



**SAW Components**  
**Low-Loss Duplexer for Mobile Communication**

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

**Data Sheet**

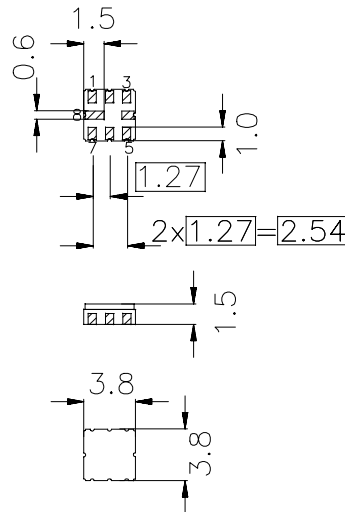
**Features**

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

**Terminals**

- Ni , gold-plated

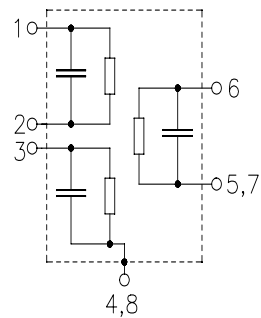
Ceramic package **QCC 8B**



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	°C
Storage temperature range	$T_{stg}$	- 40/+ 85	°C
DC voltage	$V_{DC}$	3	V
Input power	$P_{IN}$	17	dBm



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**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>	$\alpha$				dB
50.00 ... 850.00 MHz		50	54	—	
850.00 ... 917.20 MHz		37	40	—	
917.20 ... 938.60 MHz		34	37	—	
938.60 ... 949.30 MHz		8	15	—	
969.70 ... 970.70 MHz		10	25	—	
970.70 ... 980.40 MHz		17	27	—	
980.40 ... 981.40 MHz		32	40	—	
981.40 ... 1001.80 MHz		26	30	—	
1001.80 ... 1002.80 MHz		30	33	—	
1015.00 ... 1350.00 MHz		40	45	—	
1350.00 ... 1850.00 MHz		32	36	—	
1850.00 ... 2000.00 MHz		28	31	—	



