



SAW Components

Data Sheet B4142





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Low-Loss Filter for Mobile Communication

1842,50 MHz

Data Sheet



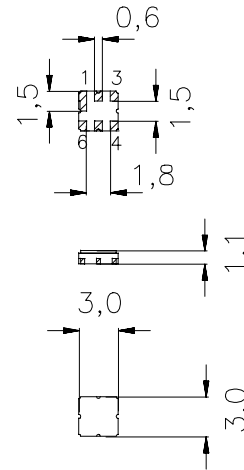
Ceramic Package DCC6C

Features

- Low-loss RF filter for mobile telephone PCN system, receive path
- High selectivity
- Usable passband: 75 MHz
- No matching network required for operation at 50 Ω
- Ceramic Package for **Surface Mounted Technology (SMT)**
- RoHS compliant

Terminals

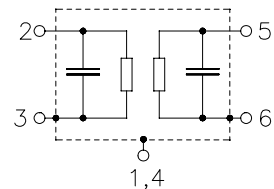
- Ni, gold-plated



Dimensions in mm, approx. weight 37mg

Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
B4142	B39182-B4142-U410	C61157-A7-A67	F61074-V8168-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 40 / + 85	°C	Machine Model, 10 pulses effective power in the on-state, duty cycle 4:8
Storage temperature range	T_{stg}	- 40 / + 85	°C	
DC voltage	V_{DC}	0	V	
ESD voltage	V^*_{ESD}	50*	V	
Input Power at GSM850, GSM900 GSM1800, GSM1900 Tx bands	P_{IN}	15	dBm	

*-acc. to JESD22-A115A (Machine Model), 10 negative & 10 positive pulses



Characteristics

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

			min.	typ.	max.	
Center frequency	f_c		—	1842,5	—	MHz
Maximum insertion attenuation	α_{max}					
	1805,0 ... 1815,0	MHz	—	3,0	3,3	dB
	1815,0 ... 1870,0	MHz	—	2,6	3,0	dB
	1870,0 ... 1880,0	MHz	—	2,6	3,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$					
	1805,0 ... 1815,0	MHz	—	1,2	1,5	dB
	1815,0 ... 1870,0	MHz	—	0,8	1,2	dB
	1870,0 ... 1880,0	MHz	—	0,8	1,2	dB
Input VSWR						
	1805,0 ... 1880,0	MHz	—	2,3	3,0	
Output VSWR						
	1805,0 ... 1880,0	MHz	—	2,3	3,0	
Attenuation	α					
	10,0 ... 1720,0	MHz	20,0	21,0	—	dB
	1720,0 ... 1765,0	MHz	25,0	30,0	—	dB
	1765,0 ... 1785,0	MHz	9,0	14,0	—	dB
	1920,0 ... 1930,0	MHz	15,0	26,0	—	dB
	1930,0 ... 3120,0	MHz	20,0	25,0	—	dB
	3120,0 ... 4000,0	MHz	17,0	30,0	—	dB



Characteristics

Operating temperature range: $T = -35$ to -25°C
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

				min.	typ.	max.	
Center frequency		f_c		—	1842,5	—	MHz
Maximum insertion attenuation		α_{\max}					
	1805,0 ... 1815,0	MHz		—	3,1	3,9	dB
	1815,0 ... 1870,0	MHz		—	2,8	3,0	dB
	1870,0 ... 1880,0	MHz		—	2,6	3,0	dB
Amplitude ripple (p-p)		$\Delta\alpha$					
	1805,0 ... 1815,0	MHz		—	1,3	2,1	dB
	1815,0 ... 1870,0	MHz		—	1,0	1,2	dB
	1870,0 ... 1880,0	MHz		—	0,8	1,2	dB
Input VSWR	1805,0 ... 1880,0	MHz		—	2,3	3,0	
Output VSWR	1805,0 ... 1880,0	MHz		—	2,3	3,0	
Attenuation		α					
	10,0 ... 1720,0	MHz		20,0	21,0	—	dB
	1720,0 ... 1765,0	MHz		25,0	30,0	—	dB
	1765,0 ... 1785,0	MHz		9,0	14,0	—	dB
	1920,0 ... 1930,0	MHz		15,0	26,0	—	dB
	1930,0 ... 3120,0	MHz		20,0	25,0	—	dB
	3120,0 ... 4000,0	MHz		17,0	30,0	—	dB



