S+M COMPONENTS **Siemens Matsushita Components**

SAW Components
Low-Loss Duplexer for Mobile Communication

B4005
959.5 MHz
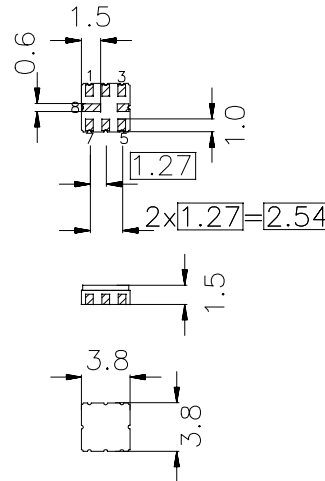**914.5 MHz**

Data Sheet

Ceramic package **QCC 8B**

Features

● Compact RF duplexer for cordless telephone CT1
● No matching network required for operation at 50 Ω
● Ceramic package for **S**urface **M**ounted **T**echnology (**SMT**)
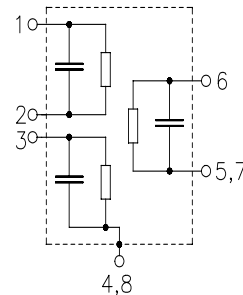
Terminals

● Ni , gold-plated

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 **S**ensitive **D**evice (**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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914.5 MHz

Data Sheet

Characteristics channel 1 (Port 1 - Ant)

Operable temperature range: T_A = 0 to +60 °C
Ant term. impedance Z_{Ant} = 50 Ω
Port 1 term. impedance $Z_{Port\,1}$ = 50 Ω
Port 2 term. impedance $Z_{Port\,2}$ = 50 Ω

		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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Low-Loss Duplexer for Mobile Communication

B4005
959.5 MHz
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 Ω
Port 1 term. impedance $Z_{Port\ 1}$ = 50 Ω
Port 2 term. impedance $Z_{Port\ 2}$ = 50 Ω

		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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Low-Loss Duplexer for Mobile Communication

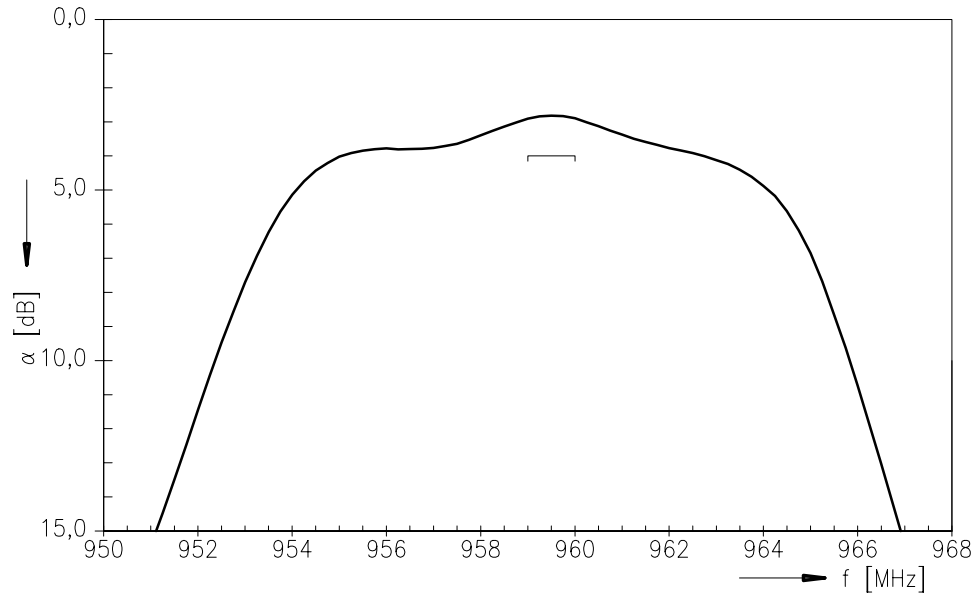**B4005**
959.5 MHz
914.5 MHz

Data Sheet

Frequency response channel 1 :

