



# SAW Components

Data Sheet B4115





**SAW Components**

**B4115**

**Low-Loss Filter for Mobile Communication**

**942,5 MHz**

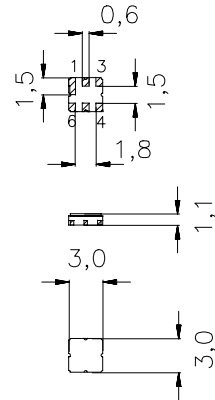
**Data Sheet**



Ceramic package **DCC6D**

**Features**

- Low-loss RF filter for mobile telephone EGSM systems, receive path
- Low amplitude ripple
- Usable passband 35 MHz
- Unbalanced to balanced Operation
- Ceramic package for **Surface Mounted Technology (SMT)**



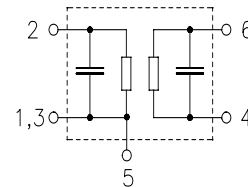
**Terminals**

- Ni, gold-plated

Dimensions in mm, approx. weight 0,037 g

**Pin configuration**

- 2 Input, unbalanced
- 4, 6 Balanced Outputs
- 1, 3, 5 To be grounded
- 1, 3, 5 Case ground



Type	Ordering code	Marking and Package according to	Packing according to
B4115	B39941-B4115-U510	C61157-A7-A68	F61074-V8089-Z000

Electrostatic Sensitive Device (ESD)

**Maximum ratings**

Operable temperature range	$T$	- 20 / + 80	°C	source and load impedance 50 $\Omega$ peak power of GSM signal duty cycle 1 : 8 duty cycle 2 : 8 continuous wave
Storage temperature range	$T_{stg}$	- 40 / + 85	°C	
DC voltage	$V_{DC}$	3	V	
Input power max.	$P_{IN}$			
880 ... 915 MHz		5	dBm	
elsewhere		3	dBm	



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**Characteristics**

Operating temperature range:  $T = 25 \pm 2^\circ \text{C}$   
 Terminating source impedance:  $Z_S = 50 \Omega$   
 Terminating load impedance:  $Z_L = 50 \Omega$  (balanced)

		min.	typ.	max.	
<b>Center frequency</b>	$f_C$	—	942,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$				
925,0 ... 960,0 MHz		—	2,7	3,7	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
925,0 ... 960,0 MHz		—	0,8	2,0	dB
<b>Input/Output VSWR</b>					
925,0 ... 960,0 MHz		—	1,8	2,0	
<b>Output phase balance (<math>\phi(S_{31}) - \phi(S_{21}) + 180^\circ</math>)</b>					
925,0 ... 960,0 MHz		170	—	190	degree
<b>Output amplitude balance (<math> S_{31}/S_{21} </math>)</b>					
925,0 ... 960,0 MHz		-1,0	0	1,0	dB
<b>Output reflection coefficient @942,5 MHz</b>					
Phase		-59	-39	-19	°
<b>Attenuation</b>	$\alpha$				
0,0 ... 880,0 MHz		50	60	—	dB
880,0 ... 905,0 MHz		28	35	—	dB
905,0 ... 915,0 MHz		18	25	—	dB
980,0 ... 1050,0 MHz		22	24	—	dB
1050,0 ... 1680,0 MHz		50	60	—	dB
1680,0 ... 2000,0 MHz		45	55	—	dB
2000,0 ... 3000,0 MHz		30	45	—	dB
3000,0 ... 6000,0 MHz		15	25	—	dB



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**Characteristics**

Operating temperature range:  $T = -20^{\circ}\text{C}$  to  $+75^{\circ}\text{C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$  (balanced)

		min.	typ.	max.	
<b>Center frequency</b>	$f_C$	—	942,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$				
	925,0 ... 960,0 MHz	—	3,0	4,2	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
	925,0 ... 960,0 MHz	—	1,3	2,5	dB
<b>Input/Output VSWR</b>					
	925,0 ... 960,0 MHz	—	1,8	2,3	
<b>Output phase balance (<math>\phi(S_{31}) - \phi(S_{21}) + 180^{\circ}</math>)</b>					
	925,0 ... 960,0 MHz	170	—	190	degree
<b>Output amplitude balance (<math> S_{31}/S_{21} </math>)</b>					
	925,0 ... 960,0 MHz	-1,0	0	1,0	dB
<b>Attenuation</b>	$\alpha$				
	0,0 ... 880,0 MHz	50	60	—	dB
	880,0 ... 905,0 MHz	28	33	—	dB
	905,0 ... 915,0 MHz	15	23	—	dB
	980,0 ... 1050,0 MHz	20	22	—	dB
	1050,0 ... 1680,0 MHz	50	60	—	dB
	1680,0 ... 2000,0 MHz	45	55	—	dB
	2000,0 ... 3000,0 MHz	30	45	—	dB
	3000,0 ... 6000,0 MHz	15	25	—	dB



