Siemens Matsushita Components

SAW Components
Low Loss Filter for Mobile Communication

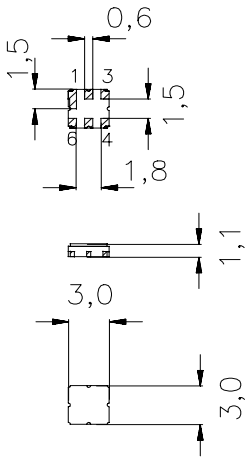
B4114
862,00 MHz

Data Sheet

Ceramic package **DCC6C**

Features

- Low-loss RF cleanup filter for mobile telephone PCS systems, transmit path
- Usable passband 30 MHz
- High nearby selectivity
- Ceramic package for **S**urface **M**ounted **T**echnology **(SMT)**



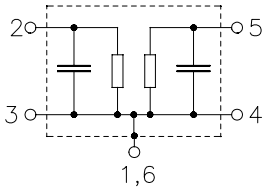
Terminals

- 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 **S**ensitive **D**evice (**ESD**)

Maximum ratings

Operable temperature range	T	– 30 / + 85	˚C	
Storage temperature range	T_{stg}	– 40 / + 85	˚C	
DC voltage	V_{DC}	0	V	
Source power	P_s	3	dBm	source impedance 50 Ω

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Characteristics

Operating temperature range: T = -30 to +85˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		min.	typ.	max.	
Center frequency	f_c	—	862,0	—	MHz
Maximum insertion attenuation	α_{max}				
847,0 ... 877,0 MHz		—	2,8	3,4	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
847,0 ... 877,0 MHz		—	1,1	1,7	dB
Input VSWR					
847,0 ... 877,0 MHz		—	2,4	2,6	
Output VSWR					
847,0 ... 877,0 MHz		—	2,4	2,6	
Relative attenuation (relative to α_{max})	α_{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

Characteristics of 2 filters in cascade [1)]

Operating temperature range: T = -30 to +85˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		min.	typ.	max.	
Center frequency	f_c	—	862,0	—	MHz
Maximum insertion attenuation	α_{max}				
847,0 ... 877,0 MHz		—	5,5	7,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
847,0 ... 877,0 MHz		—	2,1	3,6	dB
847,0 ... 877,0 MHz	2)	—	2,1	3,0	dB
Input VSWR					
847,0 ... 877,0 MHz		—	2,8	3,5	
Output VSWR					
847,0 ... 877,0 MHz		—	2,8	3,5	
Relative attenuation (relative to α_{max})	α_{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

[1)] Cascaded filters matched to each other with parallel coupling coil of 10 nH.

[2)] In temperature range -20 to +85˚C.

Characteristics of 2 filters in cascade [1)]

