



# SAW Components

Data Sheet B3859





**SAW Components**

**B3859**

**Low-Loss Filter**

**937,0 MHz**

**Data Sheet**

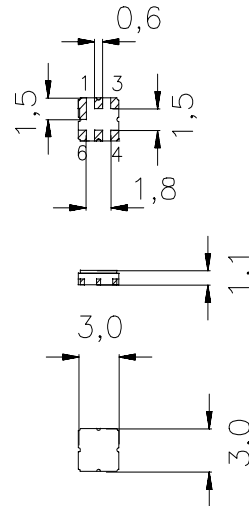
**Ceramic package DCC6C**

**Features**

- Low-loss RF filter for TETRA phone
- Usable bandwidth 10 MHz
- No matching required for operation at 50 Ω
- Package for Surface Mounted Technology (SMT)
- Hermetically sealed ceramic package

**Terminals**

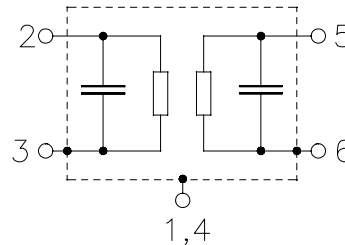
- Gold-plated



typ. Dimensions in mm, approx. weight 0,037 g

**Pin configuration**

- 2 Input
- 5 Output
- 1, 3, 4, 6 To be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B3859	B39941-B3859-U410	C61157-A7-A67	F61074-V8088-Z000

Electrostatic Sensitive Device (ESD)

**Maximum ratings**

Operable temperature range	$T_A$	-35 / +85	°C	
Storage temperature range	$T_{stg}$	-40 / +85	°C	
DC voltage	$V_{DC}$	0	V	
Source power (cw)	$P_s$	6	dBm	source impedance 50 Ω


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Operating temperature range:  $T_A = 25 \pm 5 \text{ }^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 50 \text{ } \Omega$   
 Terminating load impedance:  $Z_L = 50 \text{ } \Omega$

		min.	typ.	max.	
<b>Nominal frequency</b>	$f_N$	—	937,0	—	MHz
<b>Maximum insertion attenuation</b> 932,0 MHz ... 942,0 MHz	$\alpha_{\max}$	—	1,8	3,0	dB
<b>Amplitude ripple (p-p)</b> 932,0 MHz ... 942,0 MHz	$\Delta\alpha$	—	0,3	1,2	dB
<b>Return loss (Input and Output)</b> 932,0 MHz ... 942,0 MHz		11,0	14,0	—	dB
<b>Absolute attenuation</b>	$\alpha_{\text{abs}}$				
0,1 MHz ... 750,0 MHz		50	60	—	dB
750,0 MHz ... 800,0 MHz		46	60	—	dB
800,0 MHz ... 880,0 MHz		40	58	—	dB
880,0 MHz ... 905,0 MHz		31	36	—	dB
905,0 MHz ... 915,0 MHz		17	27	—	dB
915,0 MHz ... 922,0 MHz		8	16	—	dB
922,0 MHz ... 927,0 MHz		3	9	—	dB
947,0 MHz ... 952,0 MHz		4	9	—	dB
952,0 MHz ... 957,0 MHz		17	19	—	dB
957,0 MHz ... 980,0 MHz		21	23	—	dB
980,0 MHz ... 1025,0 MHz		26	35	—	dB
1025,0 MHz ... 1035,0 MHz		35	55	—	dB
1035,0 MHz ... 1760,0 MHz		40	46	—	dB
1760,0 MHz ... 3120,0 MHz		30	35	—	dB
3120,0 MHz ... 4000,0 MHz		18	30	—	dB
4000,0 MHz ... 6000,0 MHz		—	5	—	dB
<b>Temperature coefficient of frequency</b>	$TC_f$	—	-36	—	ppm/K



