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SAW Components

Data Sheet B7743

Data Sheet

A large, stylized graphic of the EPCOS logo is overlaid on a grayscale globe. The globe shows the outlines of continents and is set against a dark background. The EPCOS logo is rendered in a light, glowing white color, appearing to be part of the globe's surface.



SAW Components	B7743
Low-Loss Filter for Mobile Communication	1960,0 MHz
Data Sheet	

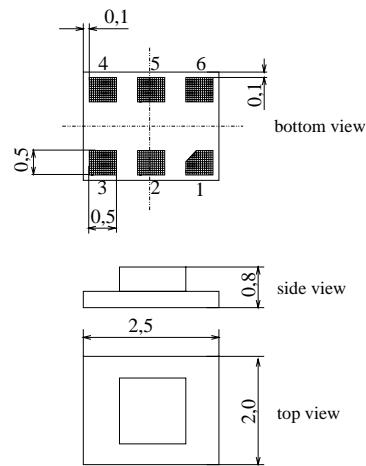
Features

- Low-loss RF filter for mobile telephone PCS systems, receive path
- High selectivity
- Low amplitude ripple
- Usable passband 60 MHz
- Unbalanced to balanced operation
- No external matching required
- Package for **Surface Mounted Technology (SMT)**

Terminals

- Gold-plated Ni

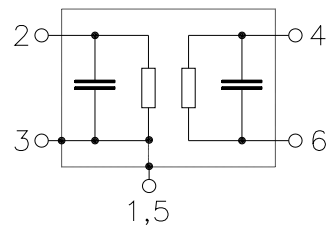
Chip Sized SAW Package DCS6P



Dimensions in mm, approx. weight 0,013 g

Pin configuration

- | | |
|---------|-----------------|
| 2 | Input |
| 4, 6 | Balanced output |
| 1, 3, 5 | To be grounded |



Type	Ordering code	Marking and Package according to	Packing according to
B7743	B39202-B7743-E410	C61157-A7-A101	F61074-V8153-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 30 / + 85	°C	
Storage temperature range	T_{stg}	- 40 / + 85	°C	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	50	V	
Input power max.				
880 ... 915 MHz	P_{IN}	13	dBm	source and load impedance 50 Ω peak power of GSM signal, duty cycle 2 : 8
1710 ... 1785 MHz		13	dBm	
1850 ... 1910 MHz		13	dBm	
elsewhere		0	dBm	continuous wave



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Characteristics

Operating Temperature Range: $T = 25^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50\ \Omega$ (unbalanced)
 Terminating load impedance: $Z_L = 50\ \Omega$ (balanced)

		min.	typ.	max.	
Center frequency	f_C	—	1960,0	—	MHz
Maximum insertion attenuation	α_{\max}	—	2,0	2,5*	dB
1930,0 ... 1990,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,5	1,0	dB
1930,0 ... 1990,0 MHz					
Input VSWR		—	1,9	2,1	
1930,0 ... 1990,0 MHz					
Output VSWR		—	1,9	2,1	
1930,0 ... 1990,0 MHz					
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^{\circ}$)		-15	—	10	°
1930,0 ... 1990,0 MHz					
Output amplitude balance (S_{31}/S_{21})		-2,0	—	3,0	dB
1930,0 ... 1990,0 MHz					
Attenuation	α				
0,0 ... 1830,0 MHz		25	28	—	dB
1830,0 ... 1910,0 MHz		14	15	—	dB
2020,0 ... 2060,0 MHz		17	18	—	dB
2060,0 ... 2200,0 MHz		27	29	—	dB
2200,0 ... 2260,0 MHz		35	38	—	dB
2260,0 ... 4390,0 MHz		25	28	—	dB
4390,0 ... 6000,0 MHz		18	25	—	dB