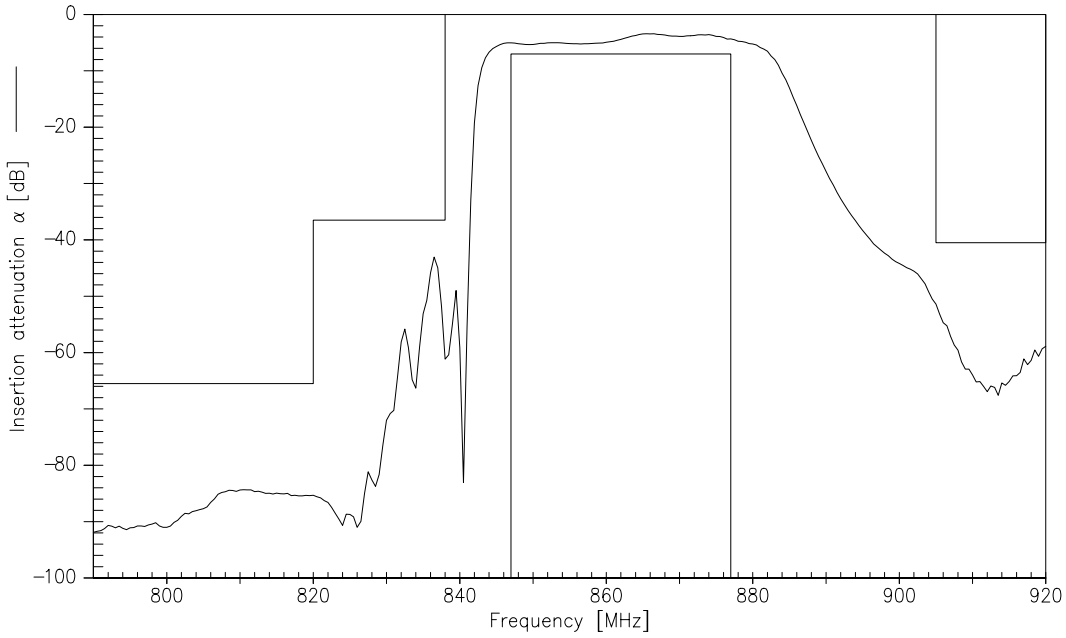
Operating temperature range: T = -30 to +85˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		min.	typ.	max.	
Center frequency	f_c	—	862,0	—	MHz
Maximum insertion attenuation	α_{max}				
847,0 ... 877,0 MHz		—	5,5	7,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
847,0 ... 877,0 MHz		—	2,1	3,6	dB
847,0 ... 877,0 MHz	2)	—	2,1	3,0	dB
Input VSWR					
847,0 ... 877,0 MHz		—	3,9	4,4	
Output VSWR					
847,0 ... 877,0 MHz		—	3,9	4,4	
Relative attenuation (relative to α_{max})	α_{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

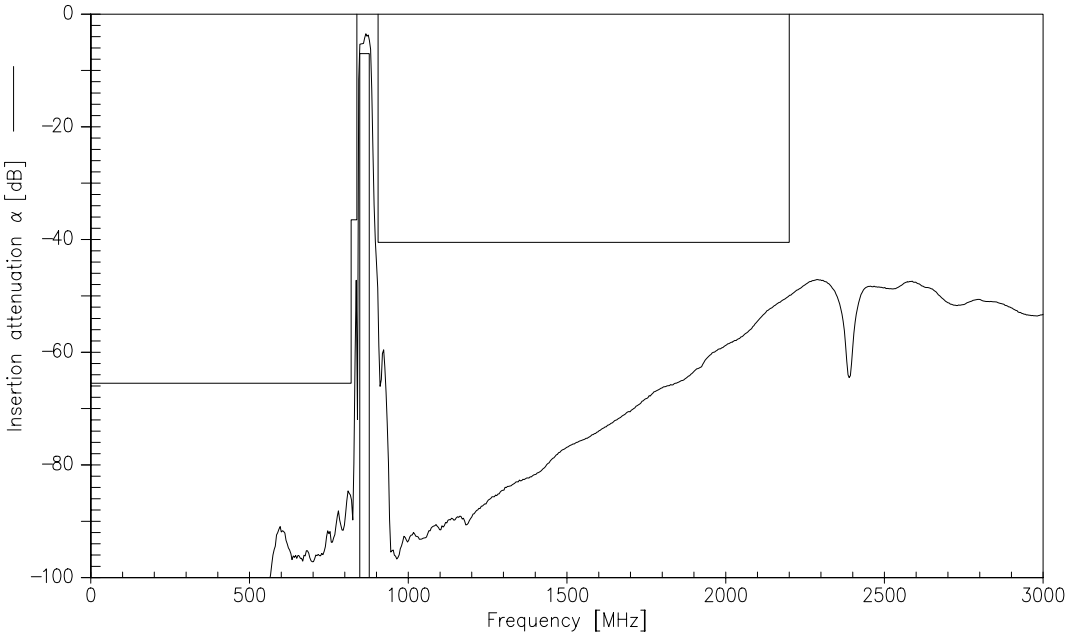
[1)] Cascaded filters directly connected to each other without matching network.

[2)] In temperature range -20 to +85˚C.

