EPCOS

SAW Components

Preliminary Data Sheet B4224

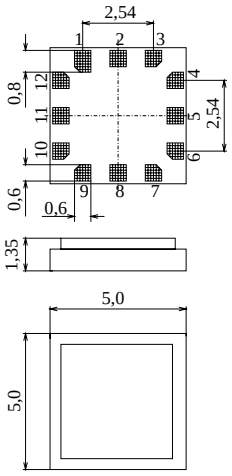


Preliminary Data Sheet

Features

- Low-loss duplexer for mobile telephone AMPS systems
- 50 Ω ports by integrated matching network
- Multifunctional ceramic base material for **S**urface **M**ounted **T**echnology (**SMT**)
- Small size and low height

Chip sized SAW package

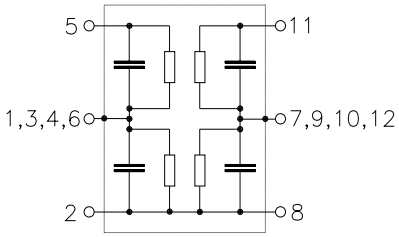


Dimensions in mm, approx. weight 0,13 g

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 **S**ensitive **D**evice (**ESD**)

Maximum ratings

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

Characteristics

Reference temperature T = 25 ± 2°C
ANT terminating impedance Z_{ANT} = 50 Ω
RX terminating impedance Z_{RX} = 50 Ω
TX terminating impedance Z_{TX} = 50 Ω

Characteristics TX - ANT		min.	typ.	max.	
Center frequency	f_c	—	836,5	—	MHz
Maximum insertion attenuation	α_{max}				
824,00 ... 849,00 MHz		—	2,0	2,4	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
824,00 ... 849,00 MHz		—	0,7	0,9	dB
Return loss					
824,00 ... 849,00 MHz		—	9,0	8,7	dB
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}				
869,00 ... 894,00 MHz		—	2,9	3,3	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
869,00 ... 894,00 MHz		—	1,0	1,6	dB
Return loss					
869,00 ... 894,00 MHz		—	12,5	12	dB
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 °C
ANT terminating impedance	Z_{ANT}	=	50 Ω
RX terminating impedance	Z_{RX}	=	50 Ω
TX terminating impedance	Z_{TX}	=	50 Ω

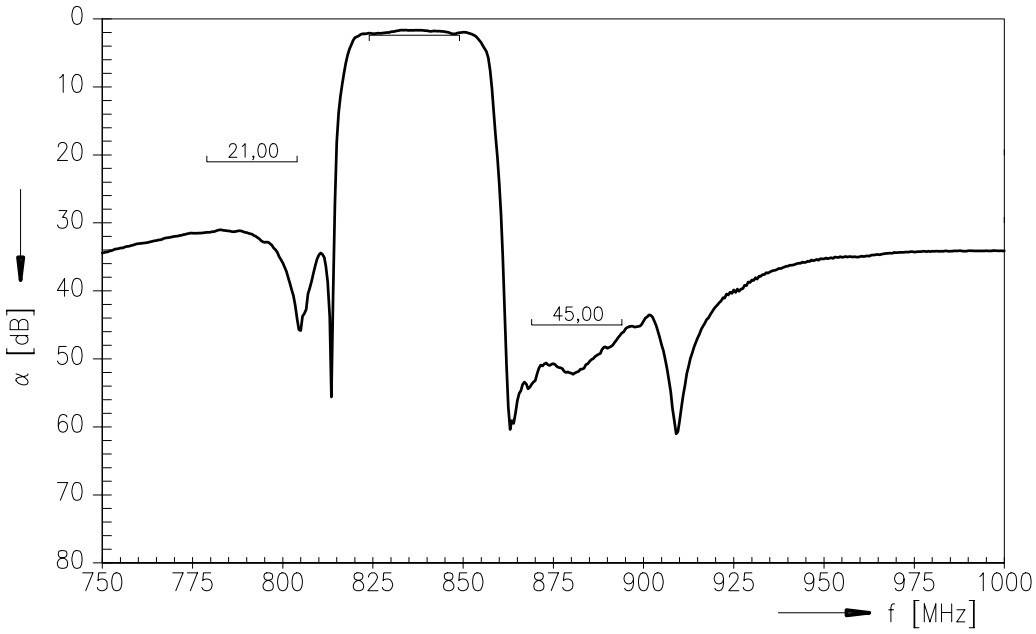
Characteristics TX - ANT		**min.**	**typ.**	**max.**	
Center frequency	f_c	—	836,5	—	MHz
Maximum insertion attenuation	α_{max}				
824,00 ... 849,00 MHz		—	2,2	2,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
824,00 ... 849,00 MHz		—	0,7	1,0	dB
Return loss					
824,00 ... 849,00 MHz		—	9,0	8,7	dB
Attenuation	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}				
869,00 ... 894,00 MHz		—	3,4	3,9	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
869,00 ... 894,00 MHz		—	1,5	2,0	dB
Return loss					
869,00 ... 894,00 MHz		—	12,5	12	dB
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

