



Siemens Matsushita Components

# SAW Components

## Low-Loss Duplexer for Mobile Communication

**B4005**  
**959.5 MHz**  
**914.5 MHz**

### Data Sheet

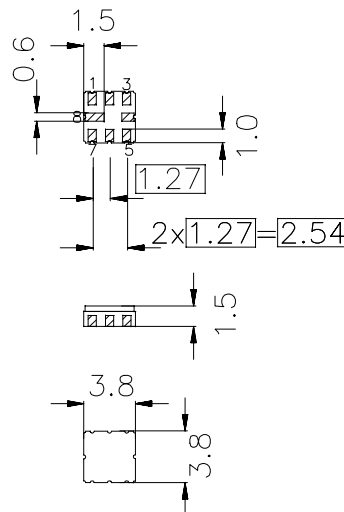
#### Features

- Compact RF duplexer for cordless telephone CT1
- No matching network required for operation at  $50 \Omega$
- Ceramic package for **Surface Mounted Technology (SMT)**

#### Terminals

- Ni, gold-plated

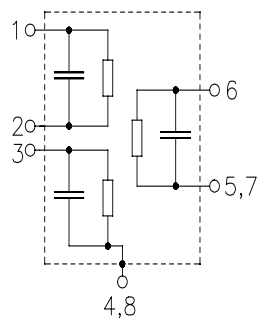
Ceramic package **QCC 8B**



Dimensions in mm, approx. weight 0.07 g

#### Pin configuration

6	Ant
3	Port 1
1	Port 2
5, 7	Ant - ground
2	Port 2 - ground
4,8	Case / Port 1 - ground



Type	Ordering code	Marking and Package according to	Packing according to
B4005	B39961-B4005-Z810	C61157-A7-A46	F61074-V8037-Z000

Electrostatic Sensitive Device (ESD)

#### Maximum ratings

Operable temperature range	$T_A$	0 /+ 60	$^{\circ}\text{C}$
Storage temperature range	$T_{\text{stg}}$	- 40/+ 85	$^{\circ}\text{C}$
DC voltage	$V_{\text{DC}}$	3	V
Input power	$P_{\text{IN}}$	17	dBm

Preliminary format of data sheet.  
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Page 1 of 7

OFW EM CP  
Jan 22, 1999



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## Data Sheet

### Characteristics channel 1 (Port 1 - Ant)

Operable temperature range:  $T_A = 0$  to  $+60$  °C

Ant term. impedance  $Z_{Ant} = 50 \Omega$

Port 1 term. impedance  $Z_{Port 1} = 50 \Omega$

Port 2 term. impedance  $Z_{Port 2} = 50 \Omega$

		min.	typ.	max.	
<b>Center frequency</b>	$f_c$	—	959.5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$	—	3.3	4.0	dB
	959.00 ... 960.00 MHz				
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	0.7	2.0	dB
	959.00 ... 960.00 MHz				
<b>Absolute attenuation</b>	$\alpha$				
	50.00 ... 850.00 MHz	50	54	—	dB
	850.00 ... 917.20 MHz	37	40	—	dB
	917.20 ... 938.60 MHz	34	37	—	dB
	938.60 ... 949.30 MHz	8	15	—	dB
	969.70 ... 970.70 MHz	10	25	—	dB
	970.70 ... 980.40 MHz	17	27	—	dB
	980.40 ... 981.40 MHz	32	40	—	dB
	981.40 ... 1001.80 MHz	26	30	—	dB
	1001.80 ... 1002.80 MHz	30	33	—	dB
	1015.00 ... 1350.00 MHz	40	45	—	dB
	1350.00 ... 1850.00 MHz	32	36	—	dB
	1850.00 ... 2000.00 MHz	28	31	—	dB



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**914.5 MHz**

## Data Sheet

### Characteristics channel 2 (Port 2 - Ant)

Operable temperature range:  $T_A = 0$  to  $+60$  °C

Ant term. impedance  $Z_{Ant} = 50 \Omega$

Port 1 term. impedance  $Z_{Port 1} = 50 \Omega$

Port 2 term. impedance  $Z_{Port 2} = 50 \Omega$

		min.	typ.	max.	
<b>Center frequency</b>	$f_c$	—	914.5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$				
914.00 ... 915.00 MHz		—	3.0	4.0	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
914.00 ... 915.00 MHz		—	0.7	2.0	dB
<b>Absolute attenuation</b>	$\alpha$				
50.00 ... 850.00 MHz		52	57	—	dB
850.00 ... 872.20 MHz		45	53	—	dB
872.20 ... 893.60 MHz		28	35	—	dB
893.60 ... 904.30 MHz		6	18	—	dB
924.70 ... 925.70 MHz		12	27	—	dB
925.70 ... 935.40 MHz		20	29	—	dB
935.40 ... 936.40 MHz		32	38	—	dB
936.40 ... 956.80 MHz		26	30	—	dB
956.80 ... 959.00 MHz		32	38	—	dB
959.00 ... 1000.00 MHz		37	44	—	dB
1000.00 ... 1350.00 MHz		44	47	—	dB
1350.00 ... 1850.00 MHz		25	28	—	dB
1850.00 ... 2000.00 MHz		18	25	—	dB



