



Siemens Matsushita Components

**SAW Components**  
**Low Loss Filter for Mobile Communication**

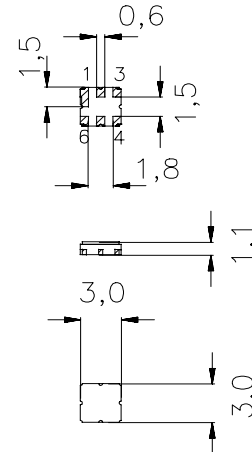
**B4114**  
**862,00 MHz**

**Data Sheet**

**Features**

- Low-loss RF cleanup filter for mobile telephone PCS systems, transmit path
- Usable passband 30 MHz
- High nearby selectivity
- Ceramic package for **Surface Mounted Technology (SMT)**

Ceramic package **DCC6C**



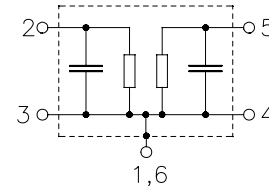
**Terminals**

- Ni, gold-plated

Dimensions in mm, approx. weight 0,05 g

**Pin configuration**

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



Type	Ordering code	Marking and Package according to	Packing according to
B4114	B39861-B4114-U410	C61157-A7-A67	F61074-V8088-Z000

Electrostatic Sensitive Device (ESD)

**Maximum ratings**

Operable temperature range	$T$	- 30 / + 85	°C	source impedance 50 $\Omega$
Storage temperature range	$T_{stg}$	- 40 / + 85	°C	
DC voltage	$V_{DC}$	0	V	
Source power	$P_s$	3	dBm	



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**Characteristics**

Operating temperature range:  $T = -30$  to  $+85^{\circ}\text{C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$

		min.	typ.	max.	
<b>Center frequency</b>	$f_c$	—	862,0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$				
	847,0 ... 877,0 MHz	—	2,8	3,4	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
	847,0 ... 877,0 MHz	—	1,1	1,7	dB
<b>Input VSWR</b>					
	847,0 ... 877,0 MHz	—	2,4	2,6	
<b>Output VSWR</b>					
	847,0 ... 877,0 MHz	—	2,4	2,6	
<b>Relative attenuation (relative to <math>\alpha_{max}</math>)</b>	$\alpha_{rel}$				
	0,0 ... 820,0 MHz	32,0	37,0	—	dB
	820,0 ... 838,0 MHz	16,0	19,0	—	dB
	905,0 ... 2200,0 MHz	23,0	26,0	—	dB



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**Characteristics of 2 filters in cascade <sup>1)</sup>**

Operating temperature range:  $T = -30$  to  $+85^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$

				min.	typ.	max.	
<b>Center frequency</b>	$f_c$			—	862,0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	847,0 ... 877,0	MHz	—	5,5	7,0	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	847,0 ... 877,0	MHz	—	2,1	3,6	dB
		847,0 ... 877,0	MHz 2)	—	2,1	3,0	dB
<b>Input VSWR</b>		847,0 ... 877,0	MHz	—	2,8	3,5	
<b>Output VSWR</b>		847,0 ... 877,0	MHz	—	2,8	3,5	
<b>Relative attenuation (relative to <math>\alpha_{\max}</math>)</b>	$\alpha_{\text{rel}}$	0,0 ... 820,0	MHz	60,0	75,0	—	dB
		820,0 ... 838,0	MHz	31,0	34,0	—	dB
		905,0 ... 2200,0	MHz	35,0	40,0	—	dB

<sup>1)</sup> Cascaded filters matched to each other with parallel coupling coil of 10 nH.

<sup>2)</sup> In temperature range  $-20$  to  $+85^\circ\text{C}$ .



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**Characteristics of 2 filters in cascade <sup>1)</sup>**

Operating temperature range:  $T = -30$  to  $+85^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$

			min.	typ.	max.	
<b>Center frequency</b>	$f_c$		—	862,0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	847,0 ... 877,0 MHz	—	5,5	7,0	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	847,0 ... 877,0 MHz	—	2,1	3,6	dB
		847,0 ... 877,0 MHz <sup>2)</sup>	—	2,1	3,0	dB
<b>Input VSWR</b>		847,0 ... 877,0 MHz	—	3,9	4,4	
<b>Output VSWR</b>		847,0 ... 877,0 MHz	—	3,9	4,4	
<b>Relative attenuation (relative to <math>\alpha_{\max}</math>)</b>	$\alpha_{\text{rel}}$	0,0 ... 820,0 MHz	60,0	75,0	—	dB
		820,0 ... 838,0 MHz	31,0	34,0	—	dB
		905,0 ... 2200,0 MHz	35,0	40,0	—	dB

<sup>1)</sup> Cascaded filters directly connected to each other without matching network.

