



SAW Components

Data Sheet B7715

Data Sheet

An abstract, grayscale graphic featuring a stylized, glowing globe with a grid pattern. The word "EPCOS" is written in large, white, sans-serif capital letters across the globe, appearing to be part of the design.



SAW Components

B7715

Low-Loss Filter for Mobile Communication

897,5 MHz

Data Sheet



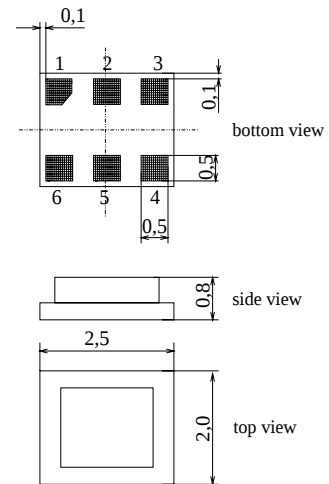
Chip sized SAW package DCS6I

Features

- Low-loss RF filter for mobile telephone EGSM systems, transmit path
- Low amplitude ripple
- Usable passband 35 MHz
- Balanced to unbalanced operation
- Impedance transformation from 200 Ω to 50 Ω
- Ceramic package for **Surface Mounted Technology (SMT)**

Terminals

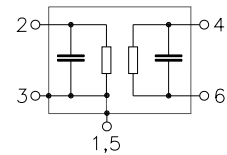
- Ni, gold-plated



Dimensions in mm, approx. weight 0,014g

Pin configuration

- 2 Output, unbalanced
- 4, 6 Balanced inputs
- 1, 3, 5 To be grounded
- 1, 5 Case ground



Type	Ordering code	Marking and Package according to	Packing according to
B7715	B39901-B7715-C610	C61157-A7-A76	F61074-V8153-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 10 / + 80	$^{\circ}\text{C}$	
Storage temperature range	T_{stg}	- 40 / + 85	$^{\circ}\text{C}$	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	50	V	
Input power max.				> 2000 hrs at 85 $^{\circ}\text{C}$ peak power of GSM signal, duty cycle 2 : 8 duty cycle 4 : 8,
880 ... 915 MHz	P_{IN}	14 12	dBm dBm	
elsewhere		0	dBm	continuous wave



SAW Components

B7715

Low-Loss Filter for Mobile Communication

897,5 MHz

Data Sheet

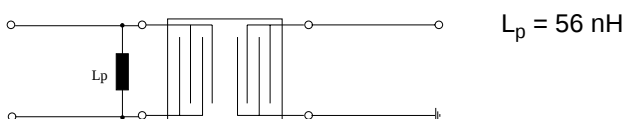


Characteristics

Operating temperature range: $T = 25 \pm 2^\circ\text{C}$
Terminating source impedance: $Z_S = 200\ \Omega$ including matching network
Terminating load impedance: $Z_L = 50\ \Omega$

		min.	typ.	max.	
Center frequency	f_C	—	897,5	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$	—	2,6	3,0	dB
880,0 ... 915,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	1,1	1,5	dB
880,0 ... 915,0 MHz					
Balanced input VSWR		—	1,7	2,0	
880,0 ... 915,0 MHz					
Unbalanced output VSWR		—	1,8	2,2	
880,0 ... 915,0 MHz					
Diff. to common mode suppression	S_{sc12}	20	23	—	dB
880,0 ... 915,0 MHz					
Input phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^\circ$)		-10	—	+10	degree
880,0 ... 915,0 MHz					
Input amplitude balance (S_{31} / S_{21})		-1,0	—	1,0	dB
880,0 ... 915,0 MHz					
Attenuation	α				
0,0 ... 850,0 MHz		45	58	—	dB
850,0 ... 871,0 MHz		12	21	—	dB
935,0 ... 960,0 MHz		20	34	—	dB
960,0 ... 1850,0 MHz		35	42	—	dB
1850,0 ... 3660,0 MHz		35	40	—	dB
3660,0 ... 6000,0 MHz		15	26	—	dB

Test matching network





SAW Components

B7715

Low-Loss Filter for Mobile Communication

897,5 MHz

Data Sheet

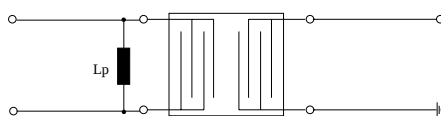


Characteristics

Operating temperature range: $T = -10$ to $80\text{ }^{\circ}\text{C}$
Terminating source impedance: $Z_S = 200\text{ }\Omega$ including matching network
Terminating load impedance: $Z_L = 50\text{ }\Omega$

		min.	typ.	max.	
Center frequency	f_C	—	897,5	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$	—	2,7	3,2	dB
880,0 ... 915,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	1,2	1,8	dB
880,0 ... 915,0 MHz					
Balanced input VSWR		—	1,7	2,0	
880,0 ... 915,0 MHz					
Unbalanced output VSWR		—	1,8	2,2	
880,0 ... 915,0 MHz					
Diff. to common mode suppression	S_{sc12}	20	23	—	dB
880,0 ... 915,0 MHz					
Input phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^{\circ}$)		-10	—	+10	degree
880,0 ... 915,0 MHz					
Input amplitude balance ($ S_{31} / S_{21} $)		-1,0	—	1,0	dB
880,0 ... 915,0 MHz					
Attenuation	α				
0,0 ... 850,0 MHz		45	58	—	dB
850,0 ... 871,0 MHz		12	21	—	dB
935,0 ... 960,0 MHz		20	34	—	dB
960,0 ... 1850,0 MHz		35	42	—	dB
1850,0 ... 3660,0 MHz		35	40	—	dB
3660,0 ... 6000,0 MHz		15	26	—	dB

