EPCOS

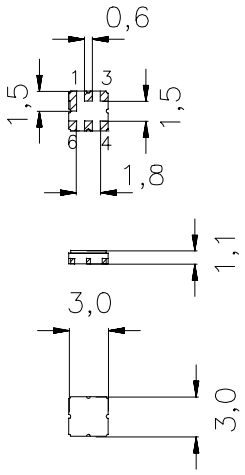
SAW Components

Data Sheet B4142

Ceramic **P**ackage **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 **S**urface **M**ounted **T**echnology (**SMT**)
- RoHS compliant



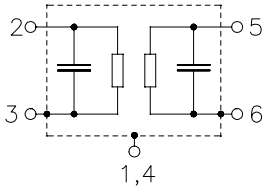
Terminals

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

Maximum ratings

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

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

Characteristics

Operating temperature range: T = 25 +- 2˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

			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 Ω
Terminating load impedance: Z_L = 50 Ω

			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˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

			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˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

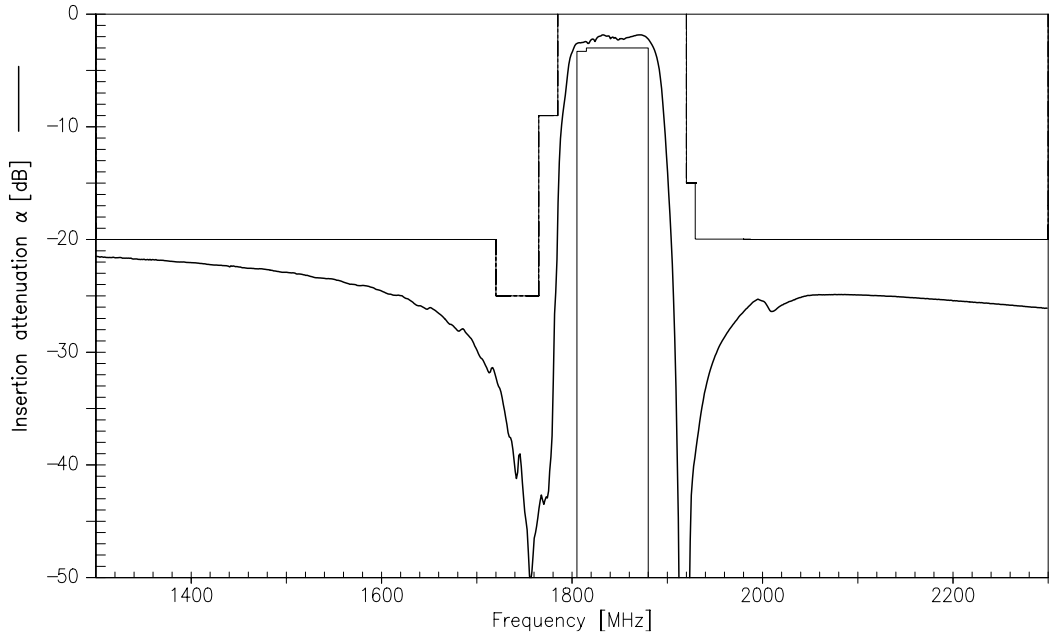
				min.	typ.	max.	
Center frequency			f_c	—	1842,5	—	MHz
Maximum insertion attenuation			α_{max}				
	1805,0	...1815,0 MHz		—	3,0	3,3	dB
	1815,0	...1870,0 MHz		—	2,8	3,0	dB
	1870,0	...1880,0 MHz		—	2,9	3,6	dB
Amplitude ripple (p-p)			$\Delta\alpha$				
	1805,0	...1815,0 MHz		—	1,2	1,5	dB
	1815,0	...1870,0 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

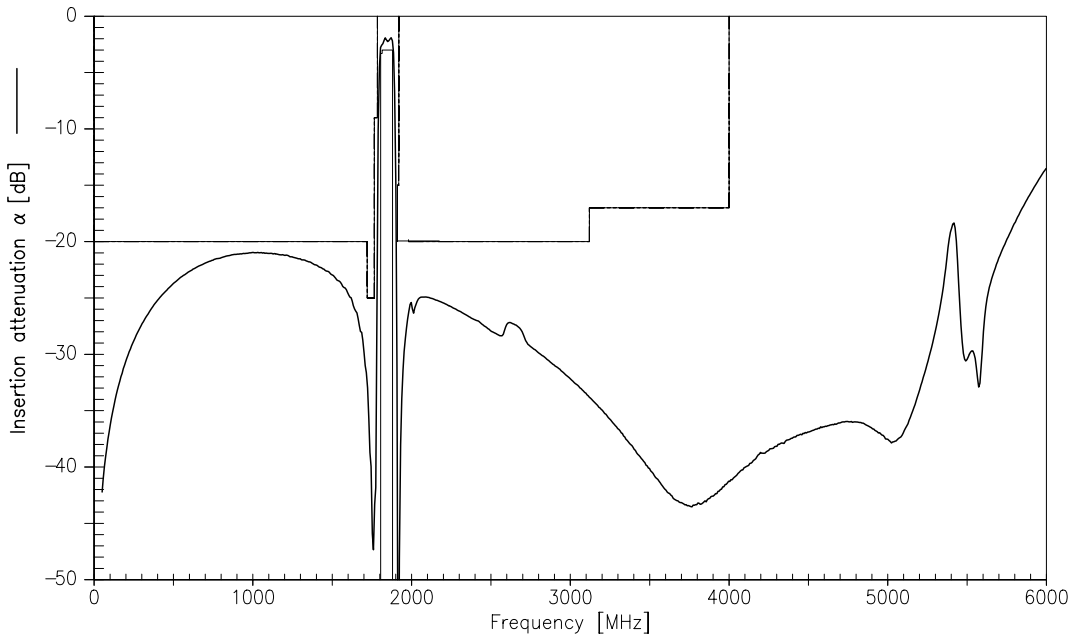
Operating temperature range: T = +75 to +85˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

			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

Transfer function (spec for 25°C)



Transfer function (wideband)



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