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**Characteristics**

Operating temperature range:  $T_A = -30 \dots +10 \text{ }^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 50 \text{ } \Omega$   
 Terminating load impedance:  $Z_L = 50 \text{ } \Omega$

		min.	typ.	max.	
<b>Nominal frequency</b>	$f_N$	—	937,0	—	MHz
<b>Maximum insertion attenuation</b> 932,0 MHz ... 942,0 MHz	$\alpha_{\max}$	—	2,1	3,5	dB
<b>Amplitude ripple (p-p)</b> 932,0 MHz ... 942,0 MHz	$\Delta\alpha$	—	0,65	1,2	dB
<b>Return loss (Input and Output)</b> 932,0 MHz ... 942,0 MHz		9,0	12,0	—	dB
<b>Absolute attenuation</b>	$\alpha_{\text{abs}}$				
0,1 MHz ... 750,0 MHz		50	60	—	dB
750,0 MHz ... 800,0 MHz		46	60	—	dB
800,0 MHz ... 880,0 MHz		40	58	—	dB
880,0 MHz ... 905,0 MHz		31	36	—	dB
905,0 MHz ... 915,0 MHz		17	27	—	dB
915,0 MHz ... 922,0 MHz		8	16	—	dB
922,0 MHz ... 927,0 MHz		3	9	—	dB
947,0 MHz ... 952,0 MHz		1,5	4	—	dB
952,0 MHz ... 957,0 MHz		9	15	—	dB
957,0 MHz ... 980,0 MHz		15	22	—	dB
980,0 MHz ... 1025,0 MHz		24	34	—	dB
1025,0 MHz ... 1035,0 MHz		35	55	—	dB
1035,0 MHz ... 1760,0 MHz		40	46	—	dB
1760,0 MHz ... 3120,0 MHz		30	35	—	dB
3120,0 MHz ... 4000,0 MHz		18	30	—	dB
4000,0 MHz ... 6000,0 MHz		—	5	—	dB
<b>Temperature coefficient of frequency</b>	$TC_f$	—	- 36	—	ppm/K


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Operating temperature range:  $T_A = +35 \dots +70 \text{ }^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 50 \text{ } \Omega$   
 Terminating load impedance:  $Z_L = 50 \text{ } \Omega$

		min.	typ.	max.	
<b>Nominal frequency</b>	$f_N$	—	937,0	—	MHz
<b>Maximum insertion attenuation</b> 932,0 MHz ... 942,0 MHz	$\alpha_{\max}$	—	2,1	3,5	dB
<b>Amplitude ripple (p-p)</b> 932,0 MHz ... 942,0 MHz	$\Delta\alpha$	—	0,6	1,2	dB
<b>Return loss (Input and Output)</b> 932,0 MHz ... 942,0 MHz		10,0	12,0	—	dB
<b>Absolute attenuation</b>	$\alpha_{\text{abs}}$				
0,1 MHz ... 750,0 MHz		50	60	—	dB
750,0 MHz ... 800,0 MHz		46	60	—	dB
800,0 MHz ... 880,0 MHz		40	58	—	dB
880,0 MHz ... 905,0 MHz		31	36	—	dB
905,0 MHz ... 915,0 MHz		17	27	—	dB
915,0 MHz ... 922,0 MHz		3	12	—	dB
922,0 MHz ... 927,0 MHz		1,5	4	—	dB
947,0 MHz ... 952,0 MHz		5	10	—	dB
952,0 MHz ... 957,0 MHz		15	20	—	dB
957,0 MHz ... 980,0 MHz		21	23	—	dB
980,0 MHz ... 1025,0 MHz		26	35	—	dB
1025,0 MHz ... 1035,0 MHz		35	55	—	dB
1035,0 MHz ... 1760,0 MHz		40	46	—	dB
1760,0 MHz ... 3120,0 MHz		30	35	—	dB
3120,0 MHz ... 4000,0 MHz		18	30	—	dB
4000,0 MHz ... 6000,0 MHz		—	5	—	dB
<b>Temperature coefficient of frequency</b>	$TC_f$	—	- 36	—	ppm/K