Test matching network



$$L_p = 56\text{ nH}$$



SAW Components

B7715

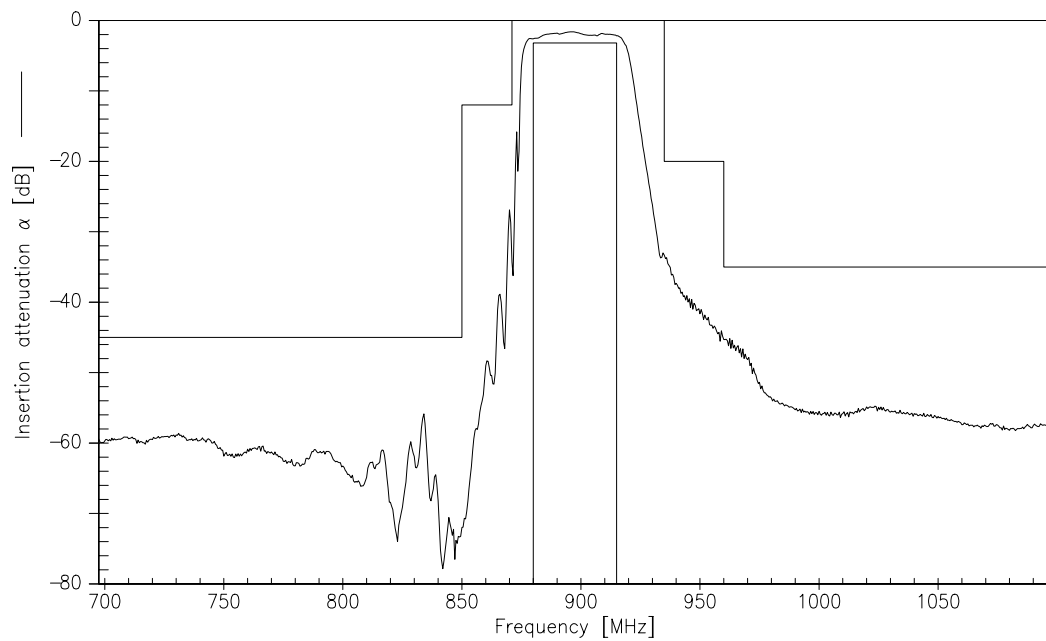
Low-Loss Filter for Mobile Communication

897,5 MHz

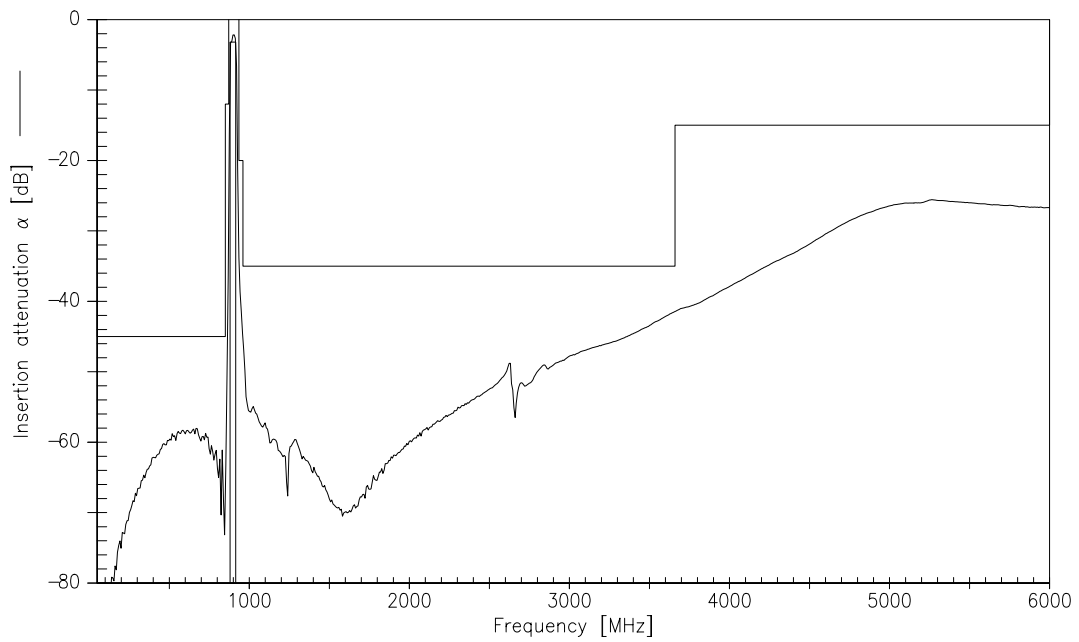
Data Sheet



Transfer function (measurement)

