



SAW Components

Data Sheet B5015

Data Sheet

An abstract, grayscale graphic featuring a globe with a grid pattern. Overlaid on the globe is a large, stylized, 3D-looking "EPCOS" logo in a light gray color. The logo is tilted and appears to be floating or emerging from the globe. The background is dark and textured.



SAW Components

B5015

Low-Loss Filter

70,0 MHz

Data Sheet

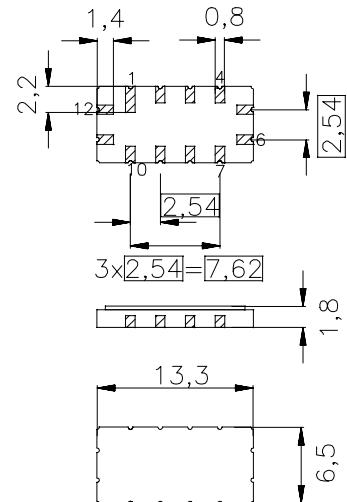
Features

- IF low-loss filter for CDMA base station
- Usable bandwidth 10 MHz
- Balanced or unbalanced operation possible
- Ceramic SMD package

Terminals

- Gold plated

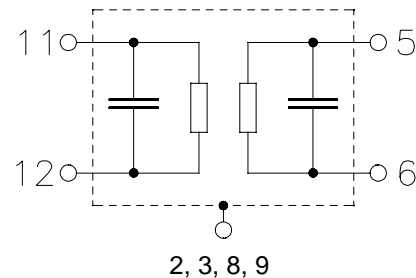
Ceramic package QCC12



Dimensions in mm, appr. weight 0,44 g

Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
B5015	B39700 - B5015 - Z510	C61157-A7-A55	F61074-V8163-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}	0	V
Source power	P_s	10	dBm



SAW Components	B5015
Low-Loss Filter	70,0 MHz

Data Sheet

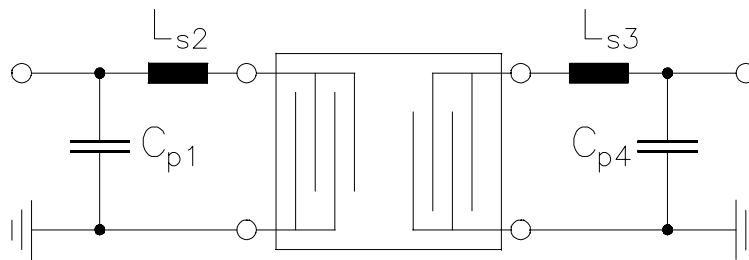
Characteristics

Operating temperature range:	$T = -10 \dots 75 \text{ }^{\circ}\text{C}$
Terminating source impedance:	$Z_S = 50 \text{ } \Omega$ and matching network
Terminating load impedance:	$Z_L = 50 \text{ } \Omega$ and matching network

			min.	typ.	max.	
Nominal frequency	f_N		—	70,0	—	MHz
Minimum insertion attenuation	α_{\min}		—	11,1	12,5	dB
Passband width	$\alpha_{\text{rel}} \leq 1,2 \text{ dB}$	$B_{1,2\text{dB}}$	11,45	11,6	—	MHz
Passband width	$\alpha_{\text{rel}} \leq 3 \text{ dB}$	$B_{3\text{dB}}$	12,0	12,7	—	MHz
Bandwidth	$\alpha_{\text{rel}} \leq 40 \text{ dB}$	$B_{40\text{dB}}$	—	16,9	18,25	MHz
Amplitude ripple (p-p)	$f_N \pm 5 \text{ MHz}$	$\Delta\alpha$	—	0,5	1,0	dB
Absolute group delay (at f_N)		τ	—	0,95	—	μs
Group delay ripple	$f_N \pm 5 \text{ MHz}$	$\Delta\tau$	—	70	—	ns
Phase ripple (p-p)	$f_N \pm 5 \text{ MHz}$	$\Delta\phi$	—	5	11,5	$^{\circ}$
Phase ripple (rms)	$f_N \pm 5 \text{ MHz}$	$\Delta\phi$	—	0,8	—	$^{\circ} \text{ rms}$
Relative attenuation (relative to α_{\min})		α_{rel}				
$f_N \pm 9,2 \text{ MHz} \dots f_N \pm 20 \text{ MHz}$			40	43	—	dB
Temperature coefficient of frequency	TC_f		—	- 87	—	ppm/K

