EPCOS

SAW Components

Data Sheet B7743

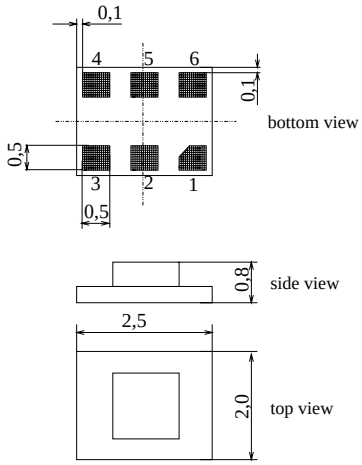
Chip **S**ized **S**AW **P**ackage **DCS6P**

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 **S**urface **M**ounted **T**echnology (**SMT**)

Terminals

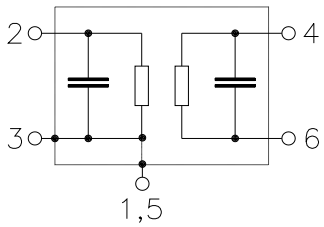
- Gold-plated Ni



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 **S**ensitive **D**evice (**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		13	dBm	source and load impedance 50 Ω
1710 ... 1785 MHz	P_{IN}	13	dBm	peak power of GSM signal,
1850 ... 1910 MHz		13	dBm	duty cycle 2 : 8
elsewhere		0	dBm	continuous wave

Characteristics

Operating Temperature Range: T = 25˚C
Terminating source impedance: Z_S = 50 Ω (unbalanced)
Terminating load impedance: Z_L = 50 Ω (balanced)

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

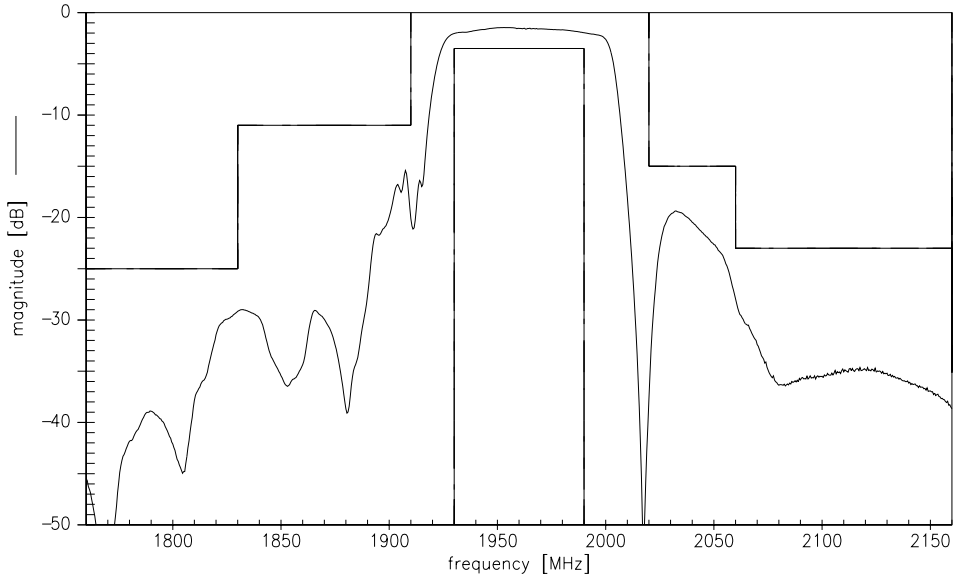
Characteristics

Operating Temperature Range: T = -30 to +85˚C
Terminating source impedance: Z_S = 50 Ω (unbalanced)
Terminating load impedance: Z_L = 50 Ω (balanced)

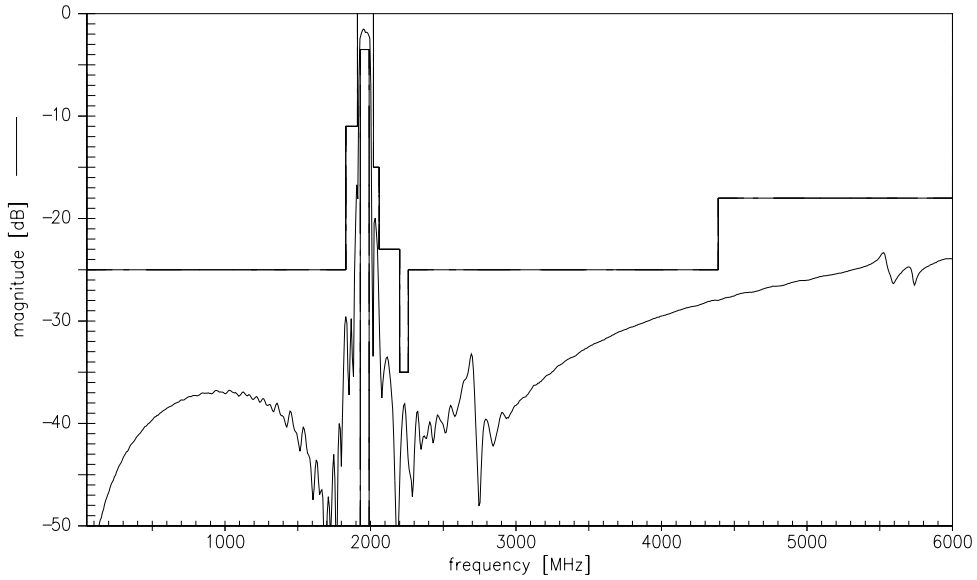
		min.	typ.	max.	
Center frequency	f_C	—	1960,0	—	MHz
Maximum insertion attenuation	α_{max}				
1930,0 ... 1990,0 MHz		—	2,3	3,5*	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1930,0 ... 1990,0 MHz		—	1,0	1,6	dB
Input VSWR					
1930,0 ... 1990,0 MHz		—	1,9	2,1	
Output VSWR					
1930,0 ... 1990,0 MHz		—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