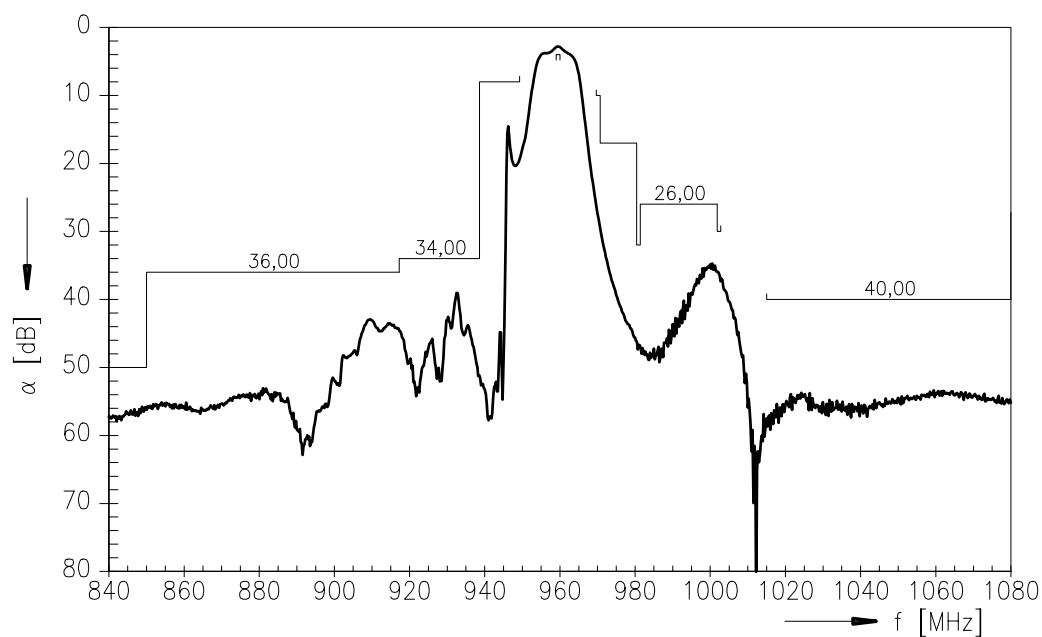
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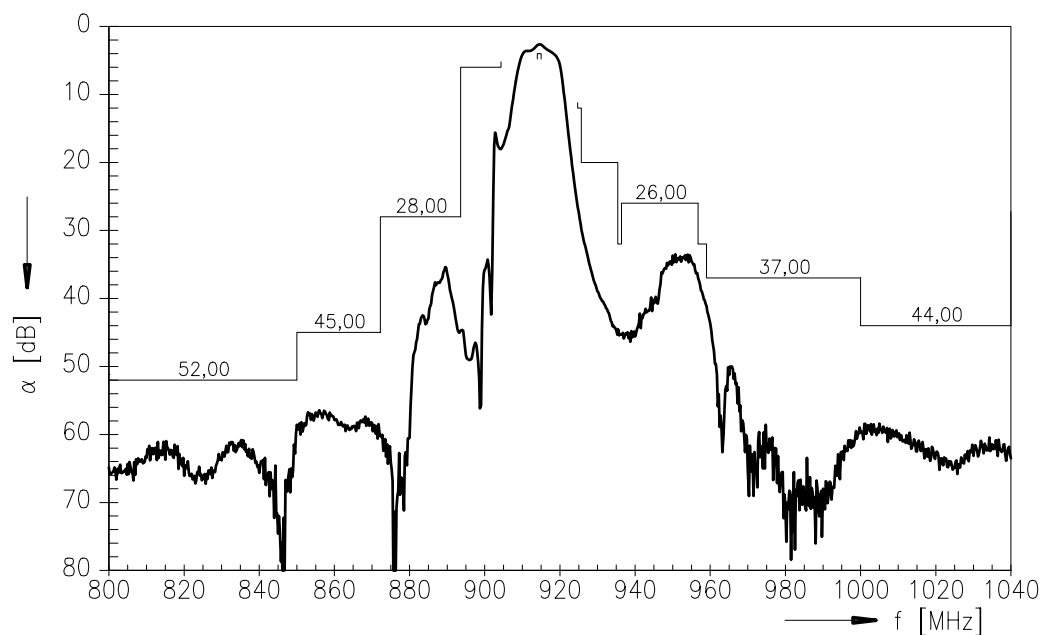
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### Data Sheet

