



SAW filters for infrastructure systems

Series/Type: **B5050**

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39880B5050H810		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.



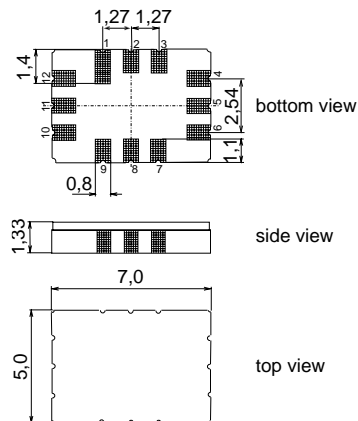
Application

- Low-loss IF filter for cdma2000 base station
- Unbalanced or balanced operation possible
- Usable passband 3.78 MHz



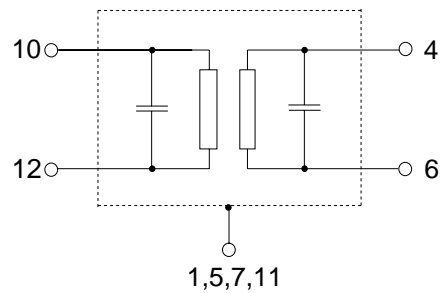
Features

- Package size 7.0 x 5.0 x 1.33 mm³
- Package code QCC12E
- RoHS compatible
- Approx. weight 0.2 g
- Ceramic package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- Filter surface passivated



Pin configuration

- 10 Input
- 12 Input ground
- 4 Output
- 6 Output ground
- 2, 3, 8, 9 To be grounded
- 1, 5, 7, 11 Case ground





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SAW IF filter

88.5 MHz

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Characteristics

Operating temperature range: $T = -10$ to $+85$ °C
 Terminating source impedance: $Z_S = 50 \Omega$ and matching network
 Terminating load impedance: $Z_L = 50 \Omega$ and matching network

		min.	typ. @ 25 °C	max.	
Nominal frequency	f_N	—	88.5	—	MHz
Minimum insertion attenuation (including matching network)	α_{min}	—	7.4	9.0	dB
Passband width $\alpha_{rel} \leq 1$ dB	$B_{1.0dB}$	3.78	5.2	—	MHz
Amplitude ripple (p-p) $f_N \pm 1.89$ MHz	$\Delta\alpha$	—	0.4	1.0	dB
Deviation from linear phase (p-p) $f_N \pm 1.89$ MHz	$\Delta\varphi$	—	3	6	°
Deviation from linear phase (rms) $f_N \pm 1.89$ MHz	$\Delta\varphi$	—	0.6	1.2	°
Relative attenuation (relative to α_{min}) $f_N \pm 15.5$... $f_N \pm 50.0$ MHz	α_{rel}	50	60	—	dB
Return loss					
Input	$f_N \pm 1.89$ MHz	10	13	—	dB
Output	$f_N \pm 1.89$ MHz	10	15	—	dB
Temperature coefficient of frequency	TC_f	—	-87	—	ppm/K



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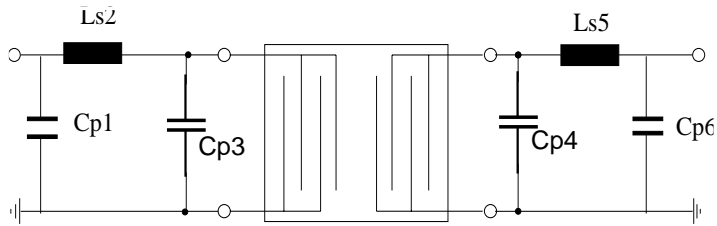
SAW IF filter

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Matching network to 50 Ω



- $C_{p1} = 56 \text{ pF}$
- $L_{s2} = 121 \text{ nH}$
- $C_{p3} = 18 \text{ pF}$
- $C_{p4} = 6.8 \text{ pF}$
- $L_{s5} = 82 \text{ nH}$
- $C_{p6} = 68 \text{ pF}$

Maximum ratings

Operable temperature range	T	-40/+85	°C	machine model, 1 pulse
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	0	V	
ESD voltage	V _{ESD}	200 ¹⁾	V	
Input power	P _{IN}	10	dBm	