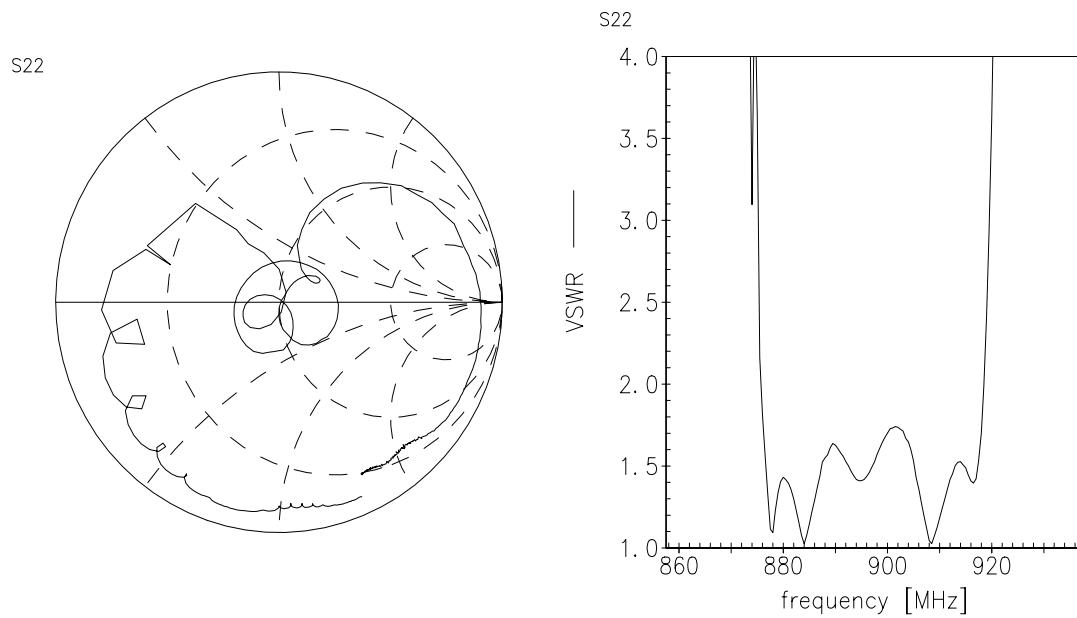
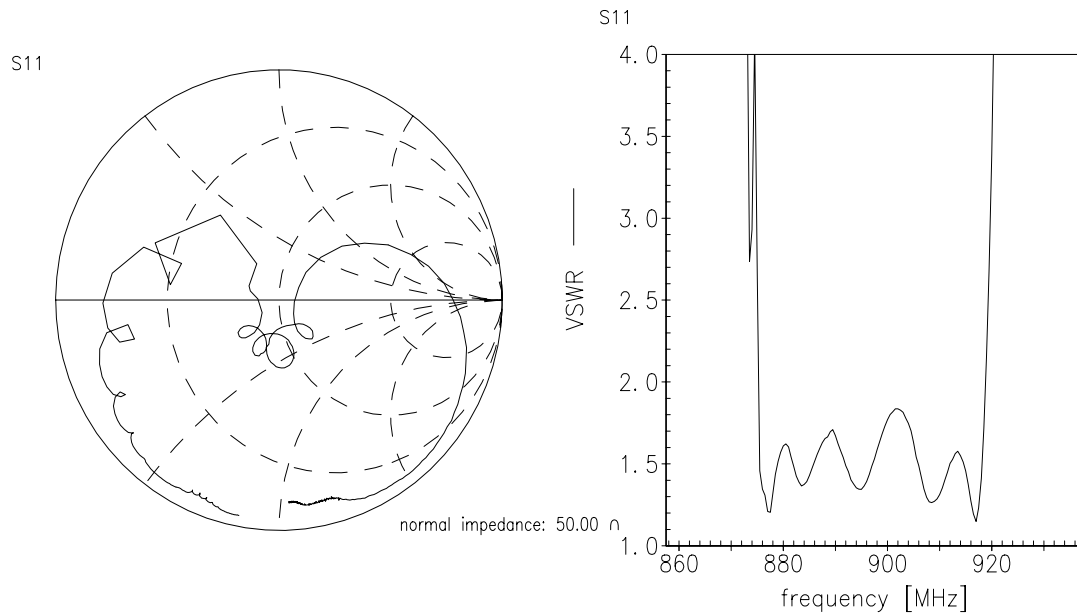


Transfer function (wideband measurement)





Matching (measurement including calculated matching network; S11 is unbalanced output)





SAW Components	B7715
Low-Loss Filter for Mobile Communication	897,5 MHz
Data Sheet	SMD

Published by EPCOS AG

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

☎ ++49 89 636 09, FAX (0 89) 636-2 26 89

© EPCOS AG 2002. 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.