



SAW Components

Preliminary Data Sheet B4224





SAW Components

B4224

Low-Loss Filter for Mobile Communication

836,5 / 881,5 MHz

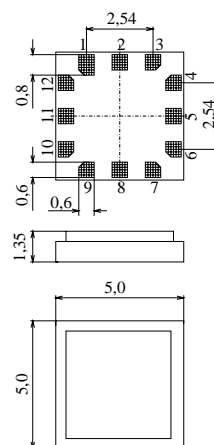
Preliminary Data Sheet



Features

- Low-loss duplexer for mobile telephone AMPS systems
- 50 Ω ports by integrated matching network
- Multifunctional ceramic base material for Surface Mounted Technology (SMT)
- Small size and low height

Chip sized SAW package

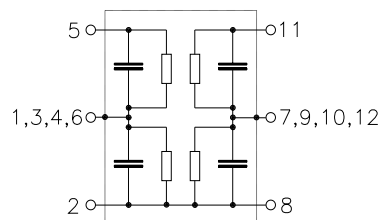


Dimensions in mm, approx. weight 0,13 g

Pin configuration

- 5 TX Input
- 11 RX Output
- 2, 8 Antenna*
- 1, 3, 4, 6 Ground
- 7, 9, 10, 12 Ground

* Only one antenna pin has to be connected.



Type	Ordering code	Marking and Package according to	Packing according to
B4224	B39881-B4224-D310	C61157-A3-A1	F61074-V8159-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operating temperature range	T	- 20/+ 85	°C	source and load impedance 50 Ω } continuous wave } wave
Storage temperature range	T_{stg}	- 40/+ 85	°C	
DC voltage	V_{DC}	0	V	
Input power max.	P_{IN}	31	dBm	
824,0 ... 849,0 MHz elsewhere		10	dBm	



Characteristics

Reference temperature $T = 25 \pm 2^\circ\text{C}$
 ANT terminating impedance $Z_{\text{ANT}} = 50 \Omega$
 RX terminating impedance $Z_{\text{RX}} = 50 \Omega$
 TX terminating impedance $Z_{\text{TX}} = 50 \Omega$

Characteristics TX - ANT		min.	typ.	max.	
Center frequency	f_c	—	836,5	—	MHz
Maximum insertion attenuation	α_{max}	—	2,0	2,4	dB
824,00 ... 849,00 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,7	0,9	dB
824,00 ... 849,00 MHz					
Return loss		—	9,0	8,7	dB
824,00 ... 849,00 MHz					
Attenuation	α				
779,00 ... 804,00 MHz		21	29	—	dB
869,00 ... 894,00 MHz		45	46	—	dB
1648,00 ... 1698,00 MHz		30	38	—	dB
2472,00 ... 2547,00 MHz		20	28	—	dB

Characteristics ANT - RX		min.	typ.	max.	
Center frequency	f_c	—	881,5	—	MHz
Maximum insertion attenuation	α_{max}	—	2,9	3,3	dB
869,00 ... 894,00 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	1,0	1,6	dB
869,00 ... 894,00 MHz					
Return loss		—	12,5	12	dB
869,00 ... 894,00 MHz					
Attenuation	α				
779,00 ... 804,00 MHz		35	38	—	dB
824,00 ... 849,00 MHz		54	55	—	dB
979,00 ... 1700,00 MHz		38	39	—	dB
1700,00 ... 3000,00 MHz		25	36	—	dB

Characteristics TX - RX		min.	typ.	max.	
Isolation between TX and RX path	α				
824,00 ... 849,00 MHz		54	55	—	dB
869,00 ... 894,00 MHz		45	46	—	dB



Characteristics

Reference temperature $T = -20$ to $85\text{ }^{\circ}\text{C}$
 ANT terminating impedance $Z_{\text{ANT}} = 50\ \Omega$
 RX terminating impedance $Z_{\text{RX}} = 50\ \Omega$
 TX terminating impedance $Z_{\text{TX}} = 50\ \Omega$

Characteristics TX - ANT		min.	typ.	max.	
Center frequency	f_c	—	836,5	—	MHz
Maximum insertion attenuation	α_{max}	—	2,2	2,5	dB
824,00 ... 849,00 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,7	1,0	dB
824,00 ... 849,00 MHz					
Return loss		—	9,0	8,7	dB
824,00 ... 849,00 MHz					
Attenuation	α				
779,00 ... 804,00 MHz		21	29	—	dB
869,00 ... 894,00 MHz		45	45	—	dB
1648,00 ... 1698,00 MHz		30	38	—	dB
2472,00 ... 2547,00 MHz		20	28	—	dB