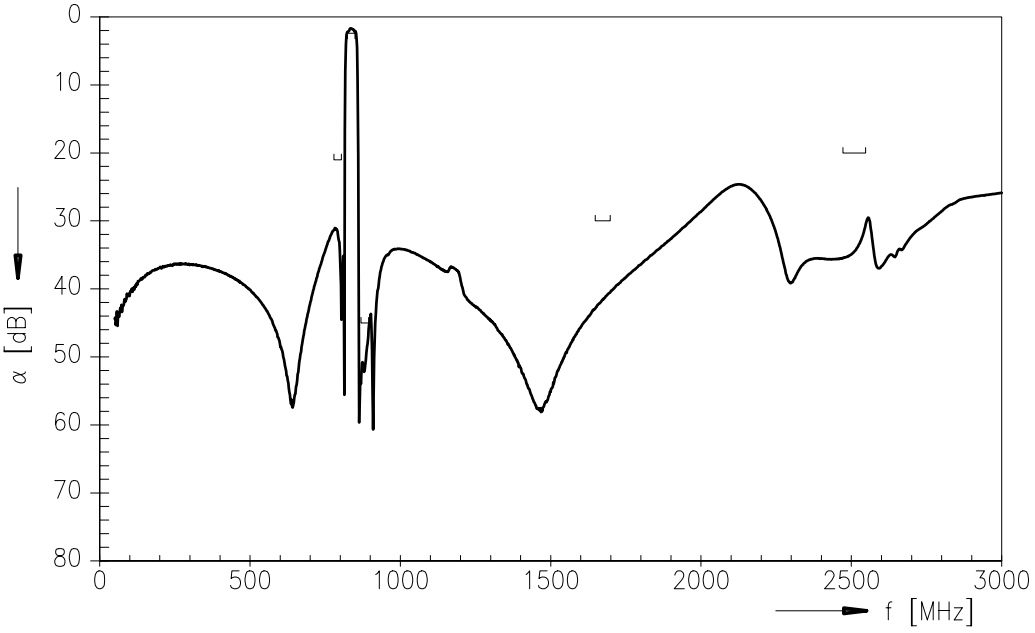
Characteristics TX - RX		**min.**	**typ.**	**max.**	
Isolation between TX and RX path	α				
824,00 ... 849,00 MHz		53 [1)]	54	—	dB
869,00 ... 894,00 MHz		45	46	—	dB