* the insertion attenuation includes also pcb losses of typ. 0,2dB



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Characteristics

Operating Temperature Range: $T = -30$ to $+85^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50\ \Omega$ (unbalanced)
 Terminating load impedance: $Z_L = 50\ \Omega$ (balanced)

		min.	typ.	max.	
Center frequency	f_C	—	1960,0	—	MHz
Maximum insertion attenuation	α_{\max}	—	2,3	3,5*	dB
1930,0 ... 1990,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	1,0	1,6	dB
1930,0 ... 1990,0 MHz					
Input VSWR		—	1,9	2,1	
1930,0 ... 1990,0 MHz					
Output VSWR		—	1,9	2,1	
1930,0 ... 1990,0 MHz					
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^{\circ}$)		-15	—	10	$^{\circ}$
1930,0 ... 1990,0 MHz					
Output amplitude balance (S_{31}/S_{21})		-2,0	—	3,0	dB
1930,0 ... 1990,0 MHz					
Attenuation	α				
0,0 ... 1830,0 MHz		25	28	—	dB
1830,0 ... 1910,0 MHz		11	12	—	dB
2020,0 ... 2060,0 MHz		15	18	—	dB
2060,0 ... 2200,0 MHz		23	26	—	dB
2200,0 ... 2260,0 MHz		35	38	—	dB
2260,0 ... 4390,0 MHz		25	28	—	dB
4390,0 ... 6000,0 MHz		18	25	—	dB

* the insertion attenuation includes also pcb losses of typ. 0,2dB



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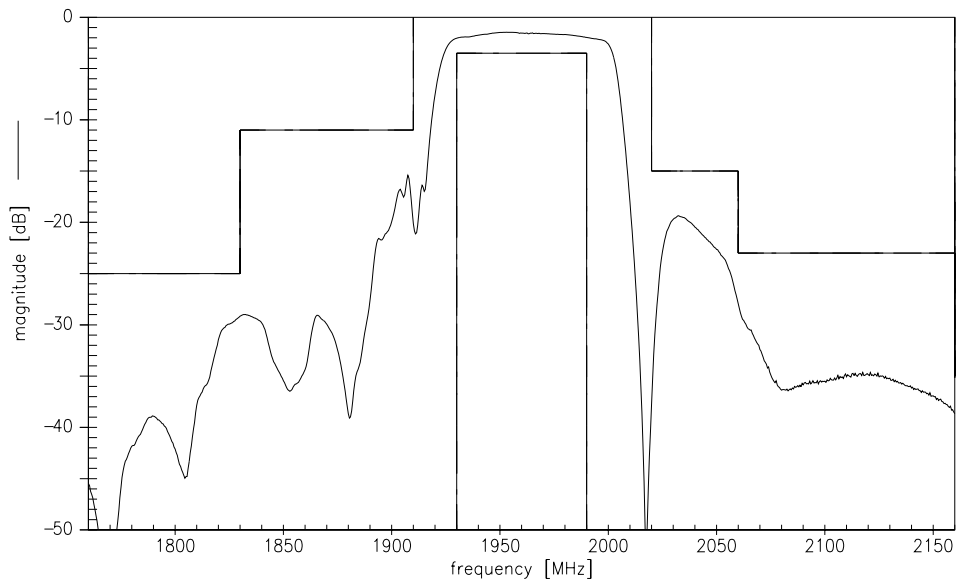
Low-Loss Filter for Mobile Communication

1960,0 MHz

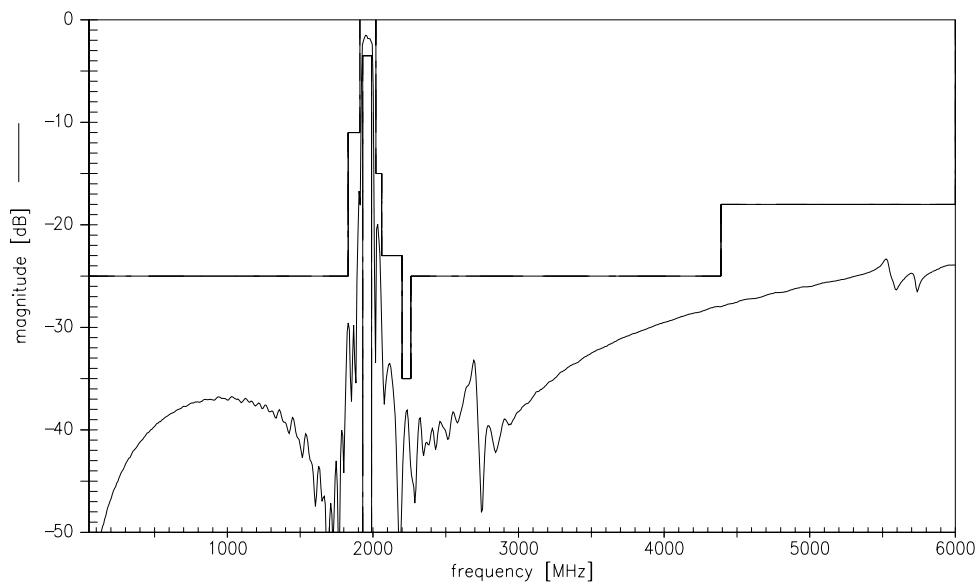
Data Sheet



Transfer function (narrow band)