Characteristics ANT - RX		min.	typ.	max.	
Center frequency	f_c	—	881,5	—	MHz
Maximum insertion attenuation	α_{max}	—	3,4	3,9	dB
869,00 ... 894,00 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	1,5	2,0	dB
869,00 ... 894,00 MHz					
Return loss		—	12,5	12	dB
869,00 ... 894,00 MHz					
Attenuation	α				
779,00 ... 804,00 MHz		35	38	—	dB
824,00 ... 849,00 MHz		53	54	—	dB
979,00 ... 1700,00 MHz		38	39	—	dB
1700,00 ... 3000,00 MHz		25	36	—	dB

Characteristics TX - RX		min.	typ.	max.	
Isolation between TX and RX path	α				
824,00 ... 849,00 MHz		53 ¹⁾	54	—	dB
869,00 ... 894,00 MHz		45	46	—	dB

¹⁾ for temperatures between $0\text{ }^{\circ}\text{C}$ and $85\text{ }^{\circ}\text{C}$ an isolation of 54 dB is guaranteed



SAW Components

B4224

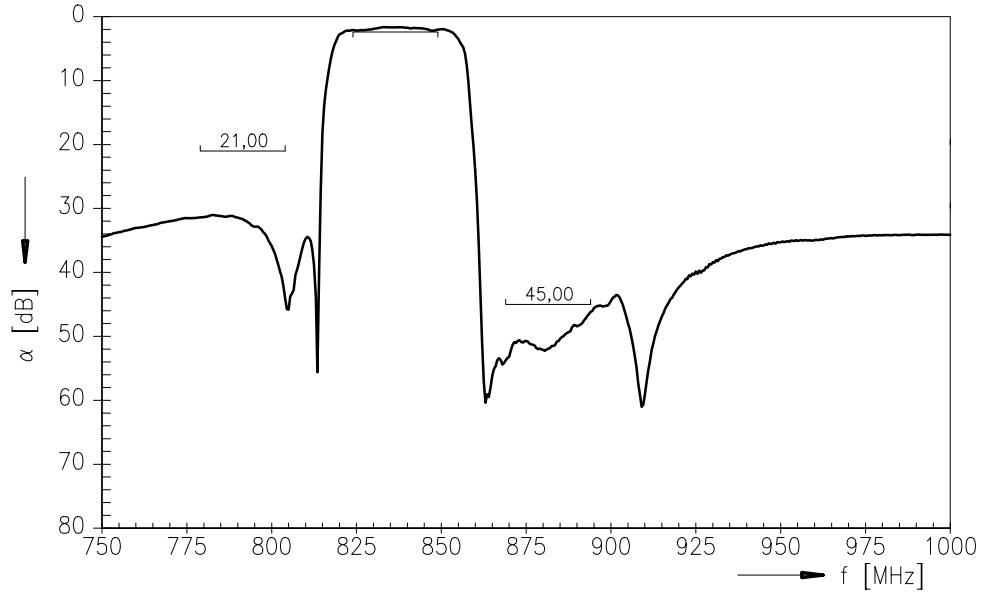
Low-Loss Filter for Mobile Communication

836,5 / 881,5 MHz

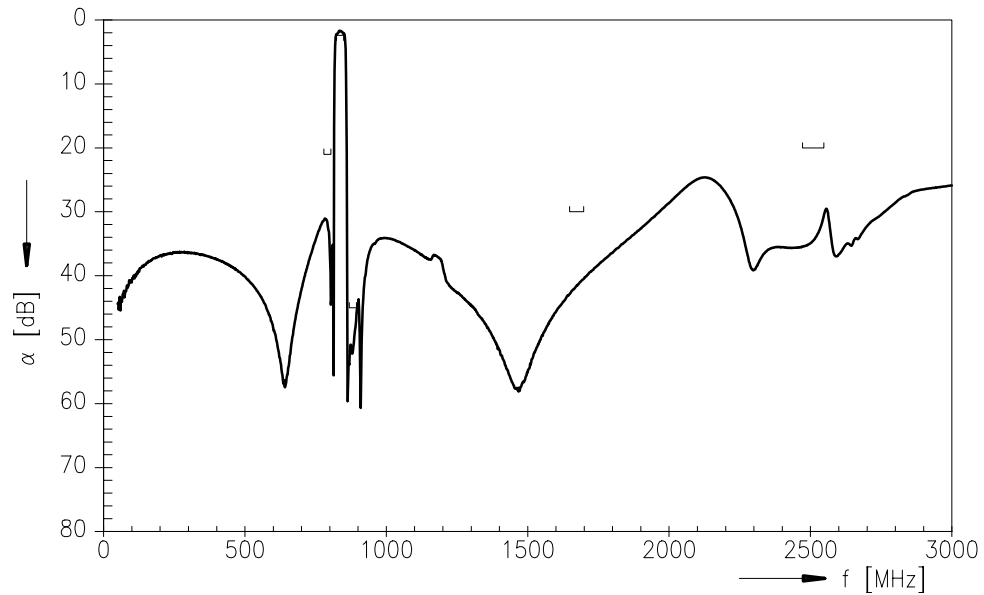
Preliminary Data Sheet



Frequency Response TX - ANT



Frequency Response TX - ANT (wideband)