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

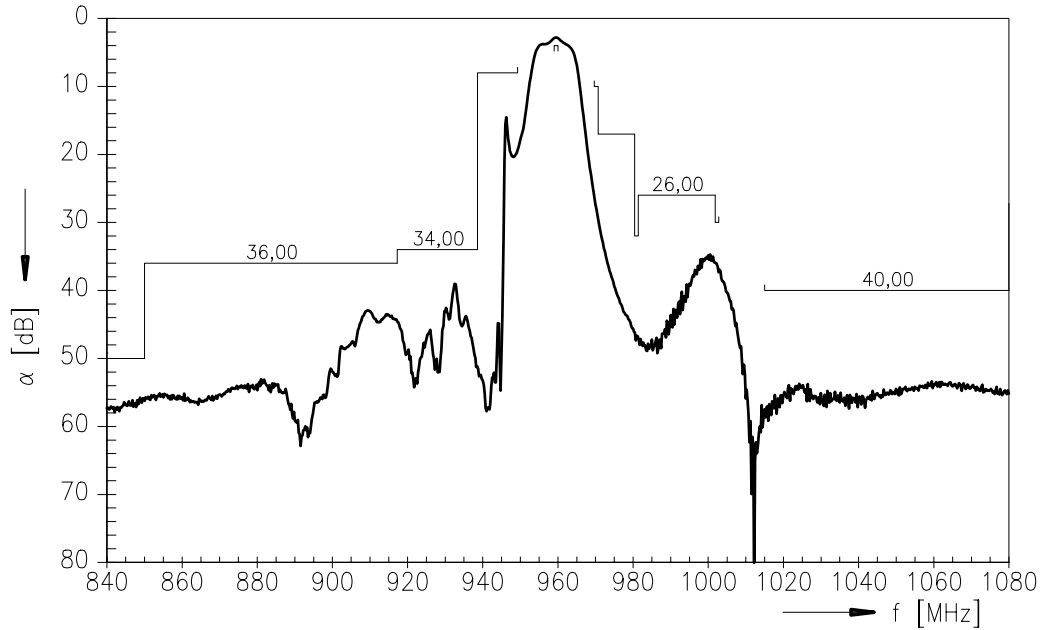


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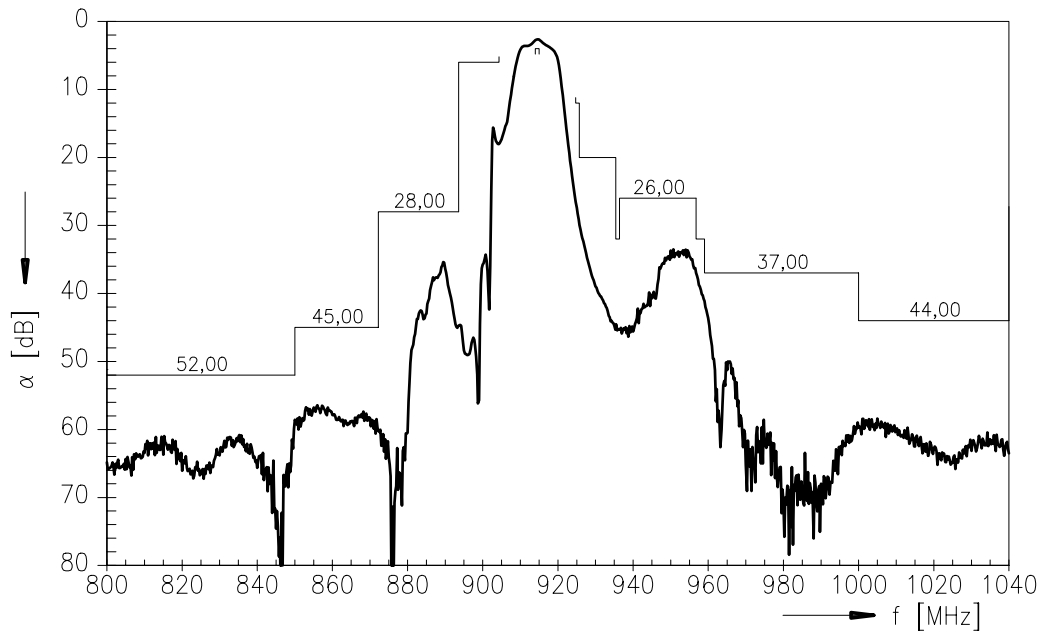
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**Frequency response channel 1 :**



