



SAW Components

Data Sheet B4121





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Low-Loss Filter for Mobile Communication

942,50 MHz

Data Sheet



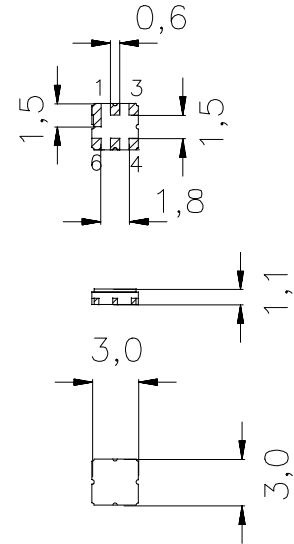
Ceramic package DCC6D

Features

- Low-loss RF filter for mobile telephone EGSM systems, receive path
- Low amplitude ripple
- Usable passband 35 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50 Ω to 150 Ω
- Ceramic package for **Surface Mounted Technology (SMT)**

Terminals

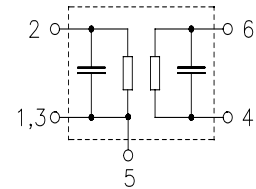
- Ni, gold-plated



Dimensions in mm, approx. weight 0,037 g

Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
B4121	B39941-B4121-U510	C61157-A7-A68	F61074-V8089-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 40 / + 85	°C	source impedance 50 Ω, load impedance 150 Ω, CW input for min. 2000 h
Storage temperature range	T_{stg}	- 40 / + 85	°C	
DC voltage	V_{DC}	3	V	
Input power max.	P_{IN}			
880 ... 915 MHz		18	dBm	
1705 ... 1785 MHz		18	dBm	



Characteristics

Operating temperature range: $T = 25 \pm 2 \text{ }^\circ\text{C}$
 Terminating source impedance: $Z_S = 50 \text{ } \Omega$
 Terminating load impedance: $Z_L = 150 \text{ } \Omega \parallel 80 \text{ nH}$

			min.	typ.	max.	
Center frequency	f_C		—	942,5	—	MHz
Maximum insertion attenuation	α_{\max}					
		925,0 ... 960,0 MHz	—	2,8	3,2	dB
Amplitude ripple (p-p)	$\Delta\alpha$					
		925,0 ... 960,0 MHz	—	1,0	1,4	dB
Attenuation	α					
		0,0 ... 600,0 MHz	60	70	—	dB
		600,0 ... 880,0 MHz	50	55	—	dB
		880,0 ... 905,0 MHz	30	38	—	dB
		905,0 ... 915,0 MHz	18	23	—	dB
		980,0 ... 1000,0 MHz	21	23	—	dB
		1000,0 ... 1025,0 MHz	30	37	—	dB
		1025,0 ... 1050,0 MHz	35	40	—	dB
		1050,0 ... 1500,0 MHz	50	57	—	dB
		1500,0 ... 2130,0 MHz	45	55	—	dB
		2130,0 ... 3000,0 MHz	40	48	—	dB
		3000,0 ... 4050,0 MHz	35	41	—	dB
		4050,0 ... 5700,0 MHz	23	30	—	dB
Symmetry in band (referenced to the matched operating condition)						
	$ S_{31} / S_{21} $	925,0 ... 960,0 MHz	-1,8	0	1,2	dB
	$\arg(S_{31}/S_{21})$	925,0 ... 960,0 MHz	170	180	192	$^\circ$



Characteristics

Operating temperature range: $T = -10$ to $+75$ °C
 Terminating source impedance: $Z_S = 50 \Omega$
 Terminating load impedance: $Z_L = 150 \Omega \parallel 80$ nH

			min.	typ.	max.	
Center frequency	f_C		—	942,5	—	MHz
Maximum insertion attenuation	α_{max}		—	3,0	3,8	dB
		925,0 ... 960,0 MHz				
Amplitude ripple (p-p)	$\Delta\alpha$		—	1,2	2,0	dB
		925,0 ... 960,0 MHz				
Attenuation	α					
		0,0 ... 600,0 MHz	60	70	—	dB
		600,0 ... 880,0 MHz	50	55	—	dB
		880,0 ... 905,0 MHz	28	33	—	dB
		905,0 ... 915,0 MHz	18	21	—	dB
		980,0 ... 1000,0 MHz	20	22	—	dB
		1000,0 ... 1025,0 MHz	30	37	—	dB
		1025,0 ... 1050,0 MHz	35	40	—	dB
		1050,0 ... 1500,0 MHz	50	57	—	dB
		1500,0 ... 2130,0 MHz	45	55	—	dB
		2130,0 ... 3000,0 MHz	40	48	—	dB
		3000,0 ... 4050,0 MHz	35	41	—	dB
		4050,0 ... 5700,0 MHz	23	30	—	dB
Symmetry in band (referenced to the matched operating condition)						
	$ S_{31} / S_{21} $	925,0 ... 960,0 MHz	-2,3	0	1,2	dB
	$\arg(S_{31}/S_{21})$	925,0 ... 960,0 MHz	170	180	192	°