#### Frequency response channel 1 :



#### Frequency response channel 2 :





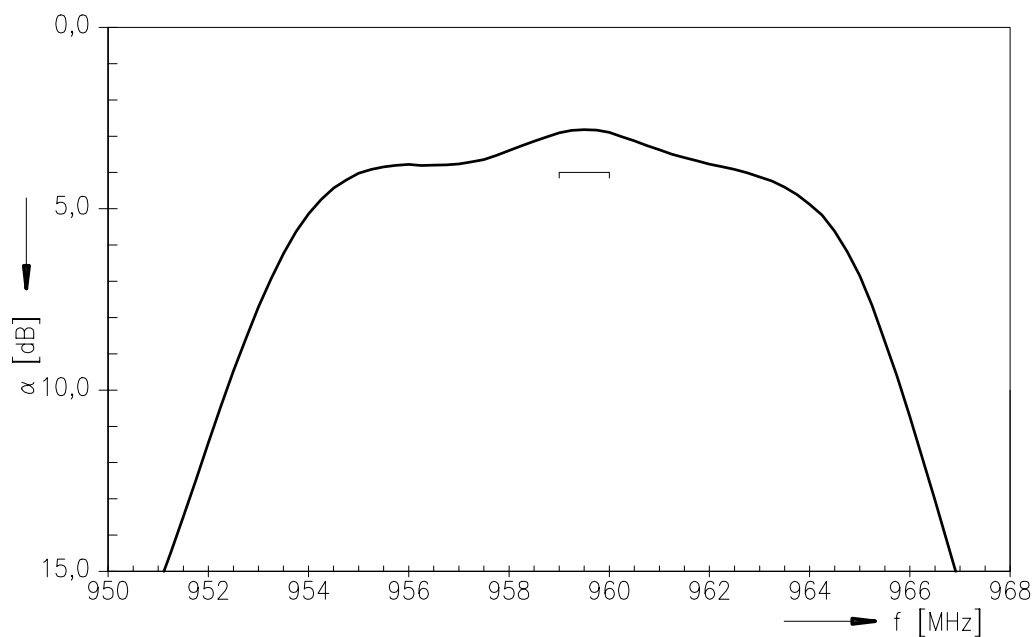
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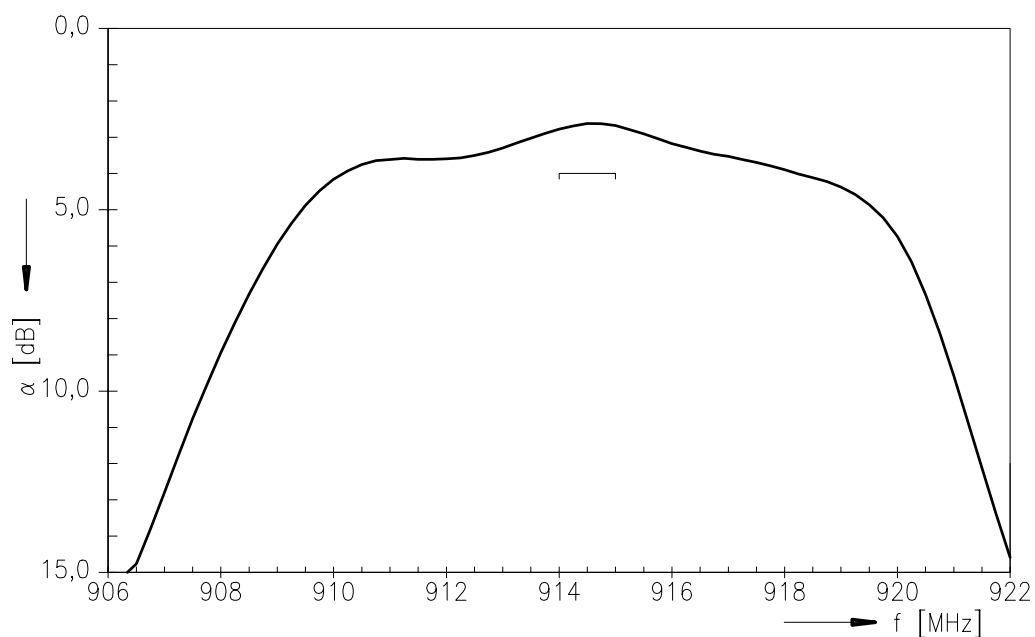
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## Data Sheet