[1)] for temperatures between 0°C and 85°C an isolation of 54 dB is guaranteed

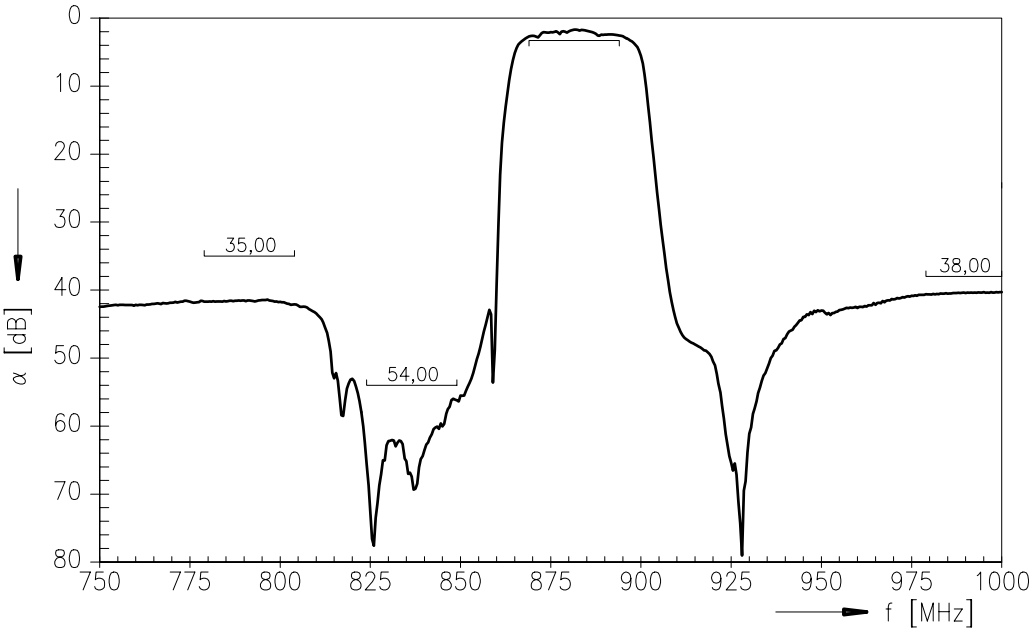
Frequency Response TX - ANT



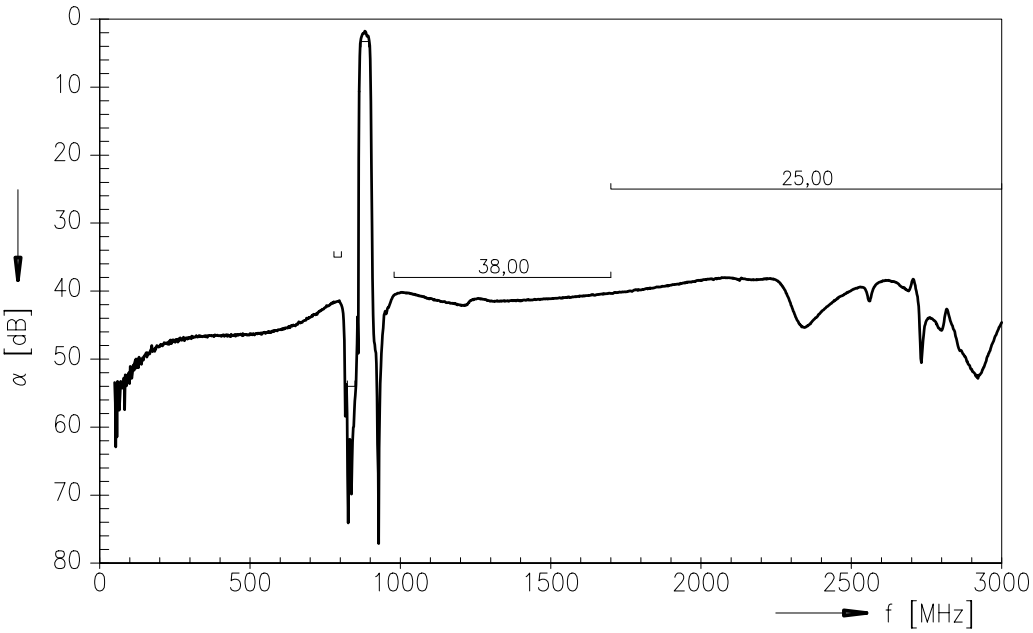
Frequency Response TX - ANT (wideband)