**SAW Components****B5015****Low-Loss Filter****70,0 MHz****Data Sheet****Matching network to 50Ω**

(Element values depend upon PCB layout)



$$C_{p1} = 68 \text{ pF} \quad L_{s2} = 130 \text{ nH}$$

$$L_{s3} = 160 \text{ nH} \quad C_{p4} = 33 \text{ pF}$$



SAW Components

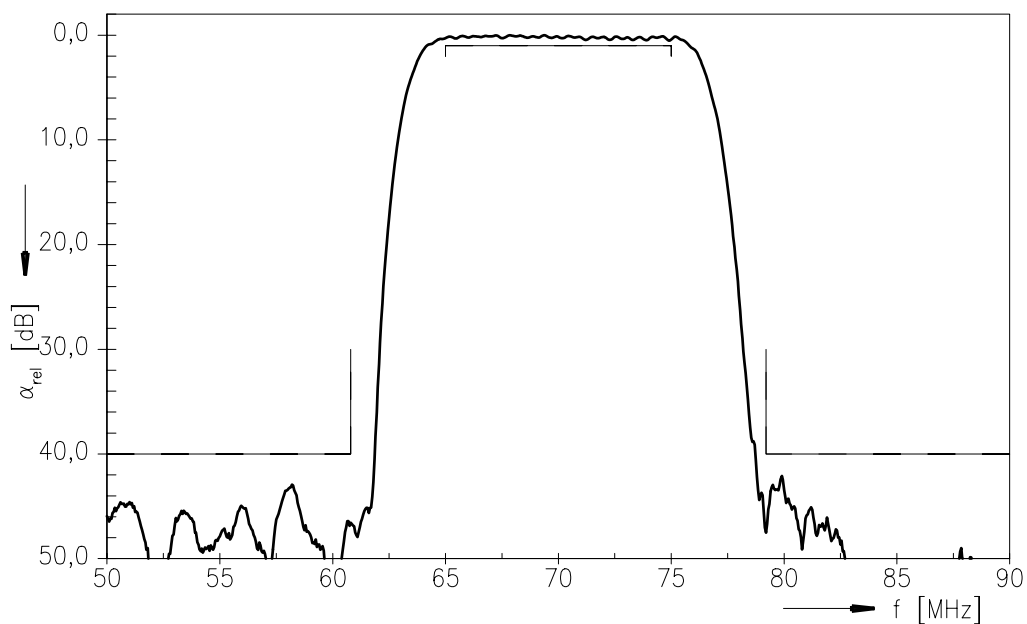
B5015

Low-Loss Filter

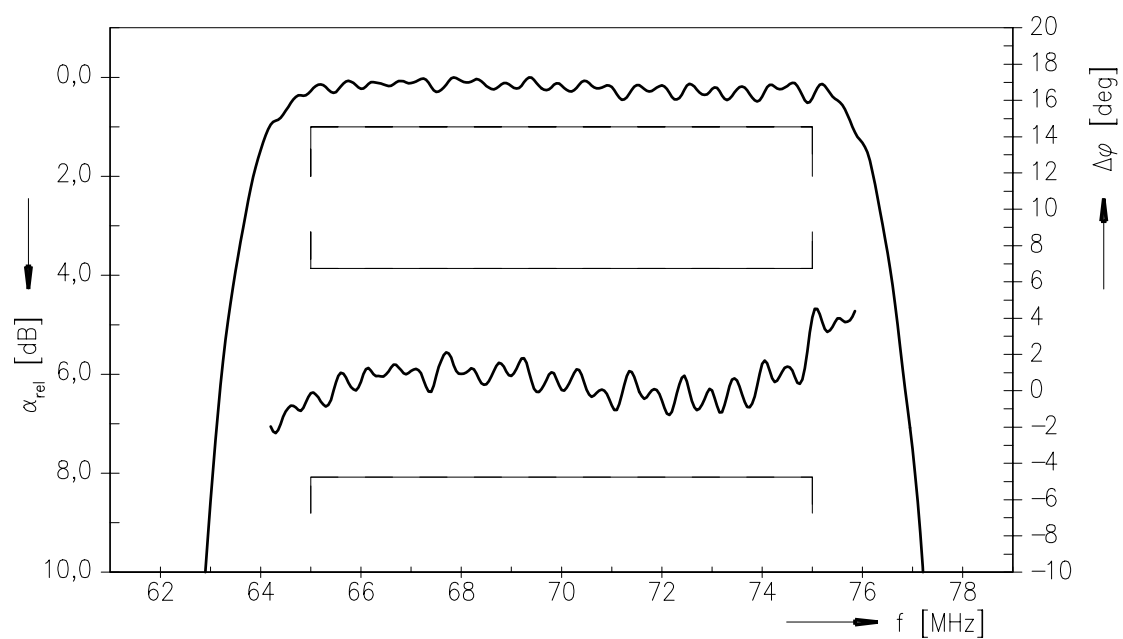
70,0 MHz

Data Sheet

Transfer function



Transfer function (pass band)





SAW Components

B5015

Low-Loss Filter

70,0 MHz

Data Sheet

Published by EPCOS AG

Surface Acoustic Wave Components Division, SAW MC

P.O. Box 80 17 09, 81617 Munich, GERMANY

© EPCOS AG 2005. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.