EPCOS

SAW Components

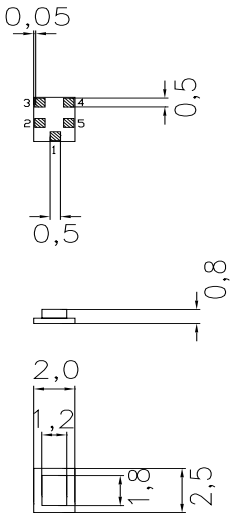
Data Sheet B7736, Pb-free

Data Sheet

Chip **S**ized **S**AW **P**ackage **QCS5H**

Features

- Low-loss RF filter for mobile telephone PCS CDMA systems, receive path
- Low amplitude ripple
- Usable passband 60 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50Ω to 100Ω
- Package for **S**urface **M**ounted **T**echnology (**SMT**)
- Pb-free



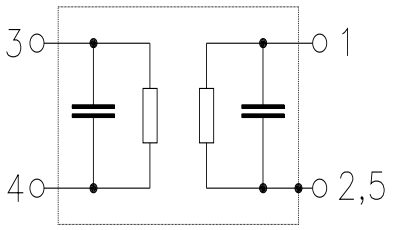
Dimensions in mm, approx. weight 0,015g

Terminals

- Gold-plated Ni

Pin configuration

1	Input, unbalanced
2, 5	Input ground
3, 4	Output, balanced
2, 5	To be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B7736	B39202-B7736-K910	C61157-A7-A139	F61074-V8189-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}	5	V	
ESD voltage	V^*_{ESD}	50*	V	Machine Model, 10 pulses source impedance 50 Ω
Input Power max.	P_{IN}	10	dBm	peak power of GSM signal, duty cycle 2 : 8

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

Characteristics

Operating Temperature Range: T = 25˚C
Terminating source impedance: Z_S = 50 Ω (unbalanced)
Terminating load impedance: Z_L = 100 Ω (balanced) //15nH

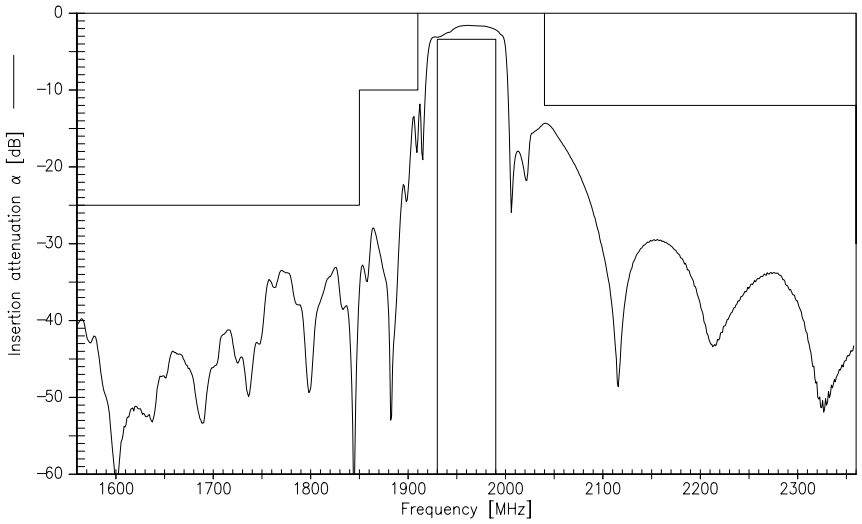
		min.	typ.	max.	
Center frequency	f_C	—	1960,0	—	MHz
Maximum insertion attenuation	α_{max}				
1930,0 ... 1990,0 MHz		—	3,3	3,4	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1930,0 ... 1990,0 MHz		—	1,7	1,8	dB
Input VSWR					
1930,0 ... 1990,0 MHz		—	2,1	2,3	
Output VSWR					
1930,0 ... 1990,0 MHz		—	2,1	2,3	
Output phase balance($\phi(S_{31})$-$\phi(S_{21})$+180^o)					
1930,0 ... 1990,0 MHz		-15	—	15	degree
Output amplitude balance ($\lvert S_{31}/S_{21}\rvert$)					
1930,0 ... 1990,0 MHz		-2,0	—	+2,0	dB
Attenuation	α				
0,0 ... 1850,0 MHz		25	30	—	dB
1850,0 ... 1910,0 MHz		11	13	—	dB
2040,0 ... 3860,0 MHz		12	14	—	dB
3860,0 ... 3980,0 MHz		30	50	—	dB
3980,0 ... 6000,0 MHz		20	40	—	dB

