



SAW Components

Data Sheet B7743





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Low-Loss Filter for Mobile Communication

1960,0 MHz

Data Sheet



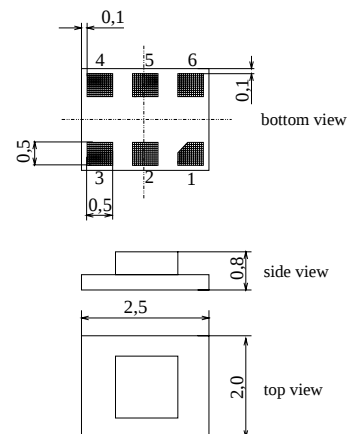
Chip Sized SAW Package DCS6P

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

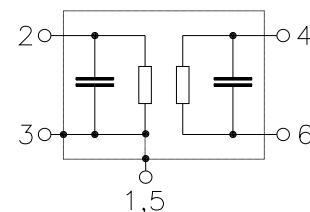
- Gold-plated Ni



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	$-30 / +85$	$^{\circ}\text{C}$	
Storage temperature range	T_{stg}	$-40 / +85$	$^{\circ}\text{C}$	
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	$\alpha_{\max}$	—	2,0	2,5*	dB
	1930,0 ... 1990,0 MHz	—	2,0	2,5*	dB
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,5	1,0	dB
	1930,0 ... 1990,0 MHz	—	0,5	1,0	dB
Input VSWR		—	1,9	2,1	
	1930,0 ... 1990,0 MHz	—	1,9	2,1	
Output VSWR		—	1,9	2,1	
	1930,0 ... 1990,0 MHz	—	1,9	2,1	
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^{\circ}$)		-15	—	10	$^{\circ}$
	1930,0 ... 1990,0 MHz	-15	—	10	$^{\circ}$
Output amplitude balance ($ S_{31}/S_{21} $)		-2,0	—	3,0	dB
	1930,0 ... 1990,0 MHz	-2,0	—	3,0	dB
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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Terminating load impedance: $Z_L = 50\ \Omega$ (balanced)

		min.	typ.	max.	
Center frequency	f_C	—	1960,0	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$	—	2,3	3,5*	dB
	1930,0 ... 1990,0 MHz	—	2,3	3,5*	dB
Amplitude ripple (p-p)	$\Delta\alpha$	—	1,0	1,6	dB
	1930,0 ... 1990,0 MHz	—	1,0	1,6	dB
Input VSWR		—	1,9	2,1	
	1930,0 ... 1990,0 MHz	—	1,9	2,1	
Output VSWR		—	1,9	2,1	
	1930,0 ... 1990,0 MHz	—	1,9	2,1	
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^{\circ}$)		-15	—	10	$^{\circ}$
	1930,0 ... 1990,0 MHz	-15	—	10	$^{\circ}$
Output amplitude balance ($ S_{31}/S_{21} $)		-2,0	—	3,0	dB
	1930,0 ... 1990,0 MHz	-2,0	—	3,0	dB
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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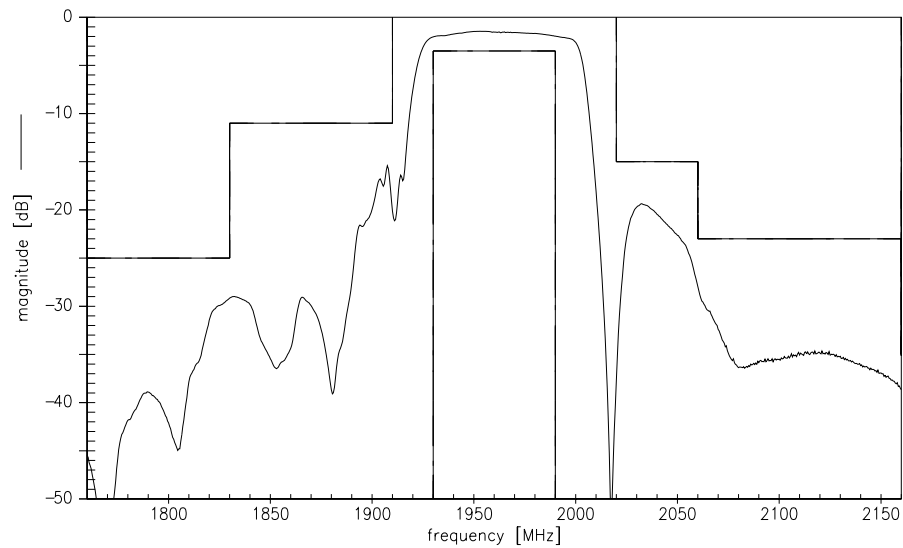
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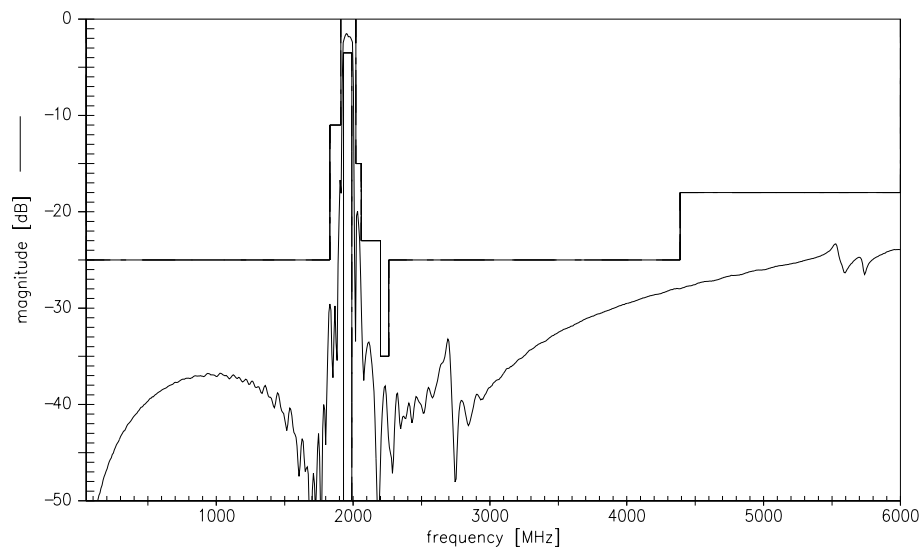
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Transfer function (narrow band)