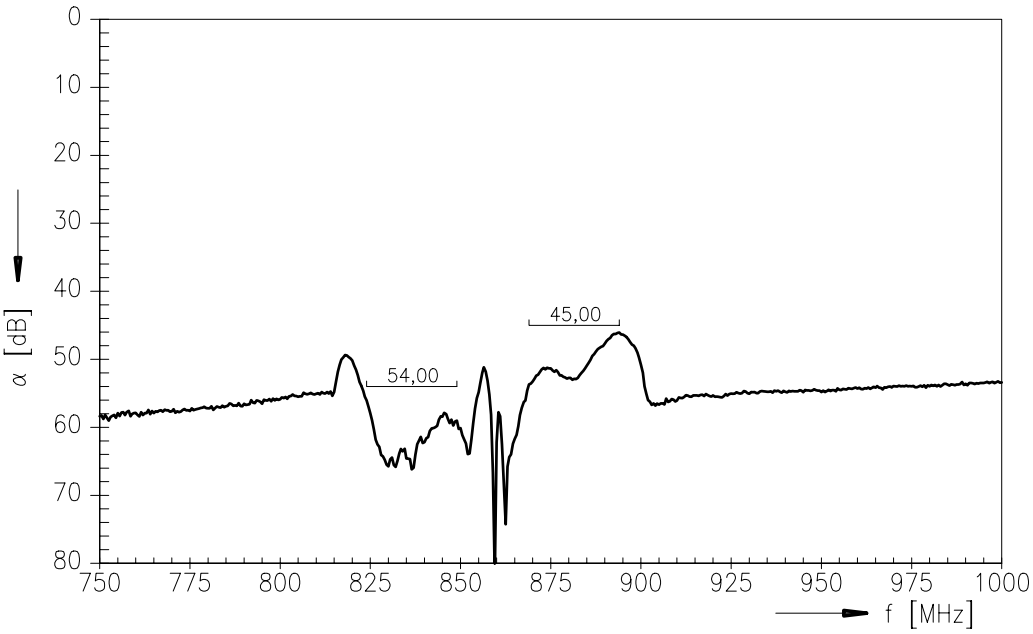
Frequency Response ANT - RX



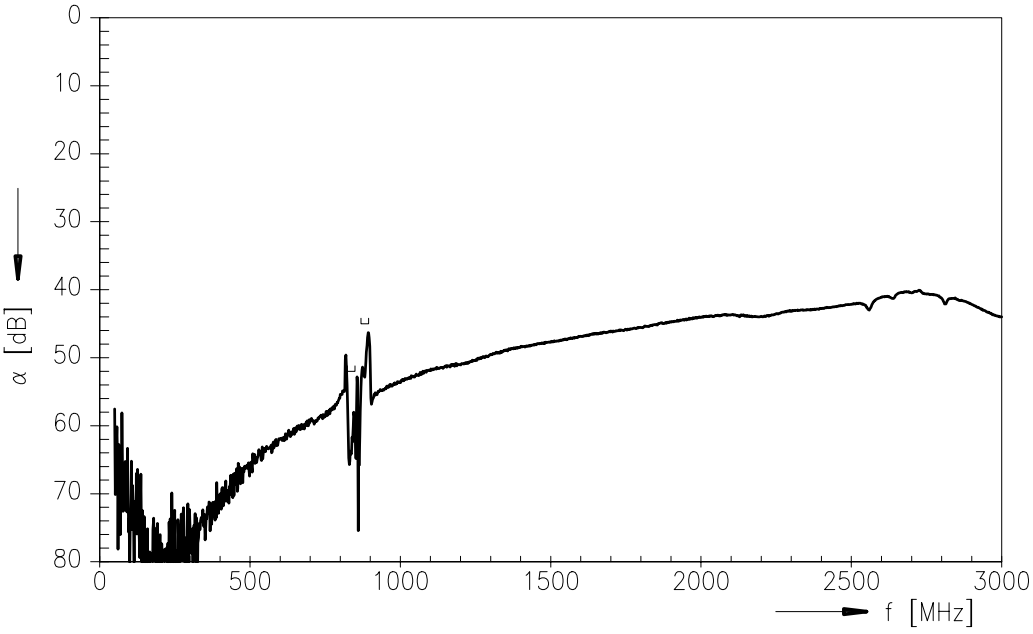
Frequency Response ANT - RX (wideband)



Frequency Response TX - RX



Frequency Response TX - RX (wideband)



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