SAW Components

B4224

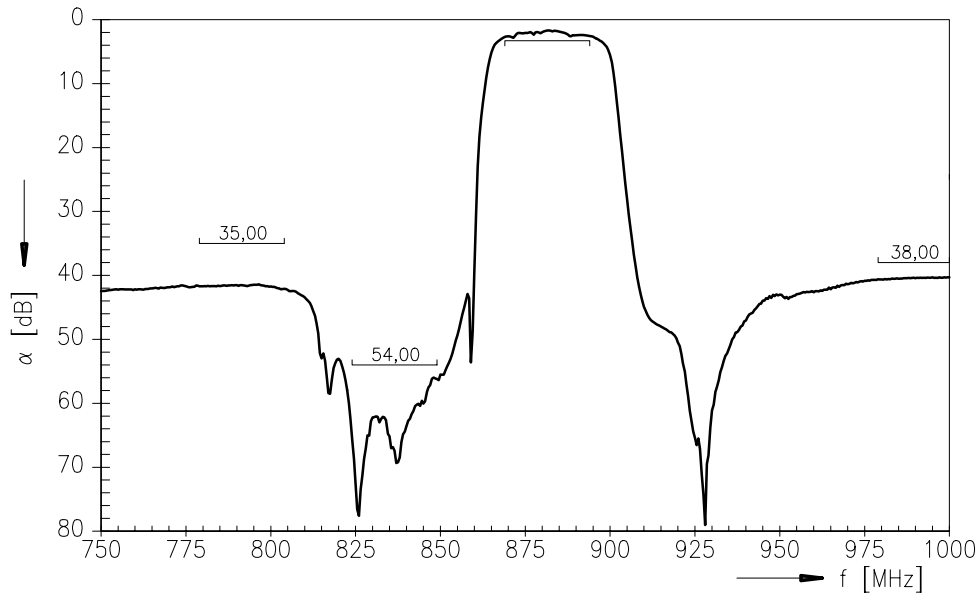
Low-Loss Filter for Mobile Communication

836,5 / 881,5 MHz

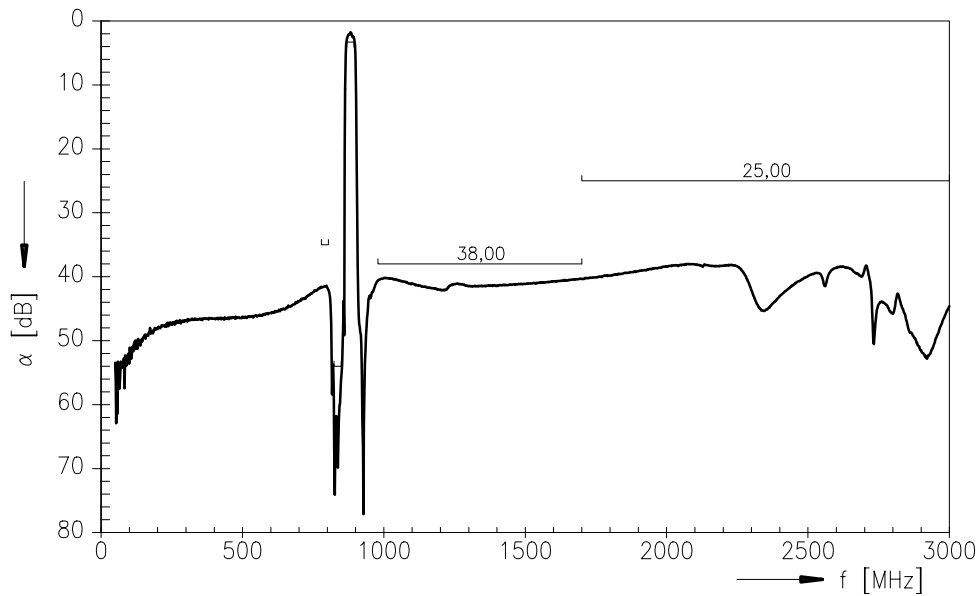
Preliminary Data Sheet



Frequency Response ANT - RX



Frequency Response ANT - RX (wideband)