Frequency response channel 2 :
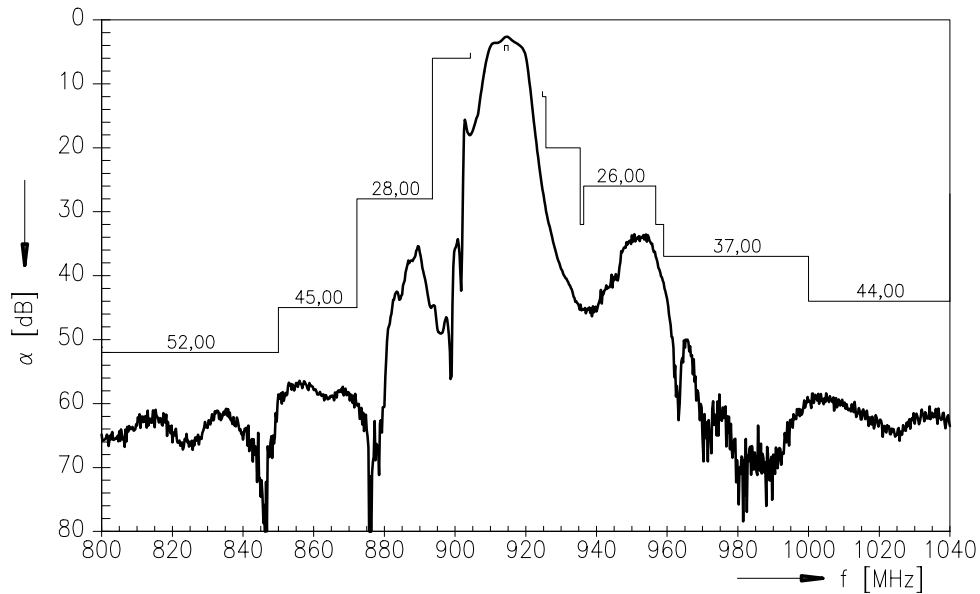
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SAW Components
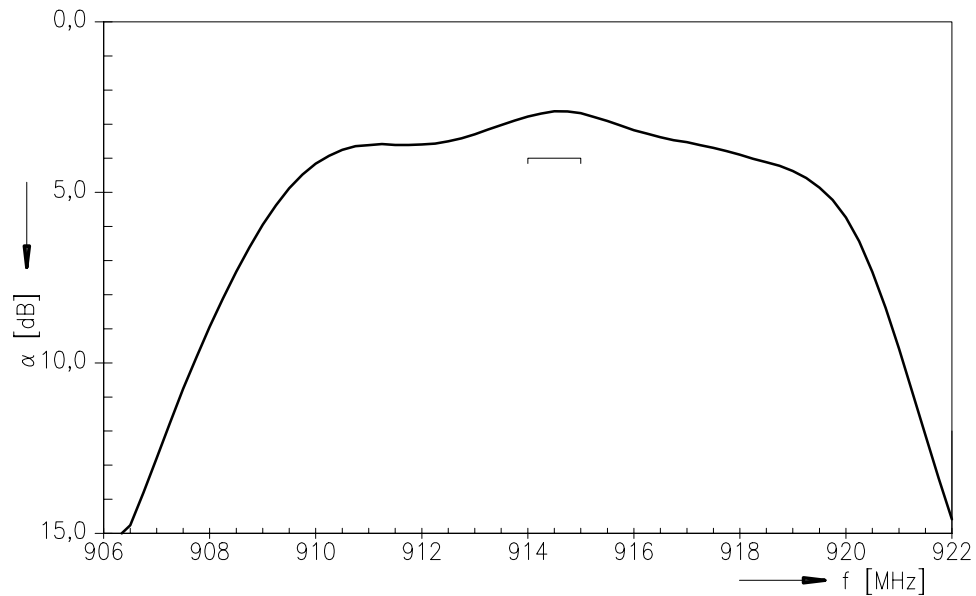**Low-Loss Duplexer for Mobile Communication**

B4005
959.5 MHz
914.5 MHz

Data Sheet

Frequency response channel 1 : (passband)

Frequency response channel 2 : (passband)

