

SAW filters for infrastructure systems

Series/Type: B5045

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39201B5045H510		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.

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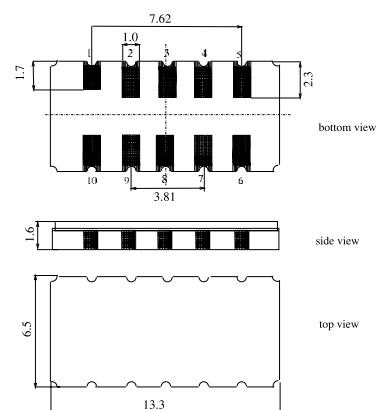
Application

- Low-loss IF filter for GSM / EDGE base station
- Usable passband 220 kHz
- Temperature stable
- Balanced or unbalanced operation possible



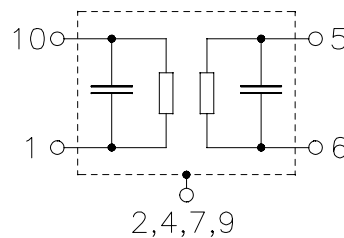
Features

- Package size 13.3 x 6.5 x 1.6 mm³
- Package code DCC12A
- RoHS compatible
- Approx. weight 0.4 g
- Ceramic package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- Filter surface passivated



Pin configuration

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



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Characteristics

Operating temperature range:

 $T = 0 \text{ to } 70 \text{ }^{\circ}\text{C}$

Terminating source impedance:

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

Terminating load impedance:

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

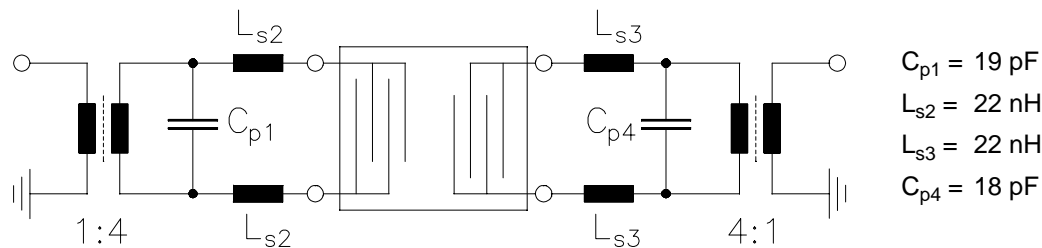
		min.	typ. @ 25 °C	max.	
Nominal frequency	f_N	—	201.0	—	MHz
Minimum insertion attenuation (including matching network)	α_{\min}	—	4.4	5.5	dB
Passband width $\alpha_{\text{rel}} \leq 1 \text{ dB}$	$B_{1.0\text{dB}}$	—	290	—	kHz
Amplitude ripple (p-p) $f_N \pm 110 \text{ kHz}$	$\Delta\alpha$	—	0.6	1.0	dB
Group delay ripple (p-p) $f_N \pm 110 \text{ kHz}$	$\Delta\tau$	—	1.0	1.5	μs
Absolute group delay at f_N	τ	1.7	1.95	2.2	μs
Relative attenuation (relative to α_{\min})	α_{rel}				
$f_N \pm 300 \text{ kHz} \quad \dots \quad f_N \pm 400 \text{ kHz}$		16	25	—	dB
$f_N \pm 400 \text{ kHz} \quad \dots \quad f_N \pm 600 \text{ kHz}$		27	30	—	dB
$f_N \pm 600 \text{ kHz} \quad \dots \quad f_N \pm 800 \text{ kHz}$		28	35	—	dB
$f_N \pm 800 \text{ kHz} \quad \dots \quad f_N \pm 35 \text{ MHz}$		38	45	—	dB
Impulse response attenuation (relative to max.)					
> 3 μs after main lobe		10	12	—	dB
> 30 μs after main lobe		50	60	—	dB
IM3 level (Input level -17 dBm)					
$f_N \pm 800 \text{ kHz}$		—	—	-110	dB
$f_N \pm 1600 \text{ kHz}$		—	—	-110	dB
Temperature coefficient of frequency¹⁾	TC_f	—	-0.036	—	ppm/K ²
Turnover temperature	T_0	—	35	—	$^{\circ}\text{C}$

¹⁾ Temperature dependance of f_c : $f_c(T_A) = f_c(T_0) (1 + TC_f(T_A - T_0)^2)$

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Matching network to 200 Ω balanced

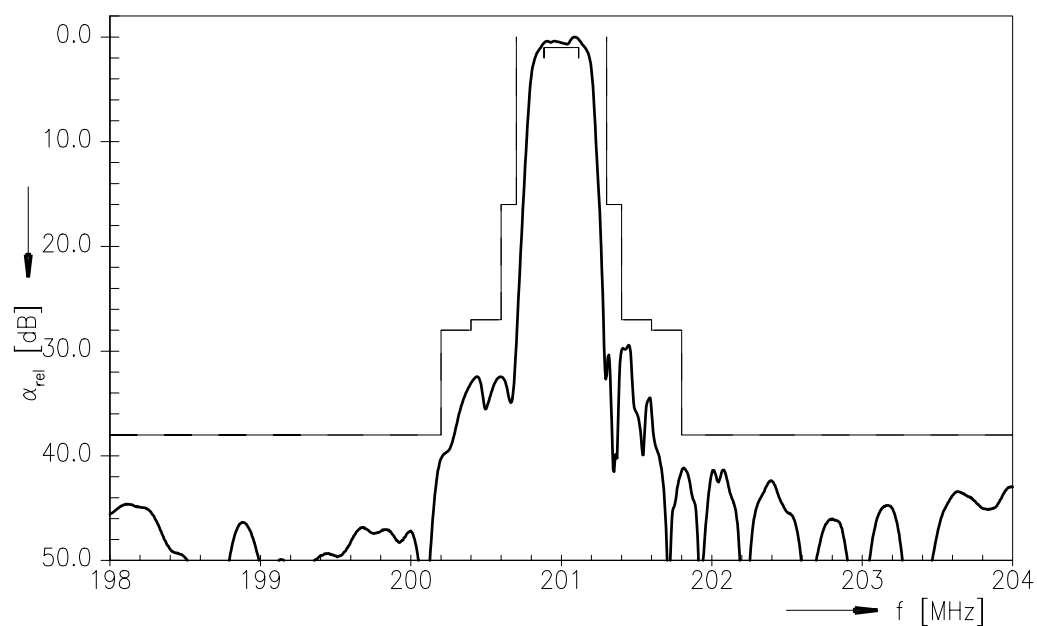


Transformers are only required for measurement in a 50 Ω environment.
 Element values depend upon PCB layout and properties.

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 +/-).

Transfer function

Transfer function (passband)


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References

Type	B5045
Ordering code	B39201-B5045-H510
Marking and package	C61157-A7-A94
Packaging	F61074-V8163-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 .

**Published by EPCOS AG
Surface Acoustic Wave Components Division
P.O. Box 80 17 09, 81617 Munich, GERMANY**

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6 January 12, 2009

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