



SAW Components

Data Sheet B3855





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B3855

Low Loss Filter

169,00 MHz

Data Sheet

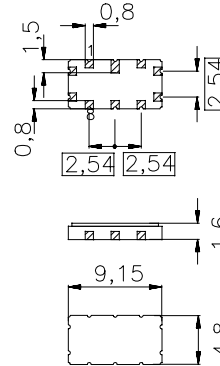
Ceramic package QCC10B

Features

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

Terminals

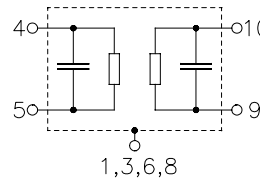
- Gold plated



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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Characteristics

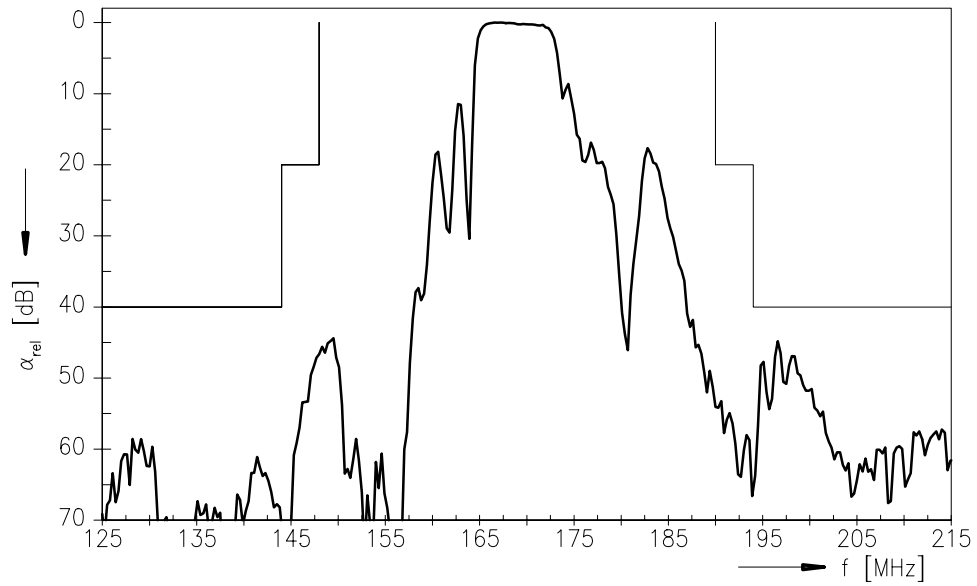
Operating temperature: $T_A = -40 \dots +85 \text{ }^\circ\text{C}$
 Terminating source impedance: $Z_S = 200 \text{ } \Omega$ and matching network
 Terminating load impedance: $Z_L = 200 \text{ } \Omega$ and matching network
 Group delay aperture: 150 kHz

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

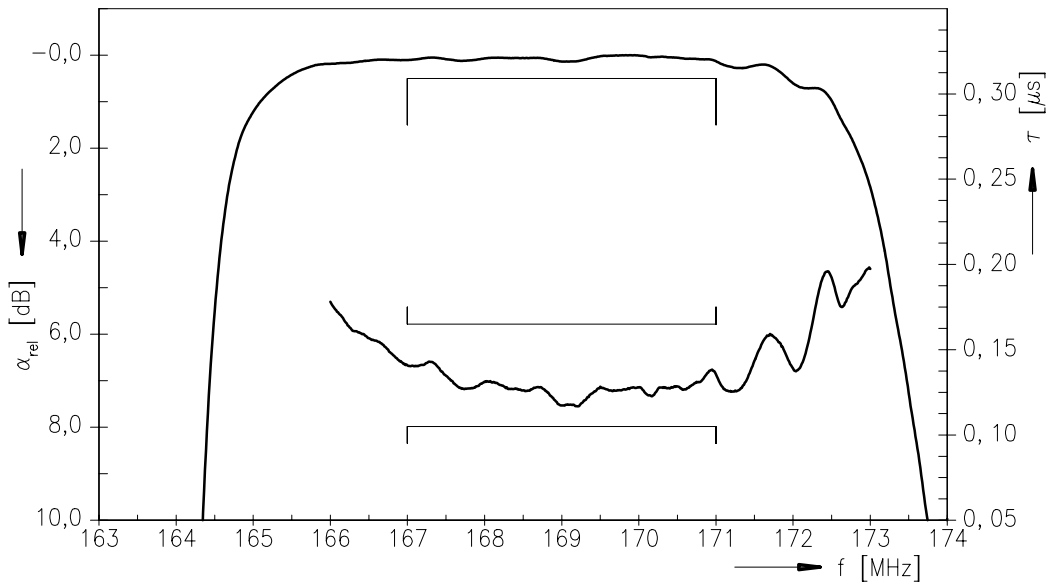


Data Sheet

Normalized frequency response



Normalized frequency response

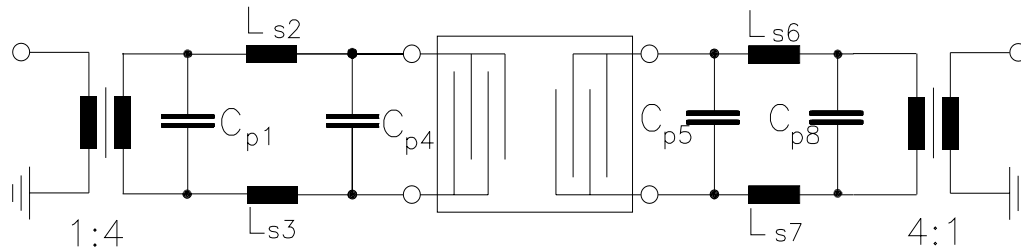




Data Sheet

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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