**Characteristics**

Operating temperature range:  $T = -20^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$  (balanced)

		min.	typ.	max.	
<b>Center frequency</b>	$f_C$	—	942,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	—	3,0	4,3	dB
925,0 ... 960,0 MHz					
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	1,3	2,6	dB
925,0 ... 960,0 MHz					
<b>Input/Output VSWR</b>		—	1,8	2,3	
925,0 ... 960,0 MHz					
<b>Output phase balance (<math>\phi(S_{31}) - \phi(S_{21}) + 180^{\circ}</math>)</b>		170	—	190	degree
925,0 ... 960,0 MHz					
<b>Output amplitude balance (<math> S_{31}/S_{21} </math>)</b>		-1,0	0	1,0	dB
925,0 ... 960,0 MHz					
<b>Attenuation</b>	$\alpha$				
0,0 ... 880,0 MHz		50	60	—	dB
880,0 ... 905,0 MHz		28	33	—	
905,0 ... 915,0 MHz		13	21	—	dB
980,0 ... 1050,0 MHz		20	22	—	
1050,0 ... 1680,0 MHz		50	60	—	dB
1680,0 ... 2000,0 MHz		45	55	—	
2000,0 ... 3000,0 MHz		30	45	—	dB
3000,0 ... 6000,0 MHz		15	25	—	



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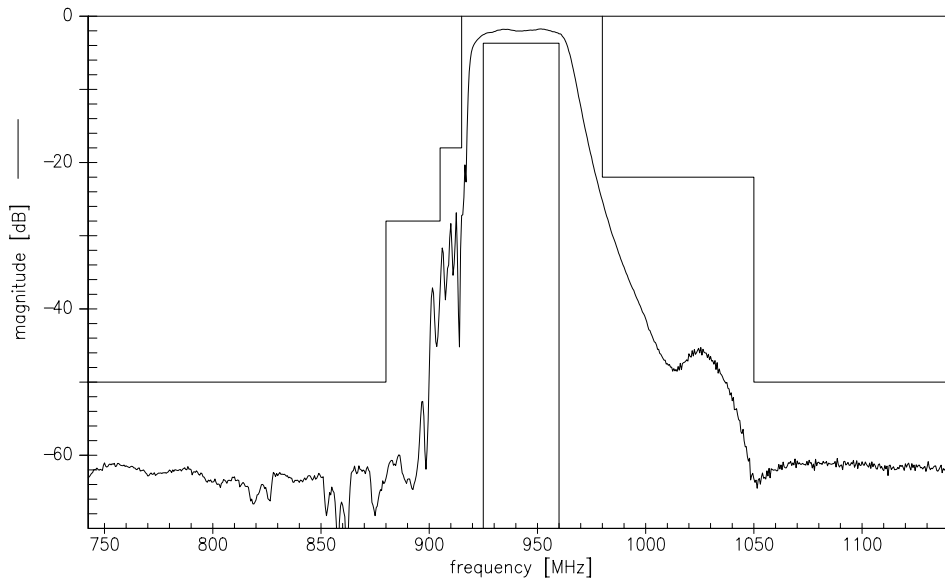
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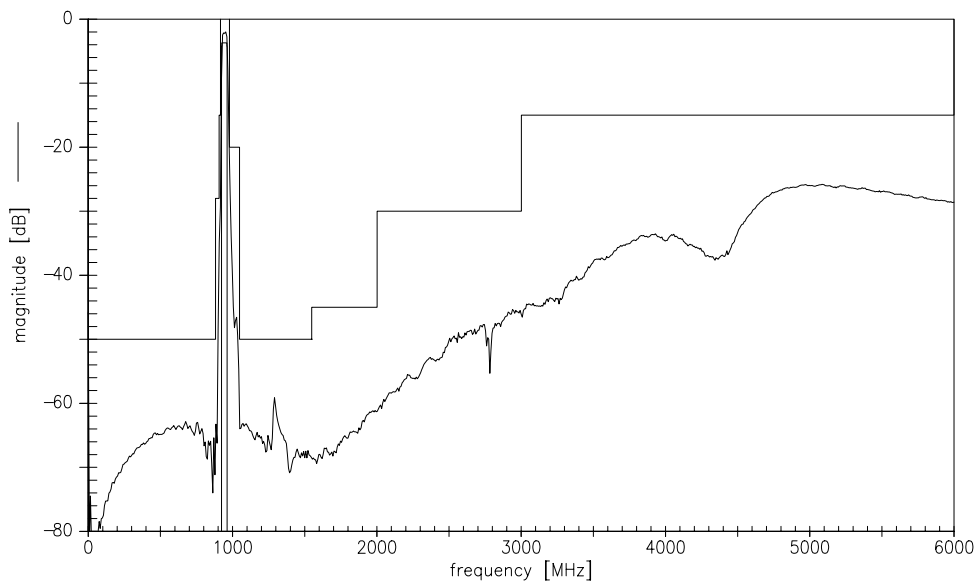
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Transfer function



Transfer function (wide band)





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**Published by EPCOS AG**

**Surface Acoustic Wave Components Division, OFW E MF**

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