Transfer function (wide band)





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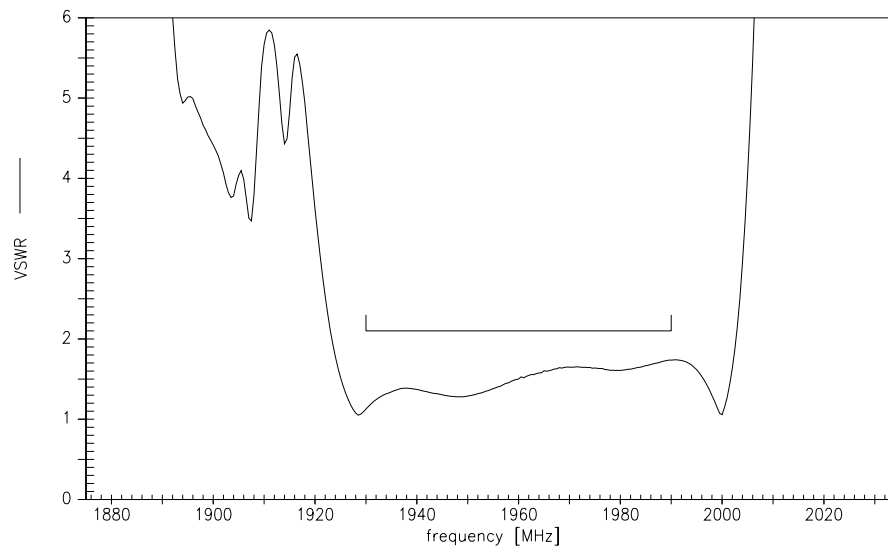
1960,0 MHz

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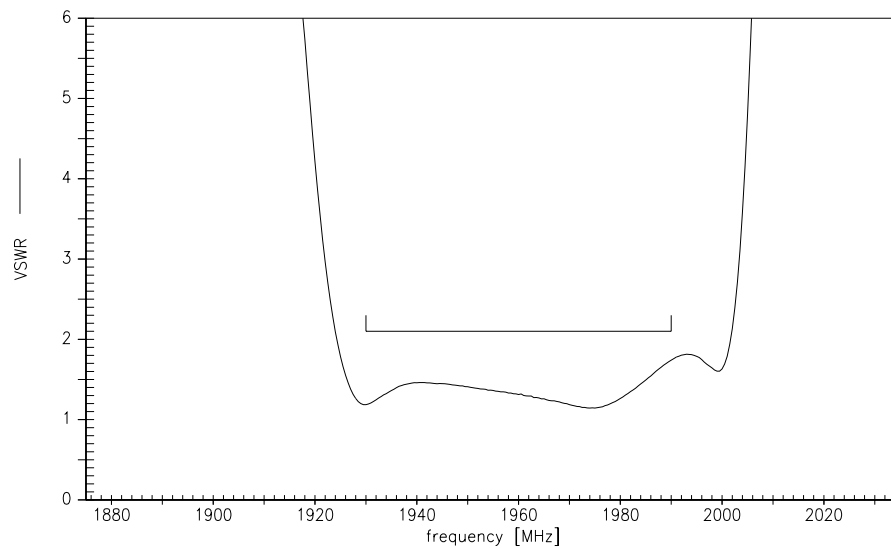


VSWR (narrow band)

Input



Output





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