



Siemens Matsushita Components

SAW Components

Low-Loss Duplexer for Mobile Communication

B4005
959.5 MHz
914.5 MHz

Data Sheet

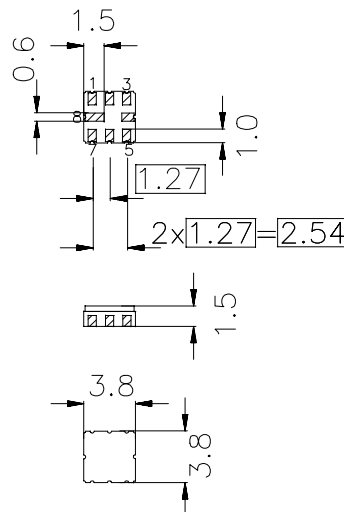
Features

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

Terminals

- Ni, gold-plated

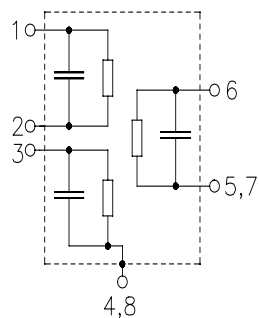
Ceramic package **QCC 8B**



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

Preliminary format of data sheet.
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OFW EM CP
Jan 22, 1999



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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.	
Center frequency	f_c	—	959.5	—	MHz
Maximum insertion attenuation	α_{max}				
959.00 ... 960.00 MHz		—	3.3	4.0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
959.00 ... 960.00 MHz		—	0.7	2.0	dB
Absolute attenuation	α				
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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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.	
Center frequency	f_c	—	914.5	—	MHz
Maximum insertion attenuation	α_{max}				
914.00 ... 915.00 MHz		—	3.0	4.0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
914.00 ... 915.00 MHz		—	0.7	2.0	dB
Absolute attenuation	α				
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



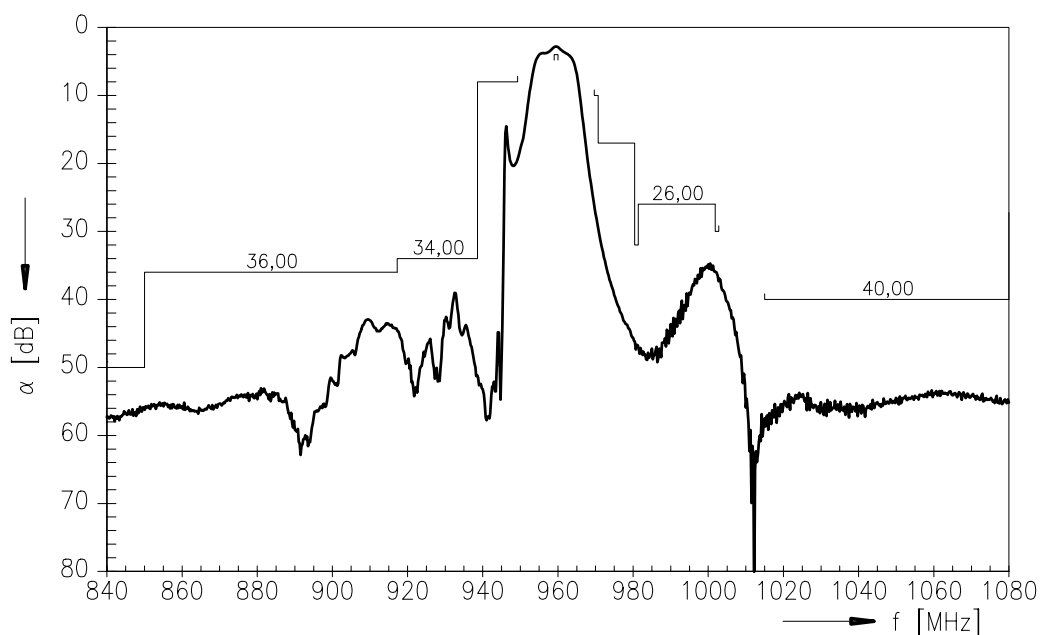
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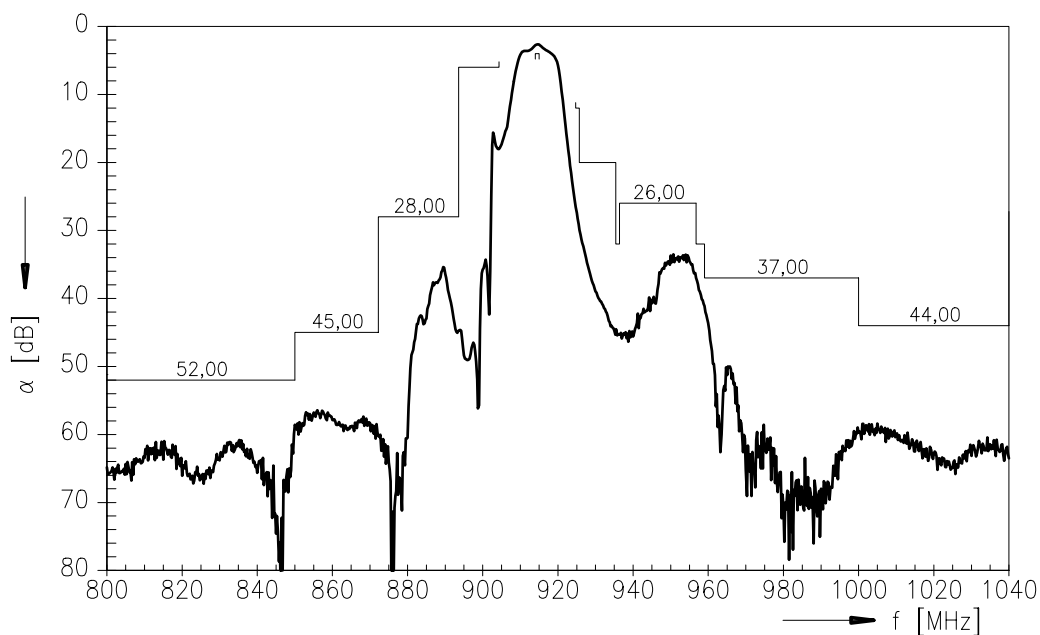
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Data Sheet