<sup>2)</sup> In temperature range  $-20$  to  $+85^\circ\text{C}$ .

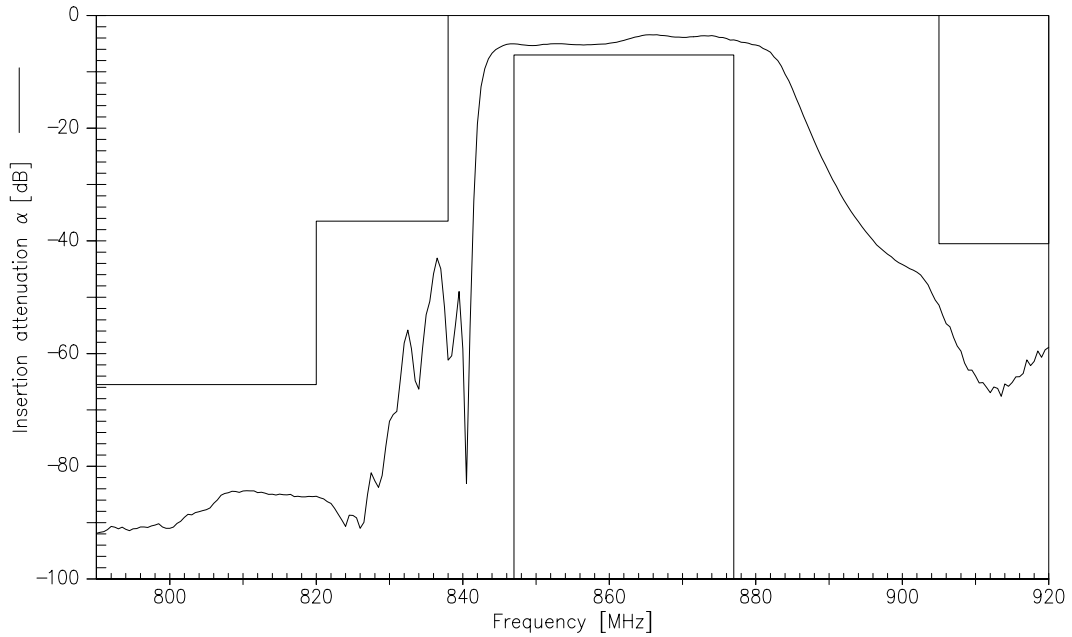


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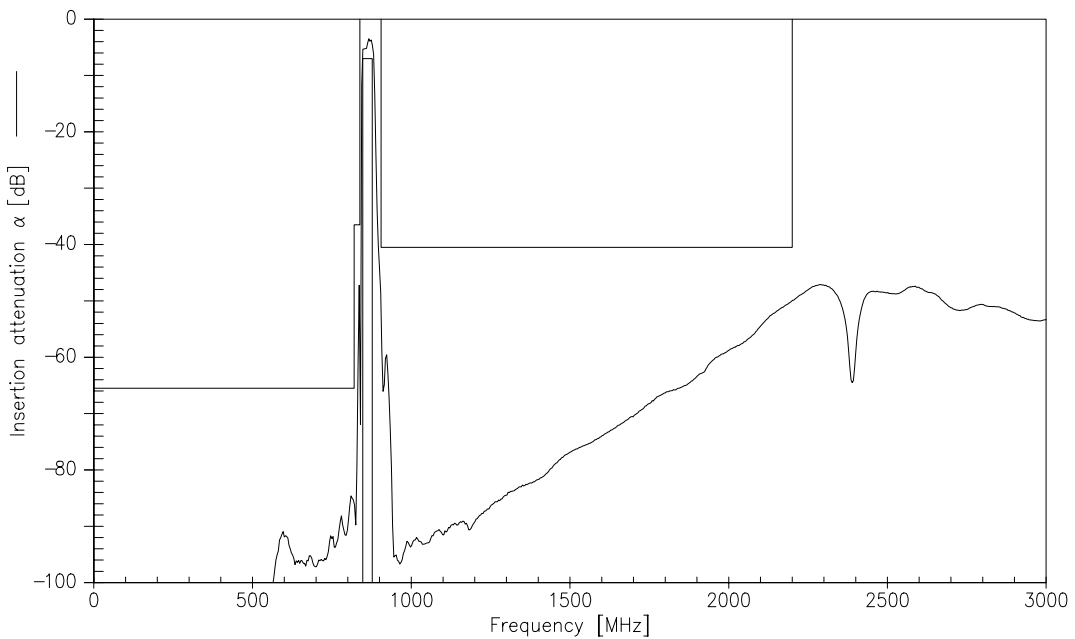
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## Data Sheet