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



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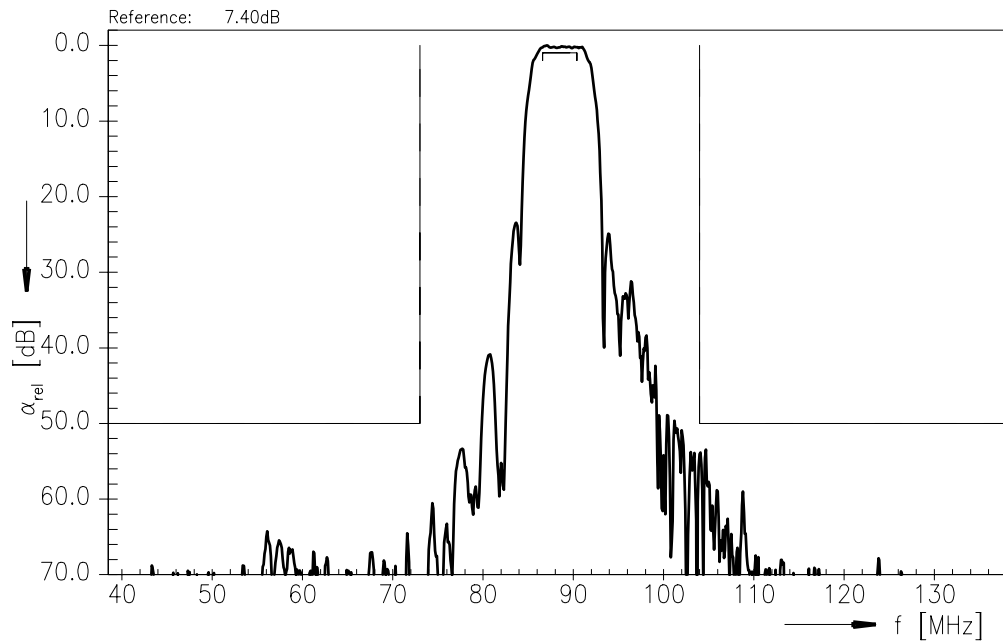
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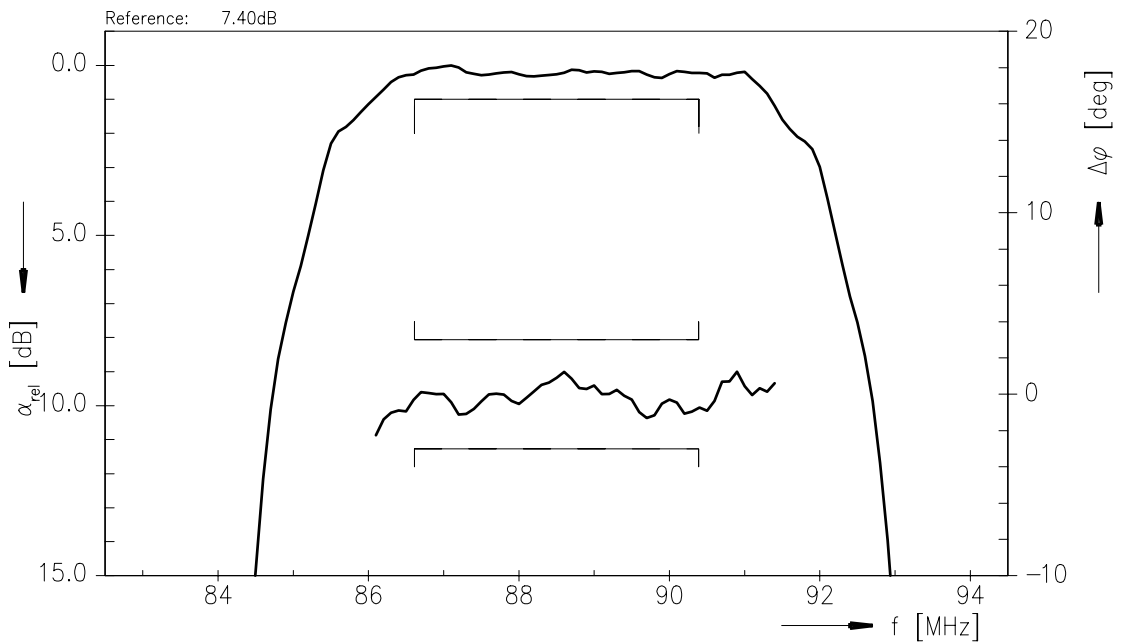
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Transfer function



Transfer function (passband)



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



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SAW IF filter

88.5 MHz

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References

Type	B5050
Ordering code	B39880-B5050-H810
Marking and package	C61157-A7-A103
Packaging	F61074-V8170-Z000
Date codes	L_1126
S-parameters	
Soldering profile	S_6001
RoHS compatible	defined as compatible with the following documents: "DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment. 2005/618/EC from April 18th, 2005, amending Directive 2002/95/EC of the European Parliament and of the Council for the purposes of establishing the maximum concentration values for certain hazardous substances in electrical and electronic equipment."

For further information please contact your local EPCOS sales office or visit our webpage at www.epcos.com .

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



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