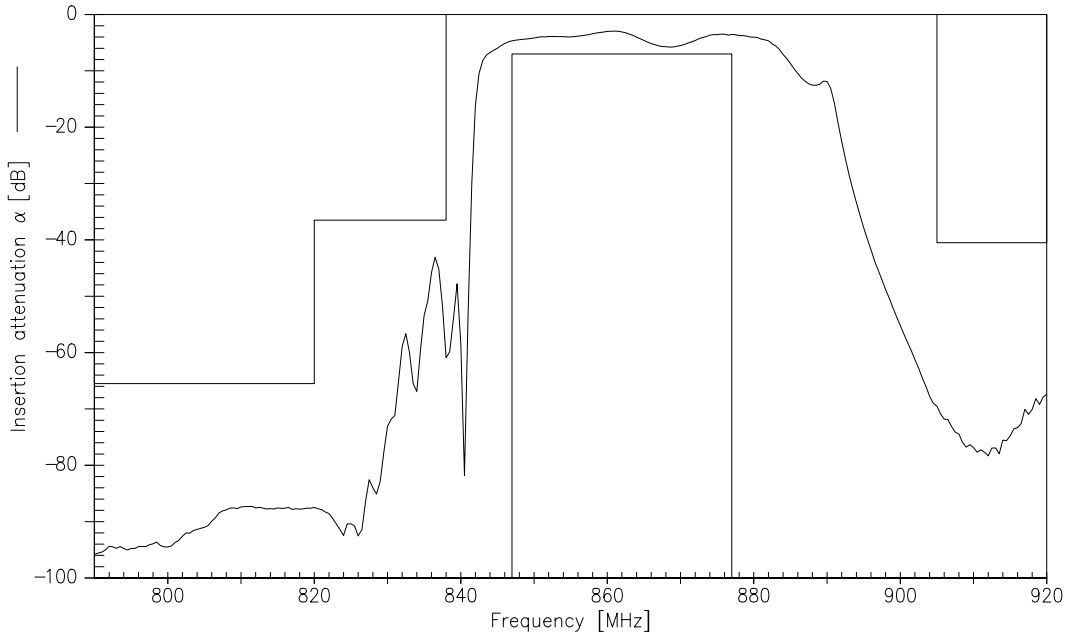
Measured transfer function(2 filters B4114 in cascade with 10nH parallel coupling coil)**:**



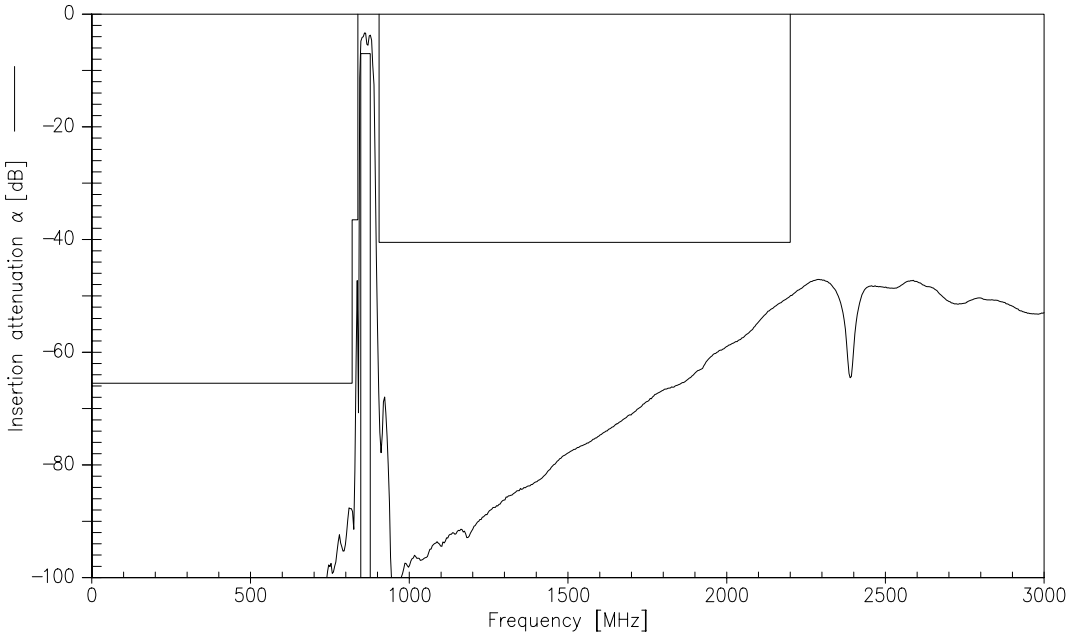
Measured transfer function(wideband,2 filters B4114 in cascade with 10nH parallel coupling coil)**:**