### Frequency response channel 1 : (passband)



### Frequency response channel 2 : (passband)





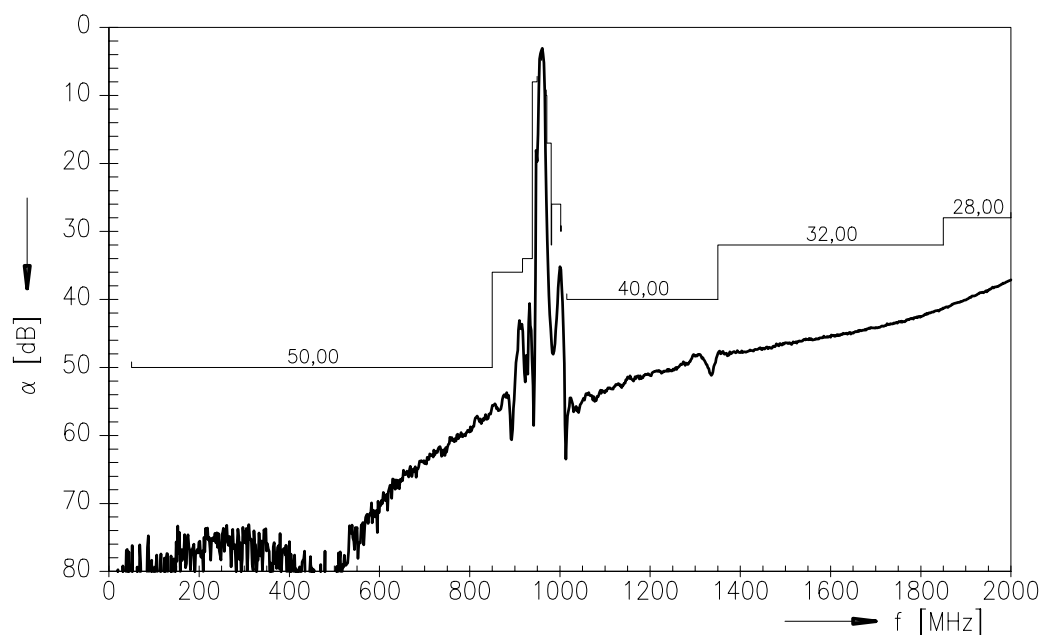
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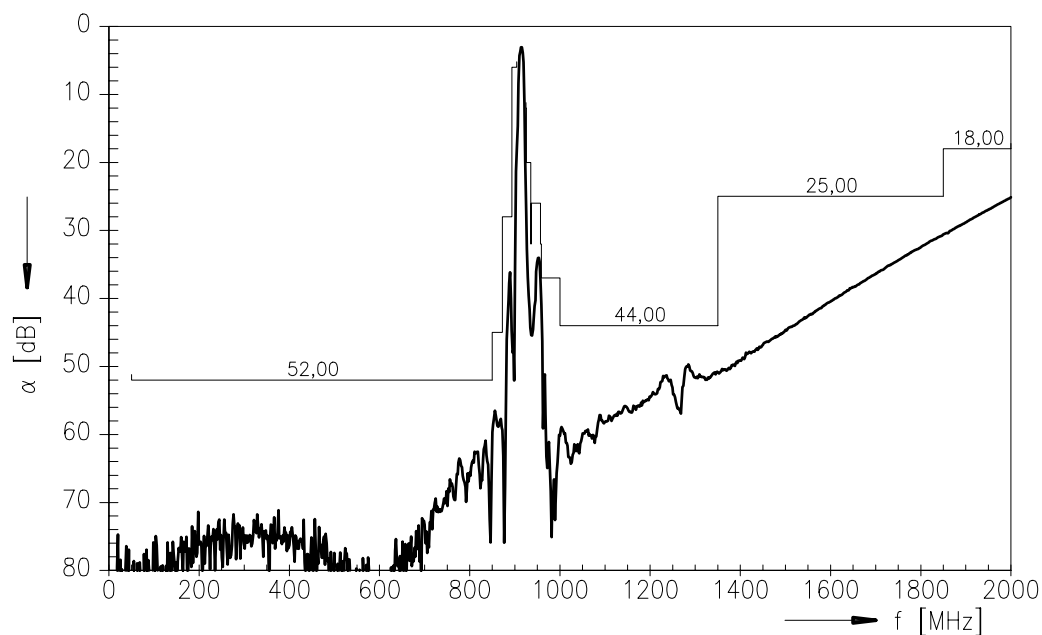
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## Data Sheet

### Frequency response channel 1 : (wideband)



### Frequency response channel 2 : (wideband)





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### Data Sheet

#### Isolation between channel 1 and channel 2

Operating temperature range  $T = 0$  to  $+60$  °C  
Ant term. impedance  $Z_{Ant} = 50 \Omega$   
Port 1 term. impedance  $Z_{Port 1} = 50 \Omega$   
Port 2 term. impedance  $Z_{Port 2} = 50 \Omega$

		min.	typ.	max.	
Absolute attenuation	$\alpha$				
	959,00 ... 960,00 MHz	36	41	—	dB
	914,00 ... 915,00 MHz	36	41	—	dB

#### Isolation between channel 1 and channel 2 :

