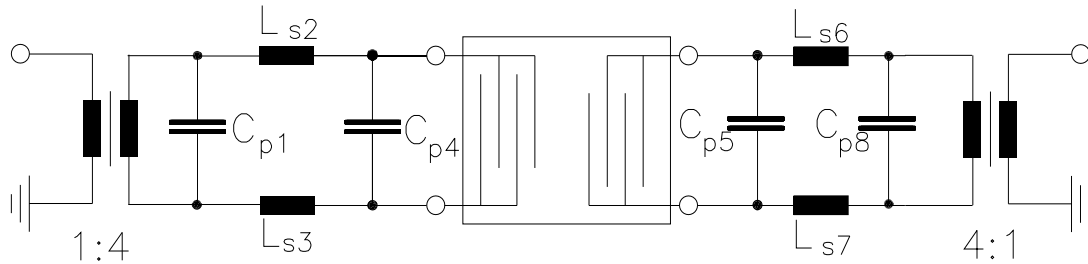


Normalized frequency response



**Data Sheet****Matching network**

(Element values depend upon PCB layout)



$$C_{p1}=3,9 \text{ pF}$$

$$L_{s2}=150 \text{ nH}$$

$$L_{s3}=150 \text{ nH}$$

$$C_{p4}=1,5 \text{ pF}$$

$$C_{p5}=1,0 \text{ pF}$$

$$L_{s6}=150 \text{ nH}$$

$$L_{s7}=180 \text{ nH}$$

$$C_{p8}=3,3 \text{ pF}$$

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