**Measured transfer function**(2 filters B4114 in cascade with 10nH parallel coupling coil):



**Measured transfer function**(wideband, 2 filters B4114 in cascade with 10nH parallel coupling coil):



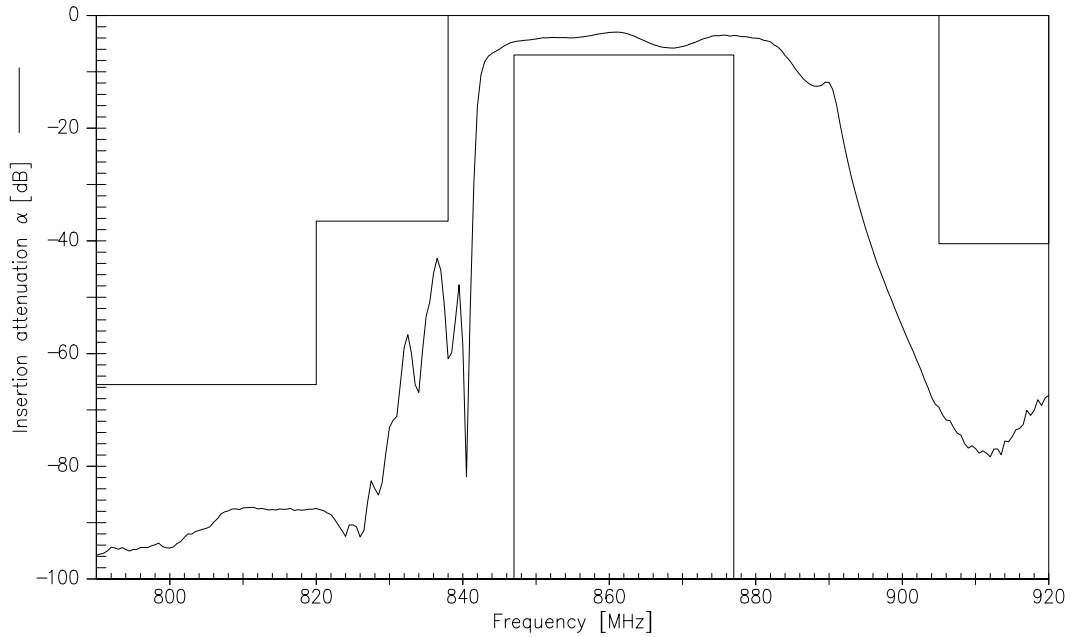


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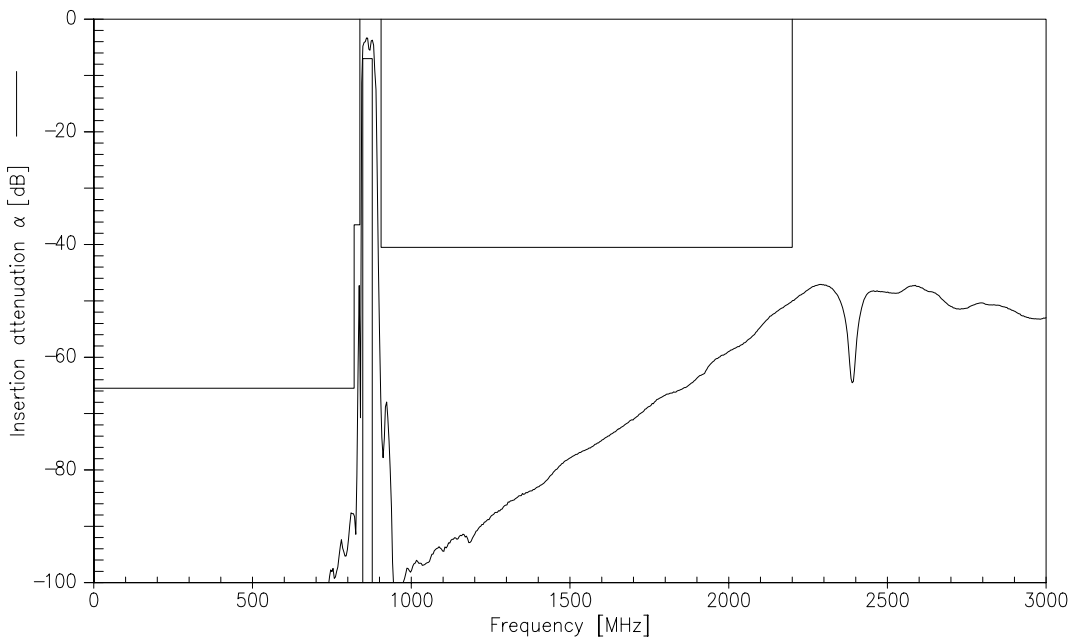
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**Data Sheet**

