SAW filters for infrastructure systems

Series/Type: B3883

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39171B3883Z710		2012-01-13	2012-12-31	2013-03-30

For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at www.epcos.com/sales.

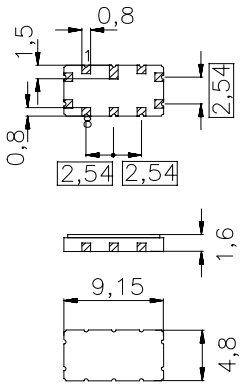
Ceramic package **QCC10B**

Features

- Low-loss IF filter
- Multichannel CDMA2000 & W-CDMA capable
- Balanced operation possible
- Hermetically sealed ceramic SMD package

Terminals

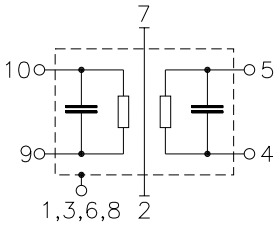
- Gold plated



Dimensions in mm, approx. weight 0,23 g

Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
B3883	B39171-B3883-Z710	C61157-A7-A49	F61074-V8172-Z000

Electrostatic **S**ensitive **D**evice (**ESD**)

Maximum ratings

Operable temperature range	T	-40/ +85	˚C	
Storage temperature range	T_{stg}	-40/ +85	˚C	
DC voltage	V_{DC}	5	V	
Source power	P_s	10	dBm	

Characteristics

Operating temperature: T = 0 .. +85 °C

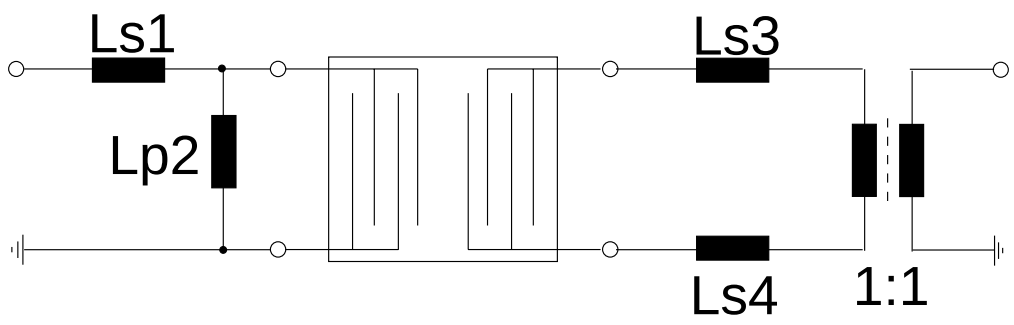
Terminating source impedance: Z_S=50 Ω single ended and matching network.

Terminating load impedance: Z_S=75 Ω balanced and matching network.

		min.	typ.	max.	
Nominal frequency	f_N	—	168,96	—	MHz
Minimum insertion attenuation (including matching network)	α_{min}	—	8,0	9,5	dB
Passband width					
$\alpha_{rel} \leq 1$ dB	B_{1dB}	—	14,5	—	MHz
$\alpha_{rel} \leq 5$ dB	B_{5dB}	—	18,5	—	MHz
$\alpha_{rel} \leq 30$ dB	B_{30dB}	—	19,5	—	MHz
Amplitude ripple (p-p)	$\Delta\alpha$				
$f_N \pm 6{,}95$ MHz		—	1,5	2,0	dB
Group delay ripple (p-p)	$\Delta\tau$				
$f_N \pm 6{,}95$ MHz		—	70	100	ns
Phase Linearity[1] (rms)	$\Delta\varphi$				
$f_N - 5{,}0$ MHz $\pm 1{,}92$ MHz		—	1,2	2,0	°
$f_N \pm 1{,}92$ MHz		—	1,6	2,0	°
$f_N + 5{,}0$ MHz $\pm 1{,}92$ MHz		—	1,0	2,0	°
$f_N + k*1{,}25$ MHz $\pm 0{,}6144$ MHz		—	1,3	2,0	°
Average Error Vector Magnitude	*EVM*				
$f_N - 5{,}0$ MHz $\pm 1{,}92$ MHz		—	3,0	4,0	%
$f_N \pm 1{,}92$ MHz		—	3,8	4,5	%
$f_N + 5{,}0$ MHz $\pm 1{,}92$ MHz		—	3,2	4,0	%
$f_N + k*1{,}25$ MHz $\pm 0{,}6144$ MHz		—	3,3	4,0	%
Relative attenuation (relative to α_{min})	α_{rel}				
$f_N - 17{,}5$ MHz ... $f_N - 66{,}0$ MHz		40	43	—	dB
$f_N + 17{,}5$ MHz ... $f_N + 19{,}5$ MHz		39	42	—	dB
$f_N + 19{,}5$ MHz ... $f_N + 23{,}5$ MHz		33	43	—	dB
$f_N + 23{,}5$ MHz ... $f_N + 66{,}0$ MHz		40	44	—	dB
Temperature coefficient of frequency	TC_f	—	-87	—	ppm/K