Characteristics

Operating temperature range: $T = -25$ to $+15^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

			min.	typ.	max.	
Center frequency	f_c		—	1842,5	—	MHz
Maximum insertion attenuation	α_{\max}					
	1805,0 ... 1815,0	MHz	—	3,1	3,8	dB
	1815,0 ... 1870,0	MHz	—	2,8	3,0	dB
	1870,0 ... 1880,0	MHz	—	2,6	3,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$					
	1805,0 ... 1815,0	MHz	—	1,3	2,0	dB
	1815,0 ... 1870,0	MHz	—	1,0	1,2	dB
	1870,0 ... 1880,0	MHz	—	0,8	1,2	dB
Input VSWR						
	1805,0 ... 1880,0	MHz	—	2,3	3,0	
Output VSWR						
	1805,0 ... 1880,0	MHz	—	2,3	3,0	
Attenuation	α					
	10,0 ... 1720,0	MHz	20,0	21,0	—	dB
	1720,0 ... 1765,0	MHz	25,0	30,0	—	dB
	1765,0 ... 1785,0	MHz	9,0	14,0	—	dB
	1920,0 ... 1930,0	MHz	15,0	26,0	—	dB
	1930,0 ... 3120,0	MHz	20,0	25,0	—	dB
	3120,0 ... 4000,0	MHz	17,0	30,0	—	dB



Characteristics

Operating temperature range: $T = +15$ to $+75^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

				min.	typ.	max.	
Center frequency		f_c		—	1842,5	—	MHz
Maximum insertion attenuation		α_{\max}					
	1805,0 ... 1815,0	MHz		—	3,0	3,3	dB
	1815,0 ... 1870,0	MHz		—	2,8	3,0	dB
	1870,0 ... 1880,0	MHz		—	2,9	3,6	dB
Amplitude ripple (p-p)		$\Delta\alpha$					
	1805,0 ... 1815,0	MHz		—	1,2	1,5	dB
	1815,0 ... 1870,0	MHz		—	1,0	1,2	dB
	1870,0 ... 1880,0	MHz		—	1,1	1,8	dB
Input VSWR	1805,0 ... 1880,0	MHz		—	2,3	3,0	
Output VSWR	1805,0 ... 1880,0	MHz		—	2,3	3,0	
Attenuation		α					
	10,0 ... 1720,0	MHz		20,0	21,0	—	dB
	1720,0 ... 1765,0	MHz		25,0	30,0	—	dB
	1765,0 ... 1785,0	MHz		7,5	9,0	—	dB
	1920,0 ... 1930,0	MHz		15,0	26,0	—	dB
	1930,0 ... 3120,0	MHz		20,0	25,0	—	dB
	3120,0 ... 4000,0	MHz		17,0	30,0	—	dB



Characteristics

Operating temperature range: $T = +75$ to $+85^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

				min.	typ.	max.	
Center frequency		f_c		—	1842,5	—	MHz
Maximum insertion attenuation		α_{\max}					
	1805,0 ... 1815,0	MHz		—	3,0	3,3	dB
	1815,0 ... 1870,0	MHz		—	2,8	3,0	dB
	1870,0 ... 1880,0	MHz		—	2,9	3,6	dB
Amplitude ripple (p-p)		$\Delta\alpha$					
	1805,0 ... 1815,0	MHz		—	1,2	1,5	dB
	1815,0 ... 1870,0	MHz		—	1,0	1,2	dB
	1870,0 ... 1880,0	MHz		—	1,1	1,8	dB
Input VSWR	1805,0 ... 1880,0	MHz		—	2,3	3,0	
Output VSWR	1805,0 ... 1880,0	MHz		—	2,3	3,0	
Attenuation		α					
	10,0 ... 1720,0	MHz		20,0	21,0	—	dB
	1720,0 ... 1765,0	MHz		25,0	30,0	—	dB
	1765,0 ... 1785,0	MHz		7,0	9,0	—	dB
	1920,0 ... 1930,0	MHz		15,0	26,0	—	dB
	1930,0 ... 3120,0	MHz		20,0	25,0	—	dB
	3120,0 ... 4000,0	MHz		17,0	30,0	—	dB