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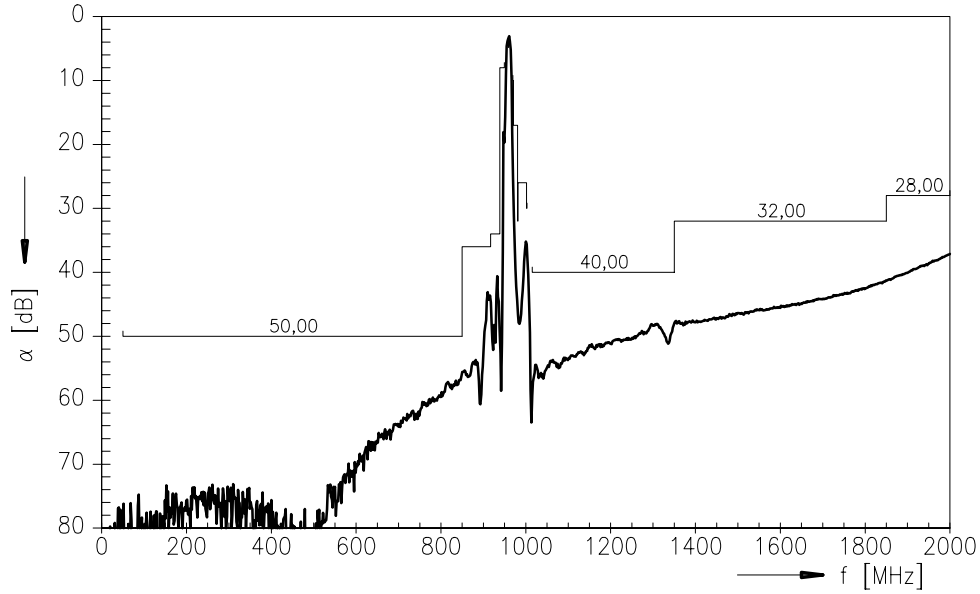Page 5 of 7

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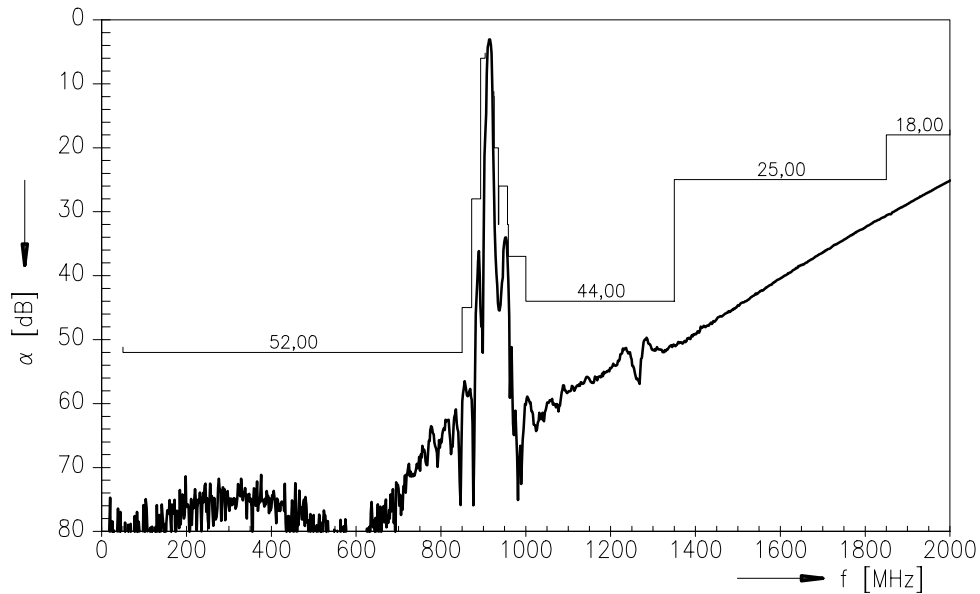
B4005
959.5 MHz
914.5 MHz

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 Ω
Port 1 term. impedance $Z_{Port\ 1}$= 50 Ω
Port 2 term. impedance $Z_{Port\ 2}$= 50 Ω

		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 :

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