**Frequency response channel 2 :**



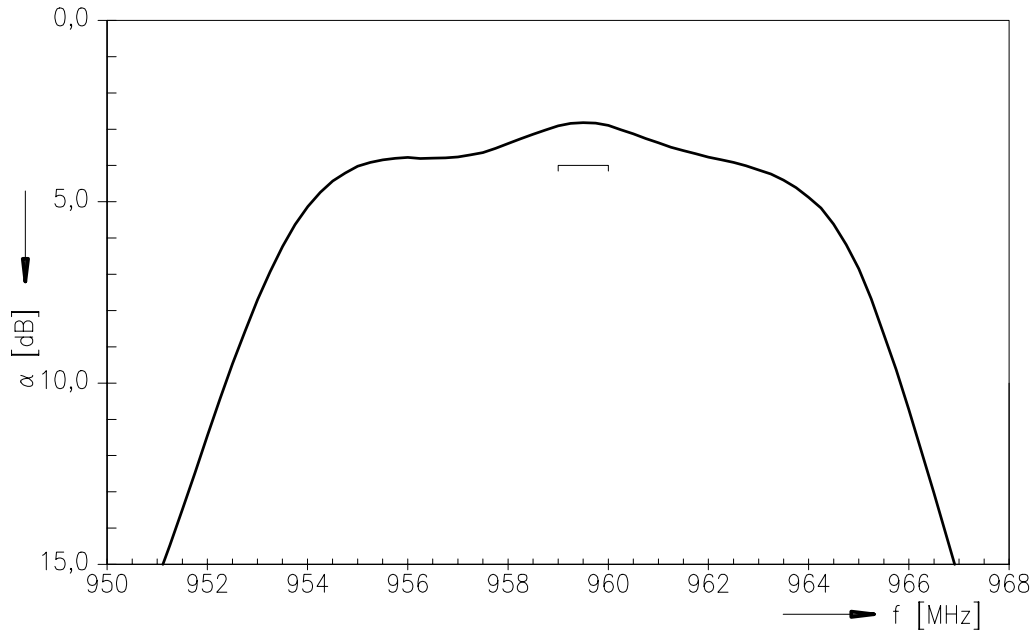


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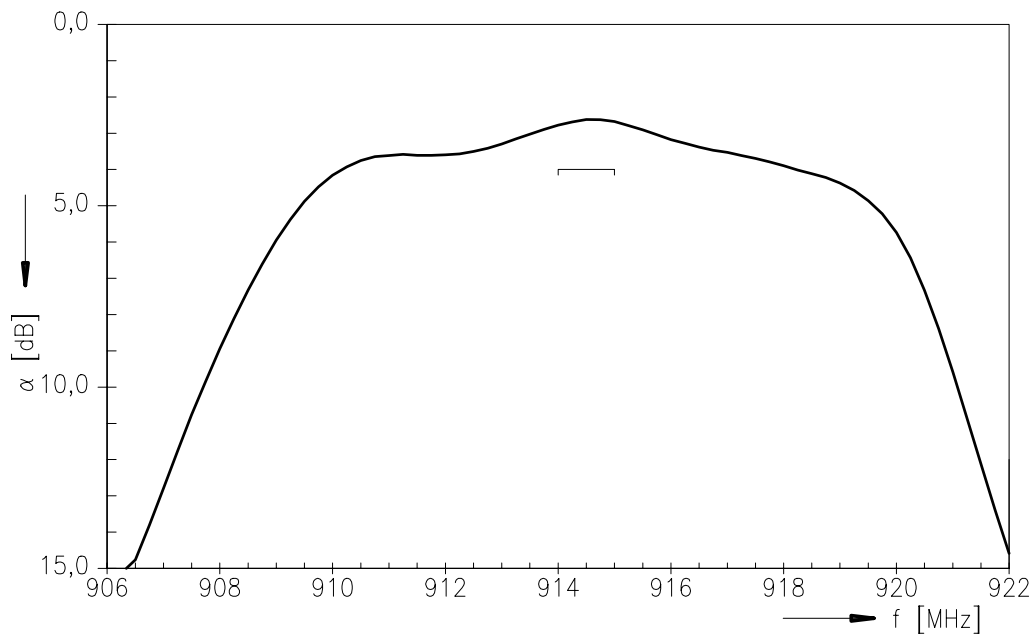
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**Frequency response channel 1 : (passband)**