SAW Components

B4224

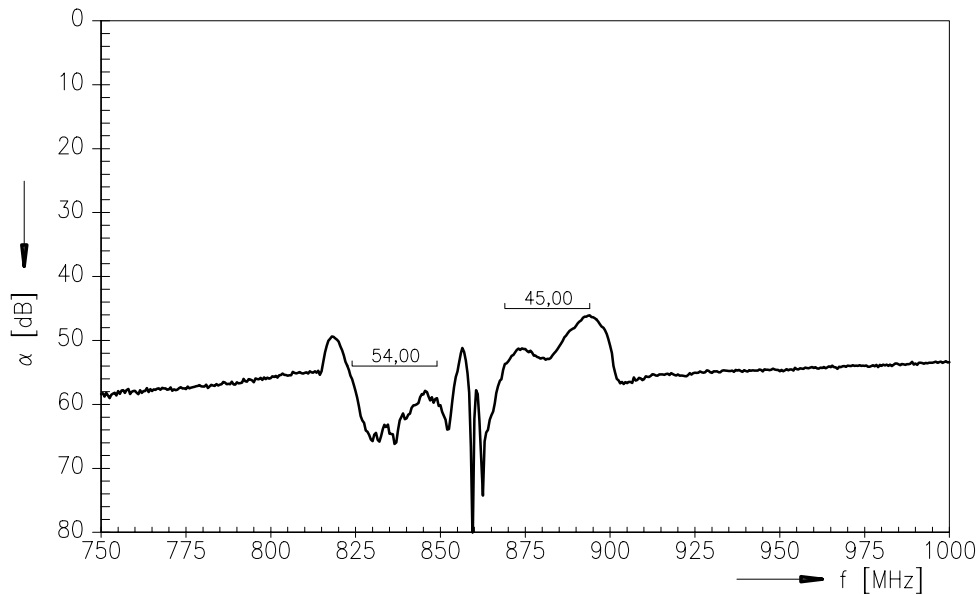
Low-Loss Filter for Mobile Communication

836,5 / 881,5 MHz

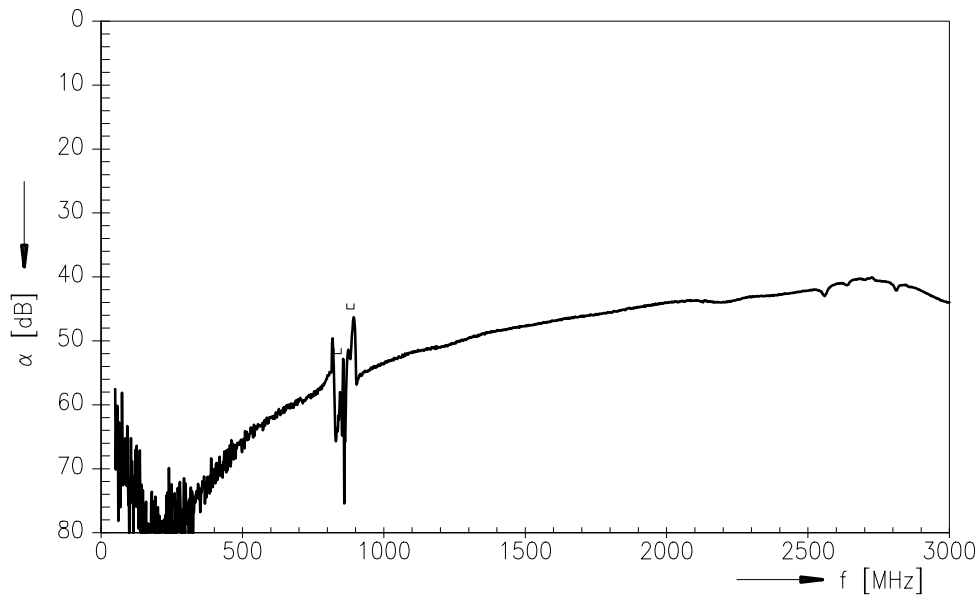
Preliminary Data Sheet



Frequency Response TX - RX



Frequency Response TX - RX (wideband)





SAW Components

B4224

Low-Loss Filter for Mobile Communication

836,5 / 881,5 MHz

Preliminary Data Sheet



Published by EPCOS AG

Surface Acoustic Wave Components Division, SAW MC WT

P.O. Box 80 17 09, D-81617 München

© EPCOS AG 2002. All Rights Reserved. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

The information contained in this brochure describes the type of component and shall not be considered as guaranteed characteristics. 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.