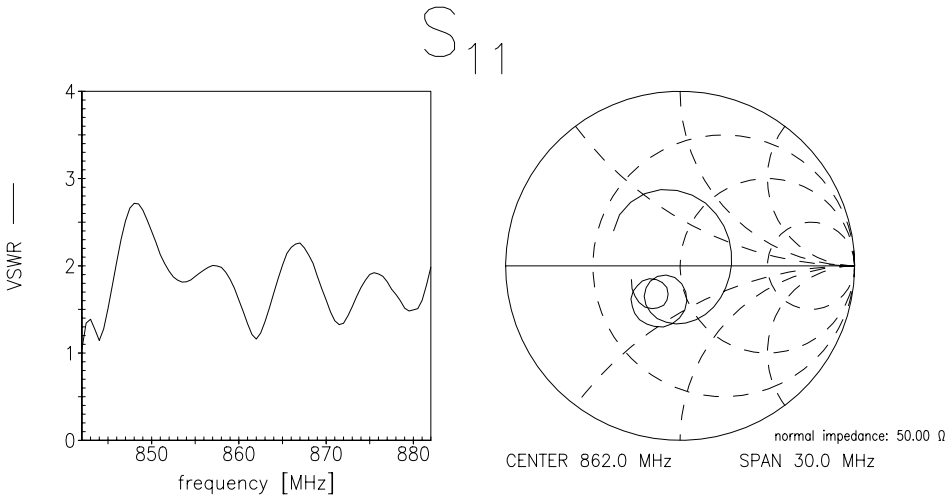
Measured transfer function(2 filters B4114 in cascade without parallel coupling coil)**:**

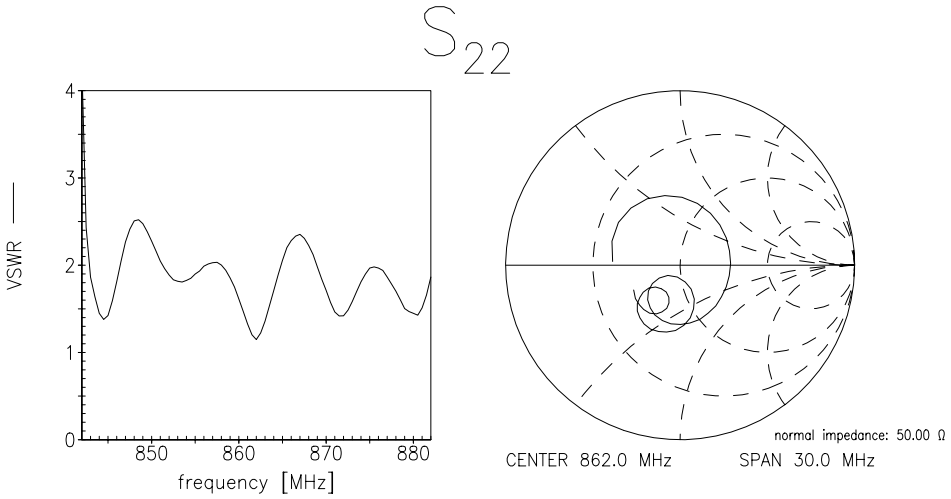


Measured transfer function(wideband, 2 filters B4114 in cascade without parallel coupling coil)**:**



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





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