



SAW Components

Data Sheet B4167





SAW Components **B4167**

Low-Loss Filter for Mobile Communication **1842,5 MHz**

Data Sheet



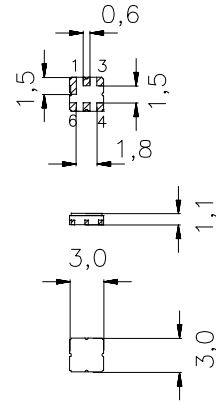
Ceramic package **DCC6D**

Features

- Low-loss RF filter for mobile telephone PCN systems, receive path
- Low amplitude ripple
- Usable passband 75 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50Ω to 200Ω
- Package for **S**urface **M**ounted **T**echnology (**SMT**)
- Ceramic SMD package

Terminals

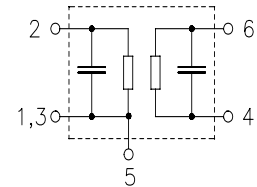
- Ni, gold-plated



Dimensions in mm, approx. weight 0,037 g

Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
B4167	B39182-B4167-U510	C61157-A7-A68	F61074-V8089-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 20 / + 75	°C	source/load impedance 50/200 Ω peak power of GSM signal, duty cycle 2 : 8
Storage temperature range	T_{stg}	- 40 / + 85	°C	
DC voltage	V_{DC}	5	V	
Input power max.				
1710 ... 1785 MHz	P_{IN}	11	dBm	
1805 ... 1880 MHz	P_{IN}	11	dBm	
elsewhere	P_{IN}	0	dBm	



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Characteristics

Operating Temperature Range: $T = +25 \pm 2 \text{ }^\circ\text{C}$
 Terminating source impedance: $Z_S = 50\Omega$ (unbalanced)
 Terminating load impedance: $Z_L = 200\Omega \parallel 22 \text{ nH}$ (balanced)

			min.	typ.	max.	
Center frequency	f_C		—	1842,5	—	MHz
Maximum insertion attenuation	α_{\max}	1805,0 ... 1880,0 MHz	—	2,0	3,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$	1805,0 ... 1880,0 MHz	—	0,9	2,0	dB
Input VSWR		1805,0 ... 1880,0 MHz	—	1,8	2,3	
Output VSWR		1805,0 ... 1880,0 MHz	—	1,8	2,3	
Output amplitude balance (S_{31}/S_{21})		1805,0 ... 1880,0 MHz	-1,5	-1,1 / +0,6	1,5	dB
Output phase balance ($\phi(S_{31})-\phi(S_{21})+180^\circ$)		1805,0 ... 1880,0 MHz	-12	+/- 6	12	°
Attenuation	α					
		0,0 ... 1000,0 MHz	40	50	—	dB
		1000,0 ... 1550,0 MHz	30	40	—	dB
		1550,0 ... 1705,0 MHz	25	28	—	dB
		1705,0 ... 1785,0 MHz	12	18	—	dB
		1920,0 ... 1980,0 MHz	12	17	—	dB
		1980,0 ... 2010,0 MHz	18	22	—	dB
		2010,0 ... 2500,0 MHz	20	26	—	dB
		2500,0 ... 3840,0 MHz	25	35	—	dB
		3840,0 ... 6000,0 MHz	20	32	—	dB



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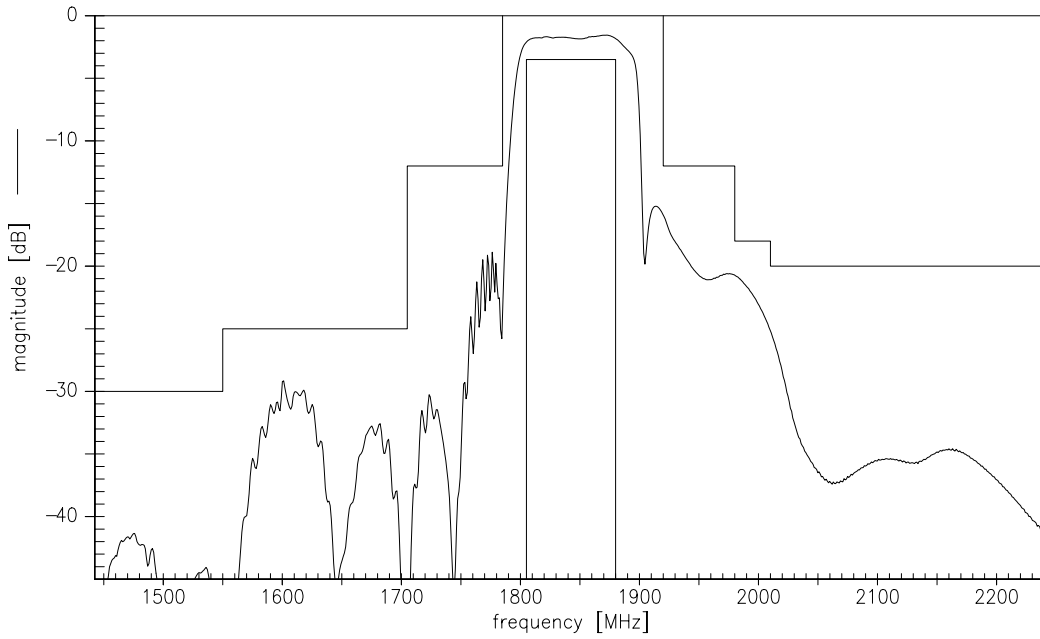
Characteristics