**Frequency response channel 2 : (passband)**



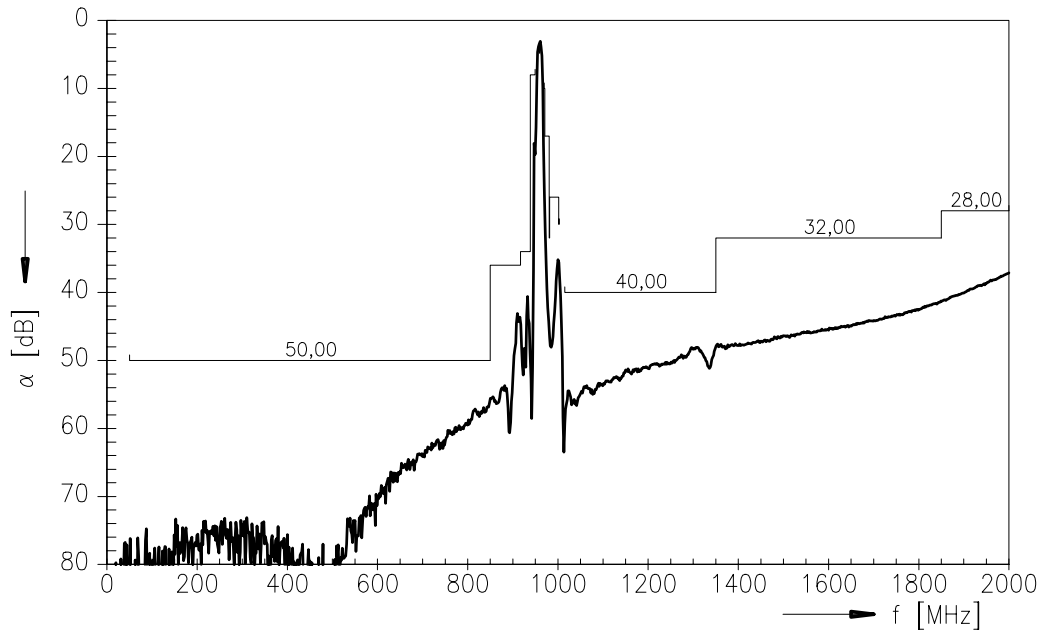


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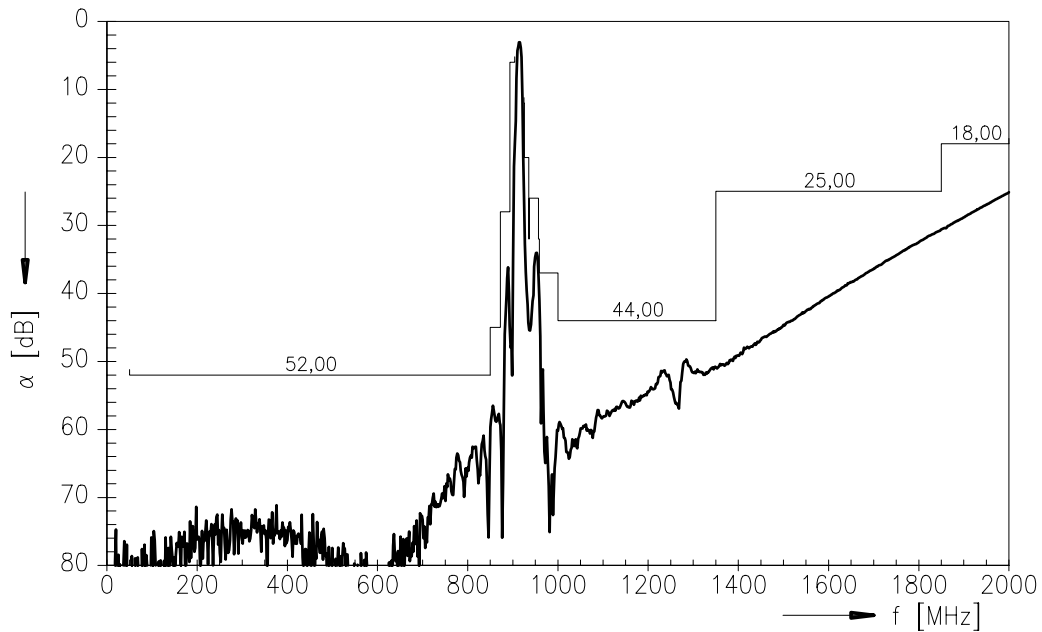
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**Frequency response channel 1 : (wideband)**



**Frequency response channel 2 : (wideband)**





Siemens Matsushita Components

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**Isolation between channel 1 and channel 2**

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

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

**Isolation between channel 1 and channel 2 :**