**Measured transfer function(2 filters B4114 in cascade without parallel coupling coil):**



**Measured transfer function(wideband, 2 filters B4114 in cascade without parallel coupling coil):**





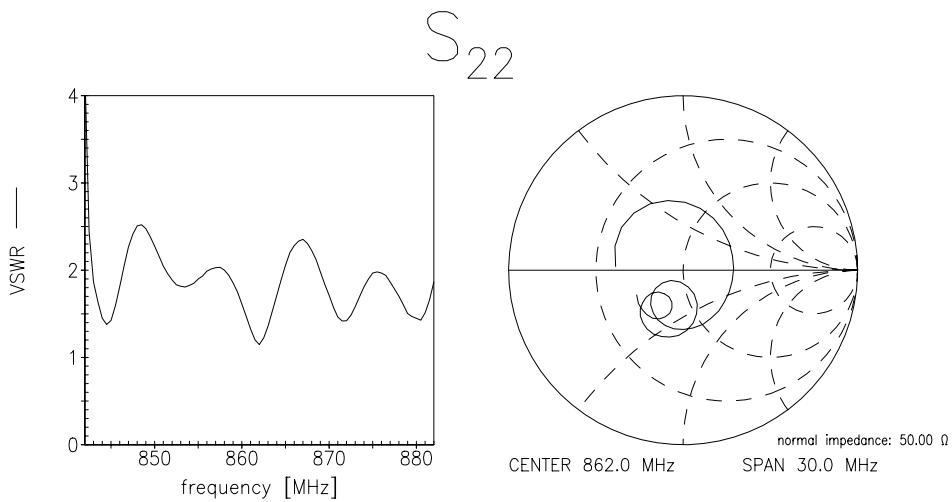
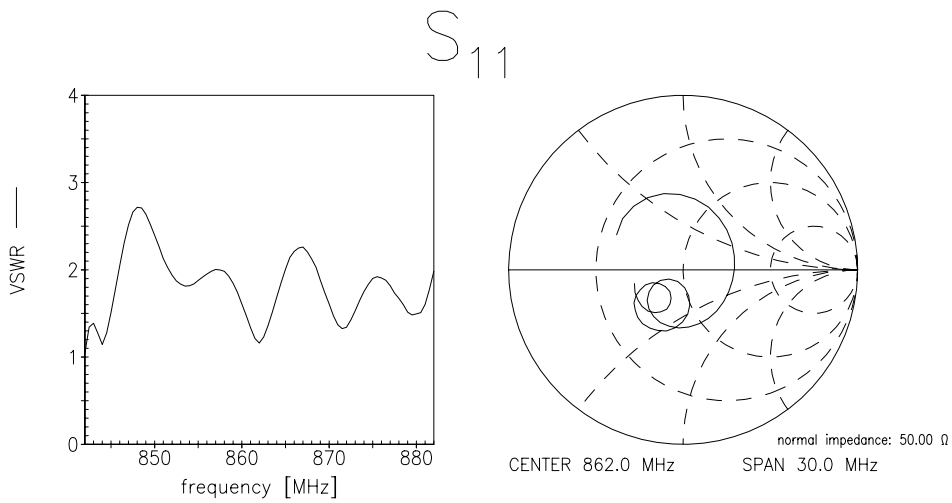
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## Data Sheet

Reflection functions(2 filters B4114 in cascade with 10nH parallel coupling coil):





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Reflection functions(2 filters B4114 in cascade without parallel coupling coil):