Transfer function (wide band)

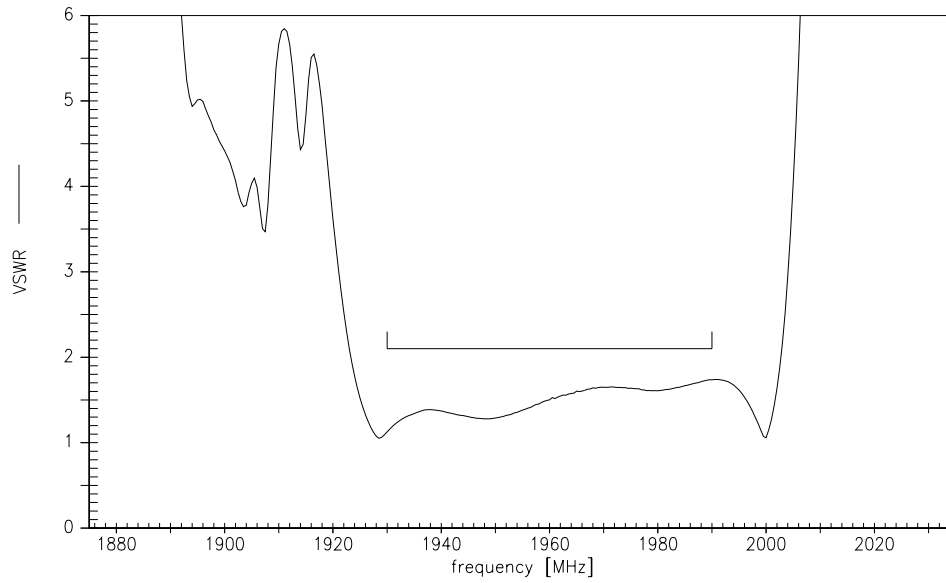




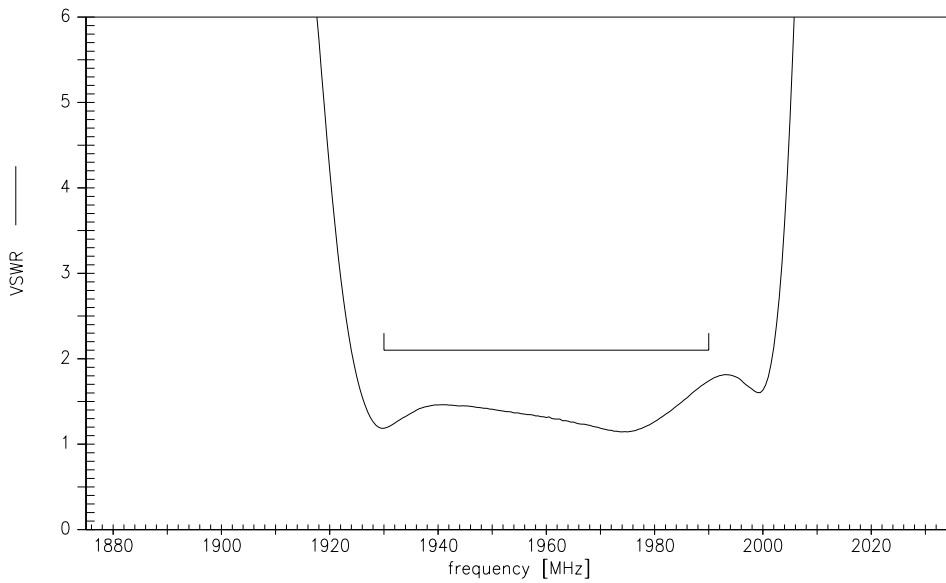
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Low-Loss Filter for Mobile Communication	1960,0 MHz
Data Sheet	SMD

VSWR (narrow band)

Input



Output





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Published by EPCOS AG

Surface Acoustic Wave Components Division, SAW MC WT

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