[1] Phase Linearity: where k = (-5, -4 .... +5)

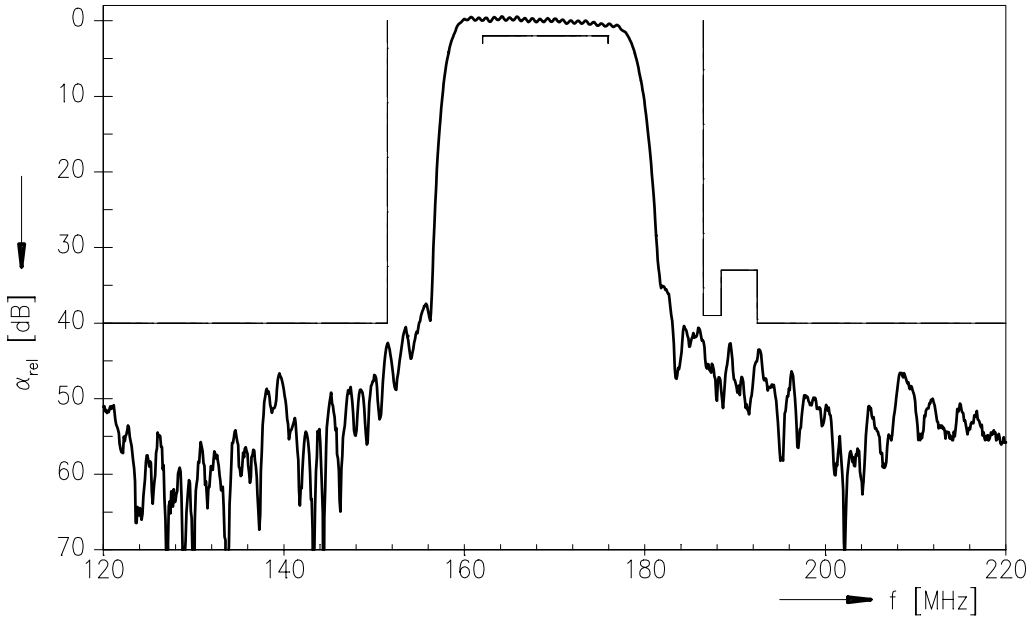
Matching network (Element values depend upon PCB layout):



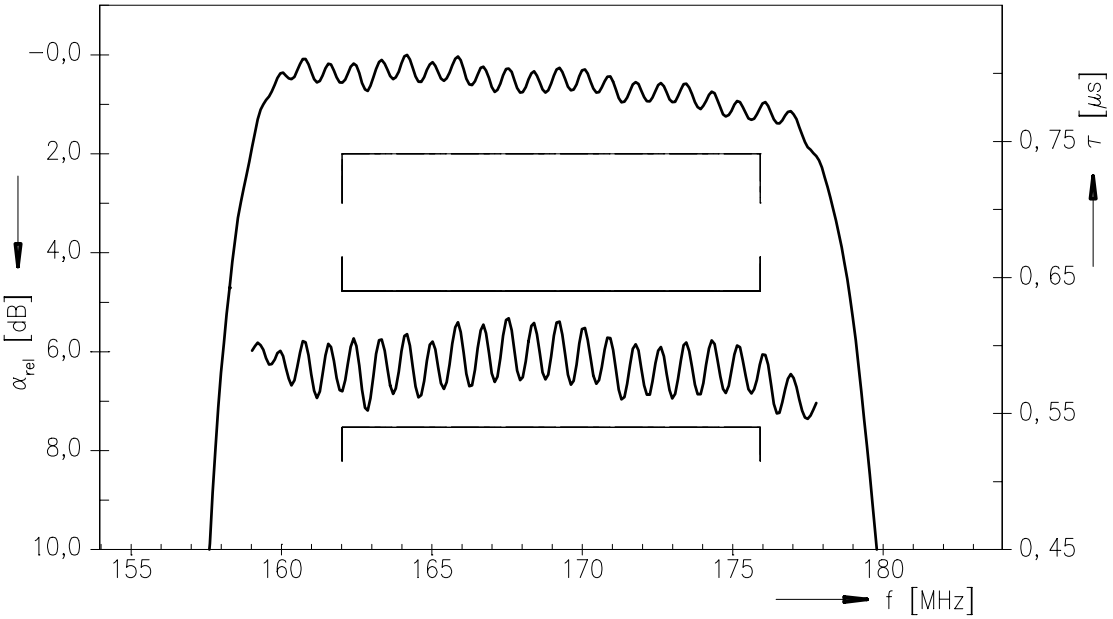
Ls1 = 180 nH
Lp2 = 390 nH

Ls3 = 82 nH
Ls4 = 82 nH

Normalized frequency response



Normalized frequency response (pass band)



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