Operating Temperature Range: $T = -10$ to $+80^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50\Omega$ (unbalanced)
 Terminating load impedance: $Z_L = 200\Omega$ (balanced) || 22 nH

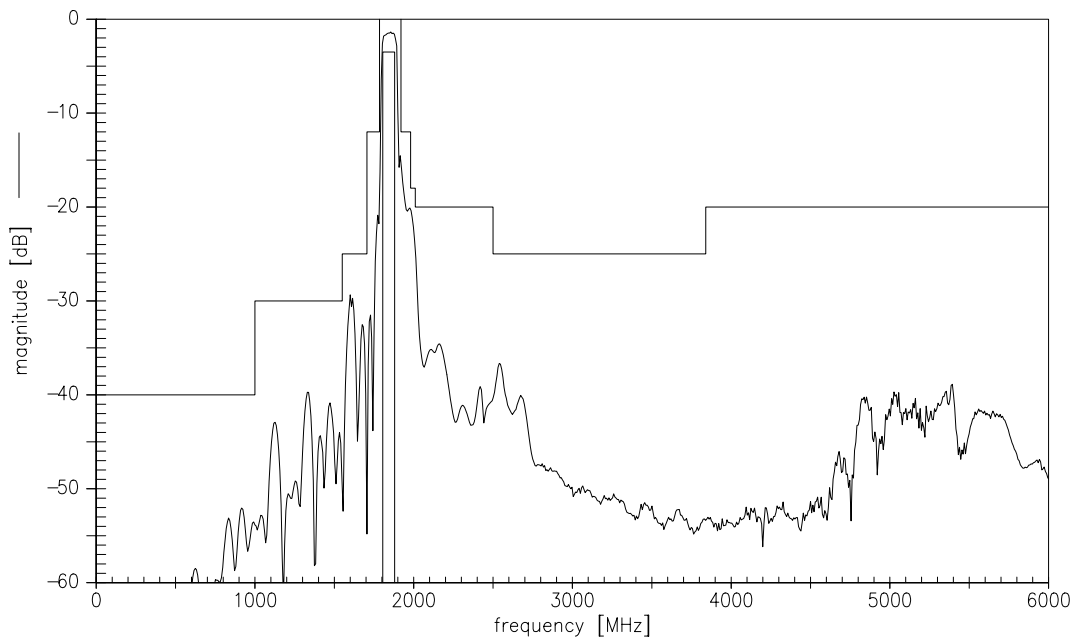
		min.	typ.	max.	
Center frequency	f_C	—	1842,5	—	MHz
Maximum insertion attenuation	α_{\max}	—	2,5	4,0	dB
	1805,0 ... 1880,0 MHz				
Amplitude ripple (p-p)	$\Delta\alpha$	—	1,4	2,5	dB
	1805,0 ... 1880,0 MHz				
Input VSWR		—	1,8	2,4	
	1805,0 ... 1880,0 MHz				
Output VSWR		—	1,8	2,4	
	1805,0 ... 1880,0 MHz				
Output amplitude balance (S_{31}/S_{21})		-1,5	-1,1 / +0,6	1,5	dB
	1805,0 ... 1880,0 MHz				
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^{\circ}$)		-15	+/- 6	15	°
	1805,0 ... 1880,0 MHz				
Attenuation	α				
	0,0 ... 1000,0 MHz	40	50	—	dB
	1000,0 ... 1550,0 MHz	30	40	—	dB
	1550,0 ... 1705,0 MHz	25	28	—	dB
	1705,0 ... 1785,0 MHz	10	15	—	dB
	1920,0 ... 1980,0 MHz	10	17	—	dB
	1980,0 ... 2010,0 MHz	18	22	—	dB
	2010,0 ... 2500,0 MHz	20	26	—	dB
	2500,0 ... 3840,0 MHz	25	35	—	dB
	3840,0 ... 6000,0 MHz	20	32	—	dB



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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