Frequency response channel 1 :



Frequency response channel 2 :





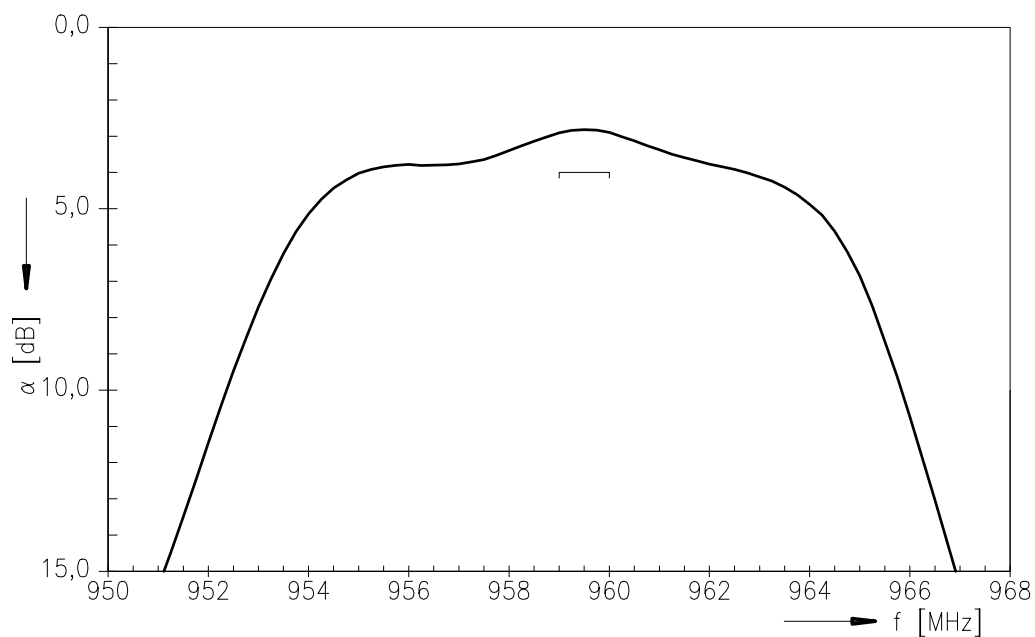
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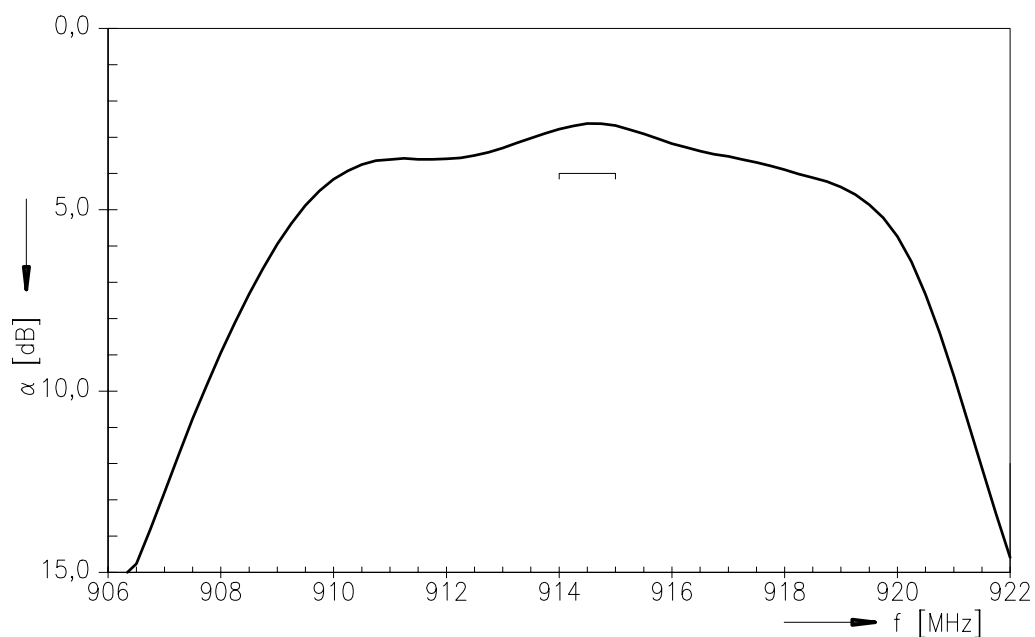
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Frequency response channel 1 : (passband)



