



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The following products presented in this data sheet are being withdrawn.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

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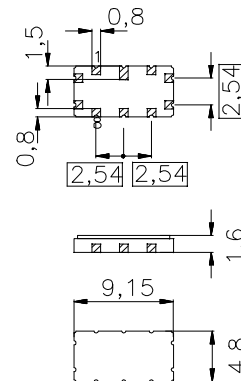
**Data Sheet**

 Ceramic package **QCC10B**
**Features**

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

**Terminals**

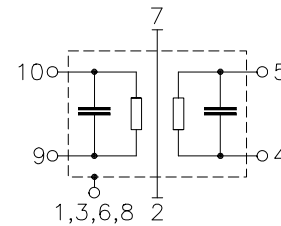
- Gold plated



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 Sensitive Device (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

**Data Sheet**
**Characteristics**

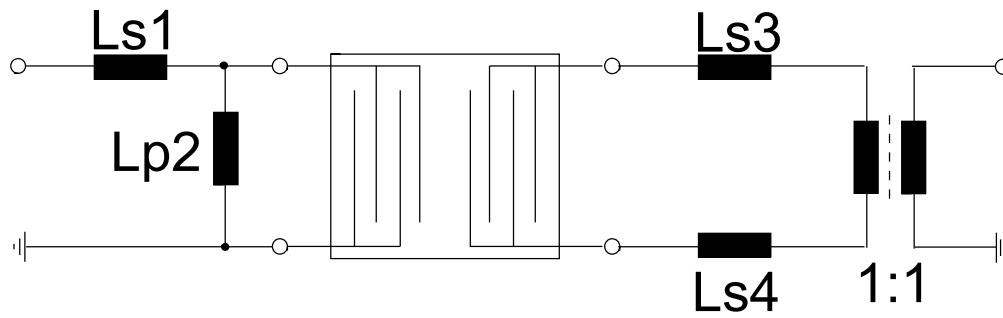
Operating temperature:	$T = 0 \dots +85 \text{ }^\circ\text{C}$
Terminating source impedance:	$Z_S = 50 \text{ } \Omega$ single ended and matching network.
Terminating load impedance:	$Z_S = 75 \text{ } \Omega$ balanced and matching network.

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

<sup>1)</sup> Phase Linearity: where k = (-5, -4 .... +5)

Data Sheet

Matching network (Element values depend upon PCB layout):

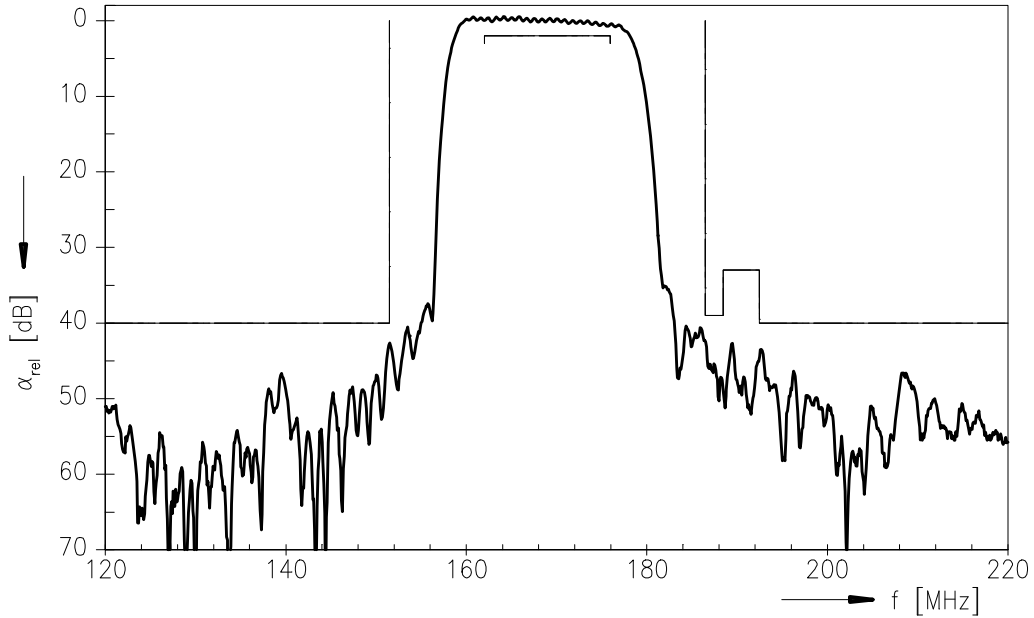


Ls1 = 180 nH  
Lp2 = 390 nH

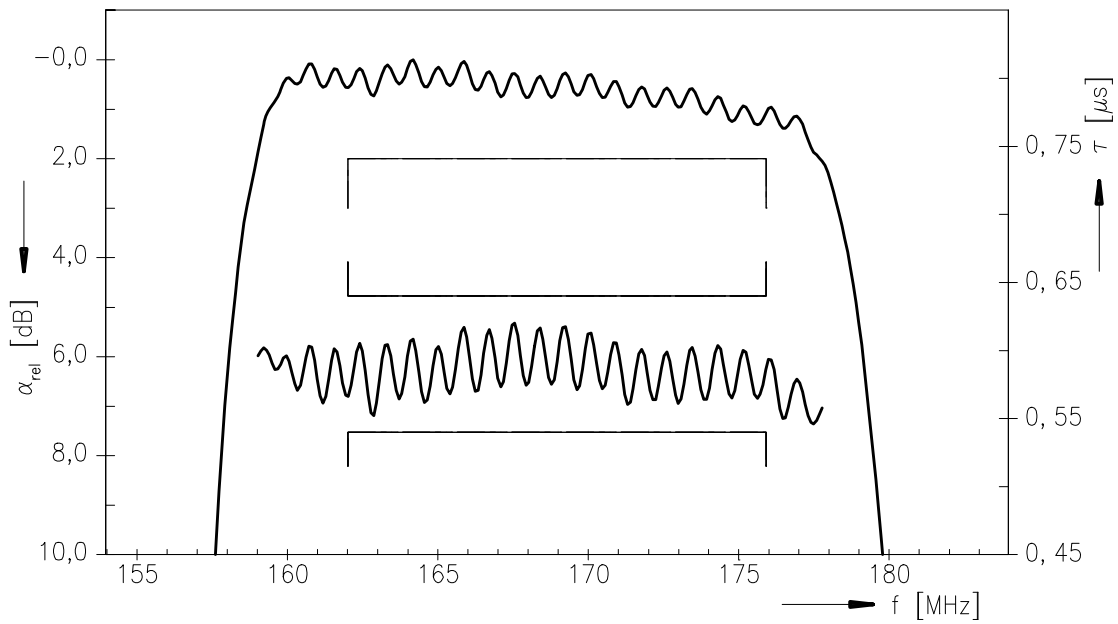
Ls3 = 82 nH  
Ls4 = 82 nH

Data Sheet

Normalized frequency response



Normalized frequency response (pass band)



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