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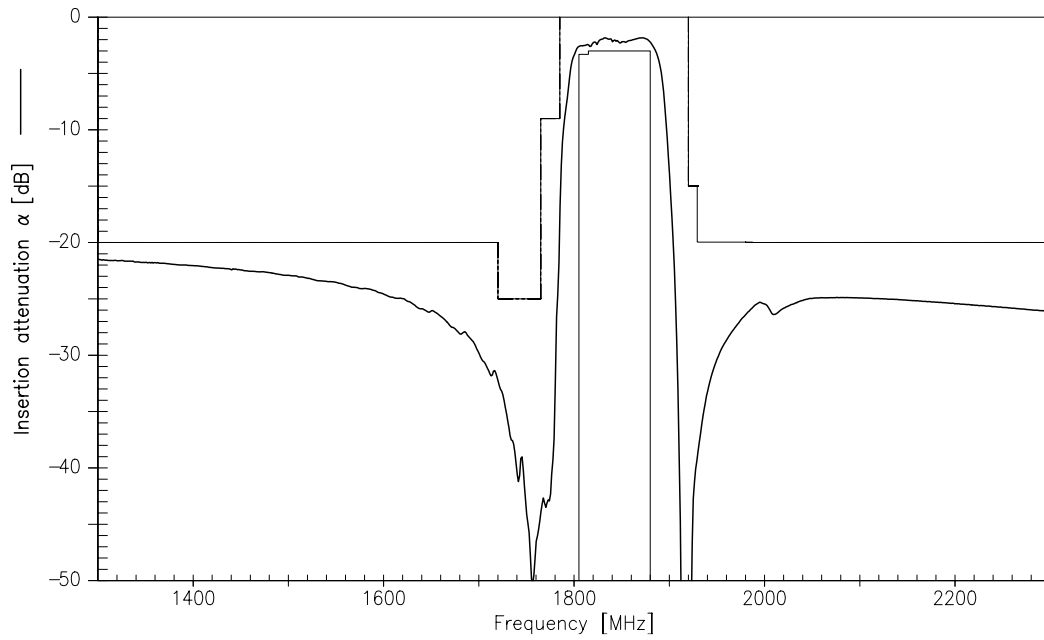
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1842,50 MHz

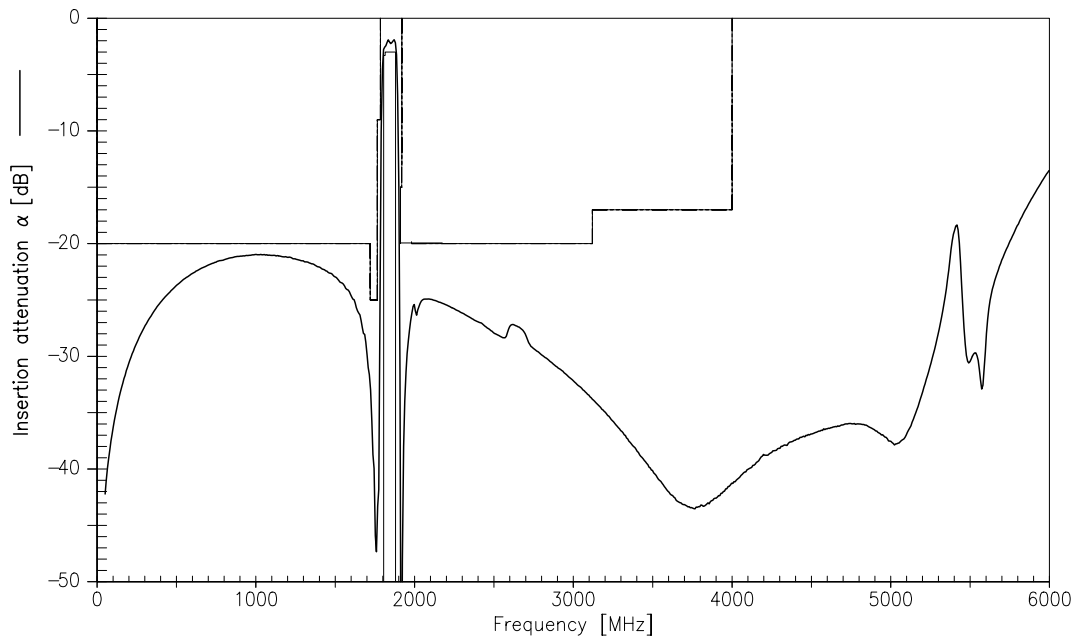
Data Sheet



Transfer function (spec for 25°C)



Transfer function (wideband)





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Published by EPCOS AG

Surface Acoustic Wave Components Division, SAW MC PD

P.O. Box 80 17 09, 81617 Munich, GERMANY

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