Transfer function (narrow band)

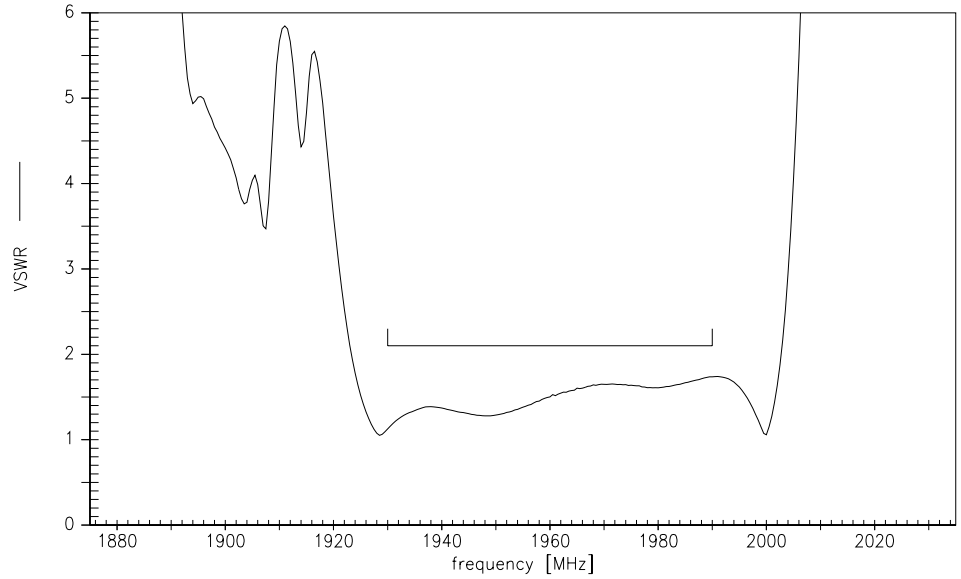


Transfer function (wide band)

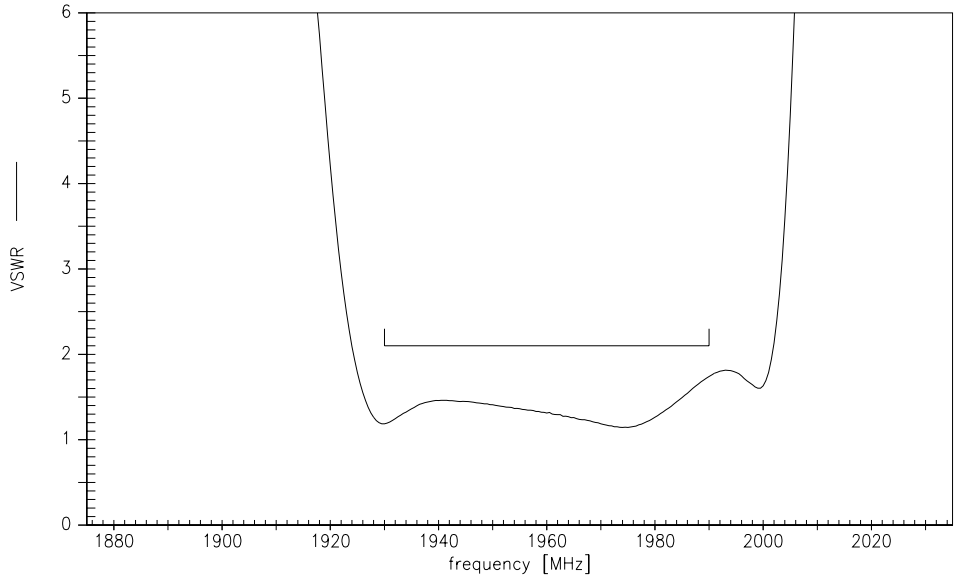


VSWR (narrow band)

Input



Output



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