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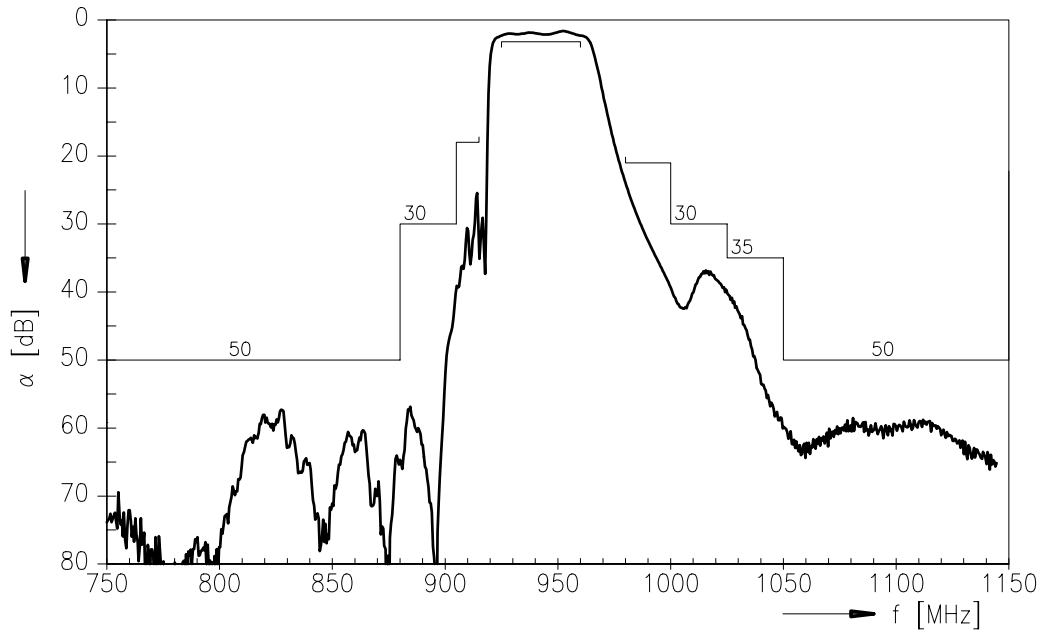
Characteristics

Operating temperature range: $T = -40$ to $+85$ °C
 Terminating source impedance: $Z_S = 50 \Omega$
 Terminating load impedance: $Z_L = 150 \Omega \parallel 80$ nH

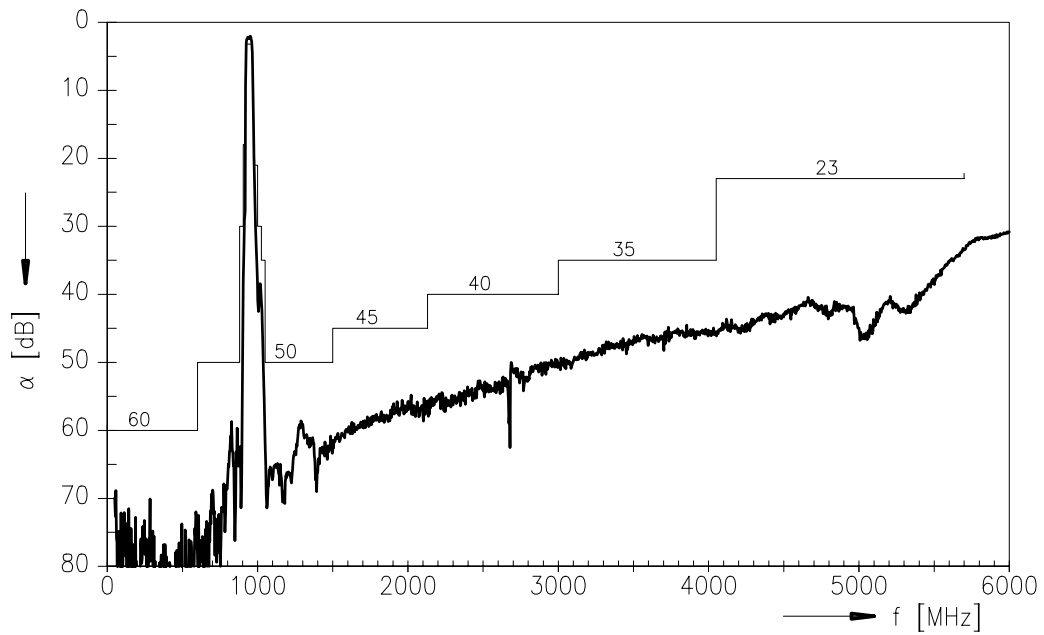
				min.	typ.	max.	
Center frequency			f_C	—	942,5	—	MHz
Maximum insertion attenuation			α_{max}				
	925,0 ... 960,0	MHz		—	3,4	4,2	dB
Amplitude ripple (p-p)			$\Delta\alpha$				
	925,0 ... 960,0	MHz		—	1,8	2,6	dB
Attenuation			α				
	0,0 ... 600,0	MHz		60	70	—	dB
	600,0 ... 880,0	MHz		50	55	—	dB
	880,0 ... 905,0	MHz		28	33	—	dB
	905,0 ... 915,0	MHz		18	21	—	dB
	980,0 ... 1000,0	MHz		19	21	—	dB
	1000,0 ... 1025,0	MHz		30	37	—	dB
	1025,0 ... 1050,0	MHz		35	40	—	dB
	1050,0 ... 1500,0	MHz		50	57	—	dB
	1500,0 ... 2130,0	MHz		45	55	—	dB
	2130,0 ... 3000,0	MHz		40	48	—	dB
	3000,0 ... 4050,0	MHz		35	41	—	dB
	4050,0 ... 5700,0	MHz		23	30	—	dB
Symmetry in band							
(referenced to the matched operating condition)							
	$ S_{31} / S_{21} $	925,0 ... 960,0	MHz	-2,6	0	1,2	dB
	$\arg(S_{31}/S_{21})$	925,0 ... 960,0	MHz	170	180	192	°



Transfer function (spec at 25 °C)



Transfer function (wideband)





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