Frequency response channel 2 : (passband)





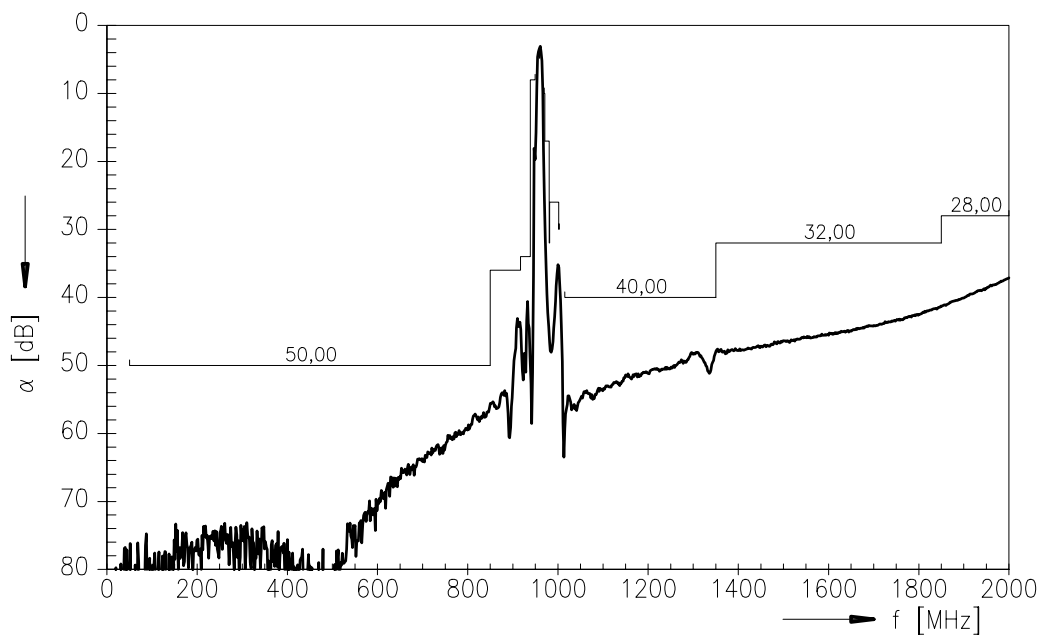
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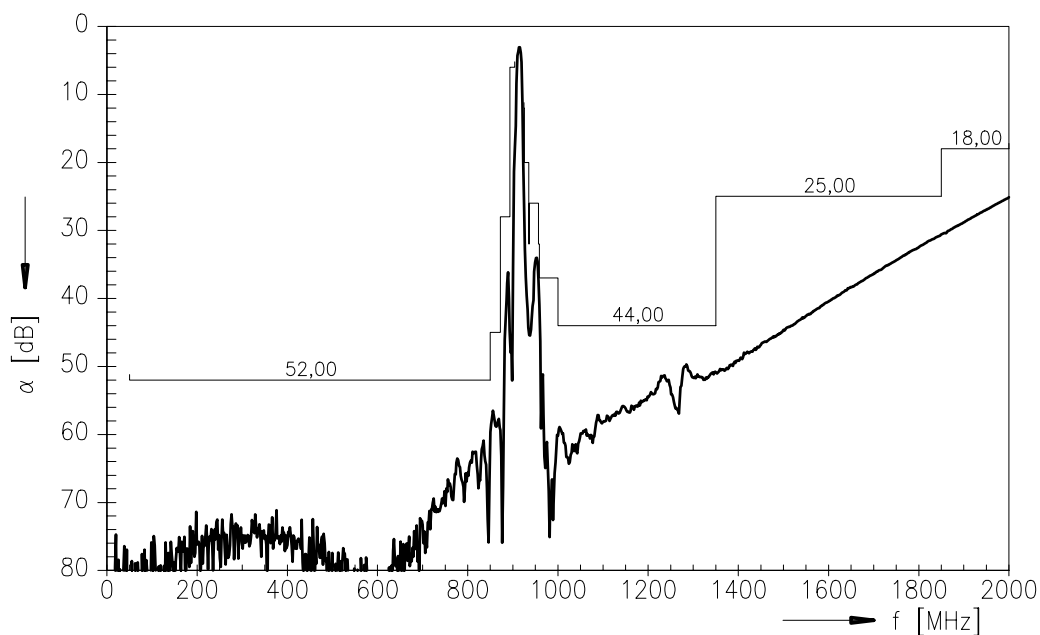
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Frequency response channel 1 : (wideband)



Frequency response channel 2 : (wideband)





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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.	
Absolute attenuation	α				
	959,00 ... 960,00 MHz	36	41	—	dB
	914,00 ... 915,00 MHz	36	41	—	dB

Isolation between channel 1 and channel 2 :