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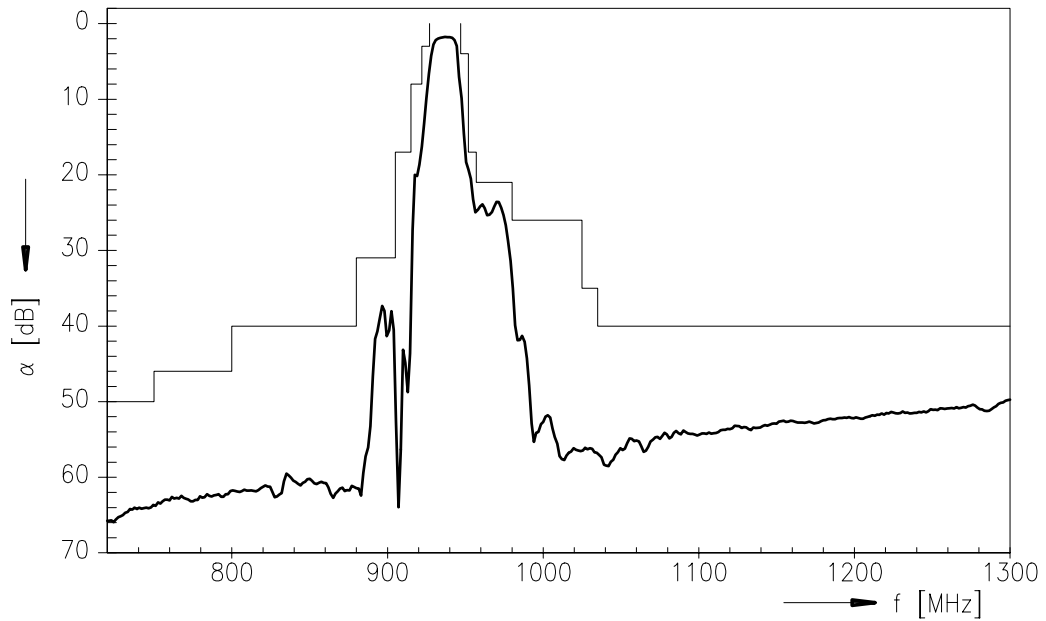
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Low-Loss Filter

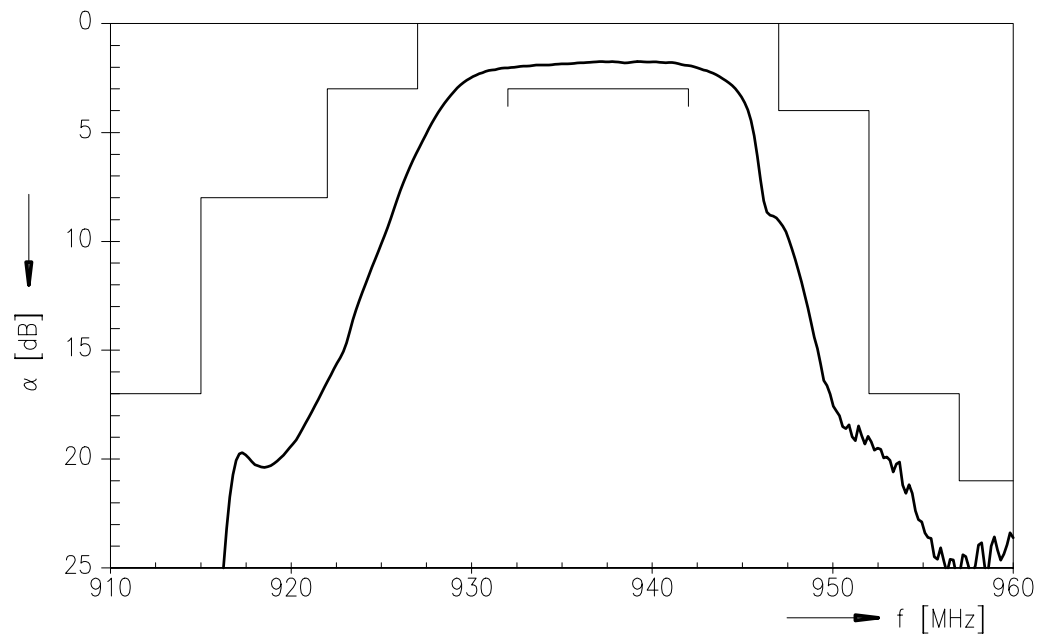
937,0 MHz

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Transfer function



Transfer function (pass band,  $25 \pm 5$  °C)





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