EPCOS

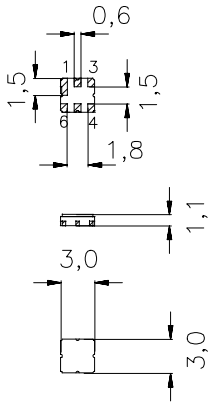
SAW Components

Data Sheet B4167

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



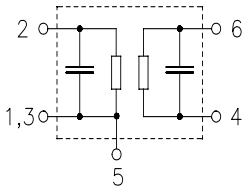
Terminals

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

Maximum ratings

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

Data Sheet SMD

Characteristics

Operating Temperature Range: T = +25 ± 2 °C
Terminating source impedance: Z_S = 50Ω (unbalanced)
Terminating load impedance: Z_L = 200Ω || 22 nH (balanced)

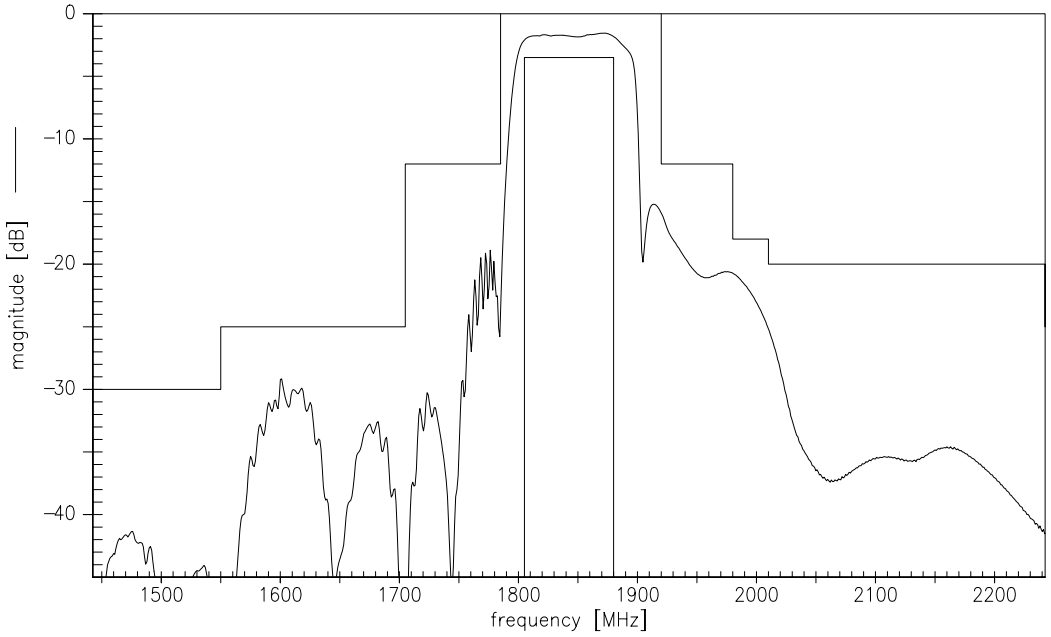
		min.	typ.	max.	
Center frequency	f_C	—	1842,5	—	MHz
Maximum insertion attenuation	α_{max}				
1805,0 ... 1880,0 MHz		—	2,0	3,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1805,0 ... 1880,0 MHz		—	0,9	2,0	dB
Input VSWR					
1805,0 ...1880,0 MHz		—	1,8	2,3	
Output VSWR					
1805,0 ...1880,0 MHz		—	1,8	2,3	
Output amplitude balance ($\lvert S_{31}/S_{21}\rvert$)					
1805,0 ...1880,0 MHz		-1,5	-1,1 / +0,6	1,5	dB
Output phase balance ($\phi(S_{31})-\phi(S_{21})+180°$)					
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

Characteristics

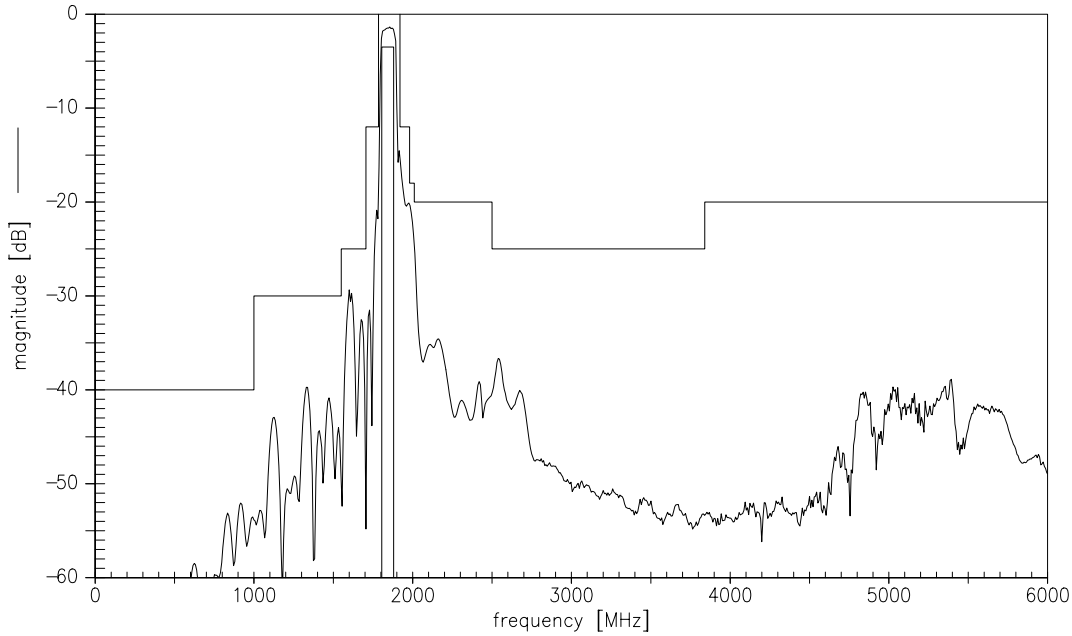
Operating Temperature Range: T = -10 to +80˚C
Terminating source impedance: Z_S = 50Ω (unbalanced)
Terminating load impedance: Z_L = 200Ω (balanced) || 22 nH

		min.	typ.	max.	
Center frequency	f_C	—	1842,5	—	MHz
Maximum insertion attenuation	α_{max}				
1805,0 ... 1880,0 MHz		—	2,5	4,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1805,0 ... 1880,0 MHz		—	1,4	2,5	dB
Input VSWR					
1805,0 ...1880,0 MHz		—	1,8	2,4	
Output VSWR					
1805,0 ...1880,0 MHz		—	1,8	2,4	
Output amplitude balance ($\lvert S_{31}/S_{21}\rvert$)					
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		-15	+/- 6	15	°
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)



Published by EPCOS AG
Surface Acoustic Wave Components Division, OFW E MF
P.O. Box 80 17 09, D-81617 München

As far as patents or other rights of third parties are concerned, liability is only assumed for components per se, not for applications, processes and circuits implemented within components or assemblies.

The information describes the type of component and shall not be considered as assured characteristics.
Terms of delivery and rights to change design reserved.

For questions on technology, prices and delivery please contact the sales offices of EPCOS AG or the international representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our sales offices.