Characteristics

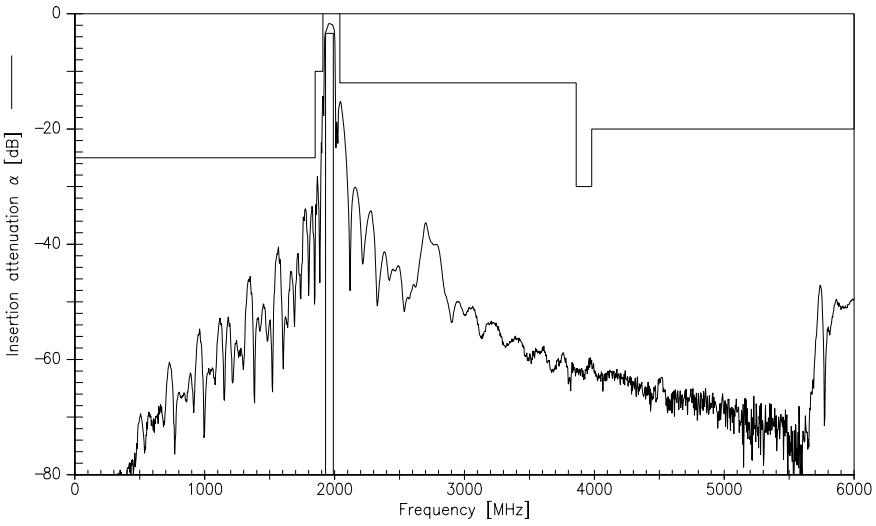
Operating Temperature Range: T = -30 to +85˚C
Terminating source impedance: Z_S = 50 Ω (unbalanced)
Terminating load impedance: Z_L = 100 Ω (balanced) //15nH

		min.	typ.	max.	
Center frequency	f_C	—	1960,0	—	MHz
Maximum insertion attenuation	α_{max}				
1930,0 ... 1990,0 MHz		—	3,5	3,8	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1930,0 ... 1990,0 MHz		—	1,9	2,2	dB
Input VSWR					
1930,0 ... 1990,0 MHz		—	2,1	2,3	
Output VSWR					
1930,0 ... 1990,0 MHz		—	2,1	2,3	
Output phase balance($\phi(S_{31})$-$\phi(S_{21})$+180°)					
1930,0 ... 1990,0 MHz		-15	—	15	degree
Output amplitude balance ($\lvert S_{31}/S_{21}\rvert$)					
1930,0 ... 1990,0 MHz		-2,0	—	+2,0	dB
Attenuation	α				
0,0 ... 1850,0 MHz		25	30	—	dB
1850,0 ... 1910,0 MHz		10	12	—	dB
2040,0 ... 3860,0 MHz		12	14	—	dB
3860,0 ... 3980,0 MHz		30	50	—	dB
3980,0 ... 6000,0 MHz		20	40	—	dB

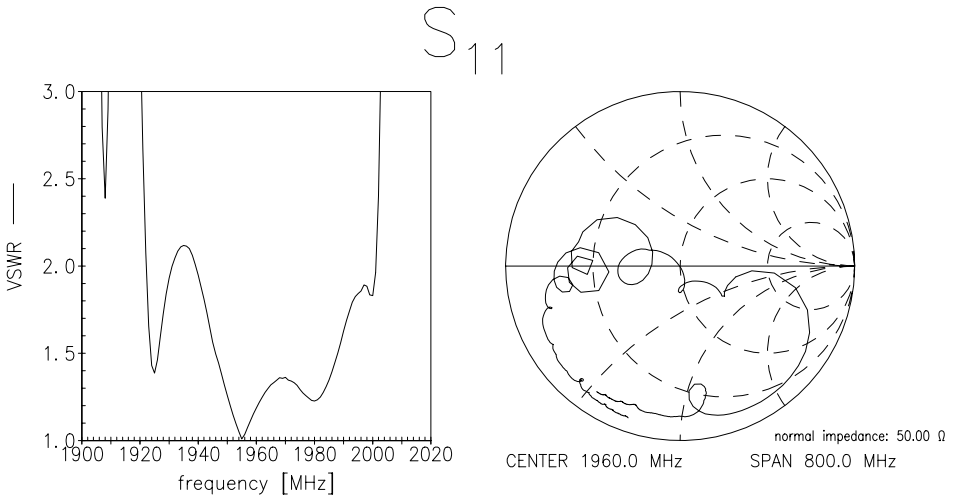
transfer function (measurement)

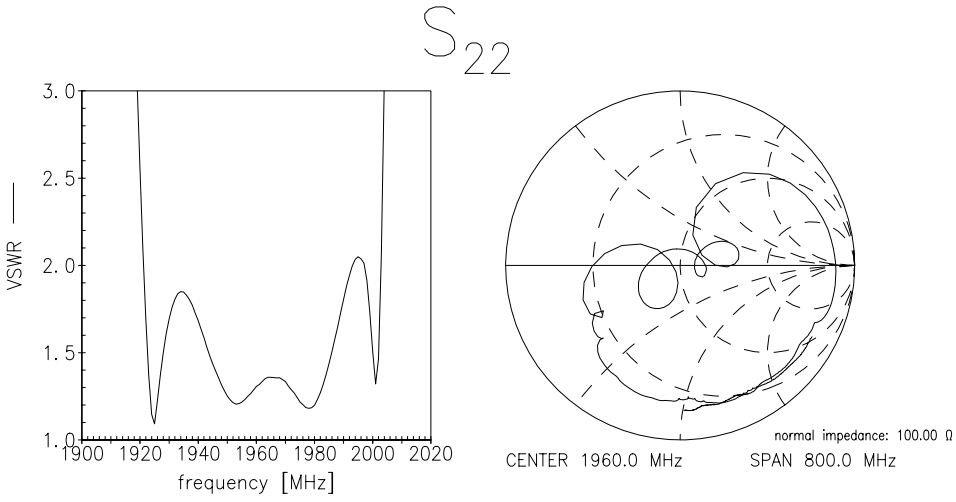


transfer function (wide band measurement)

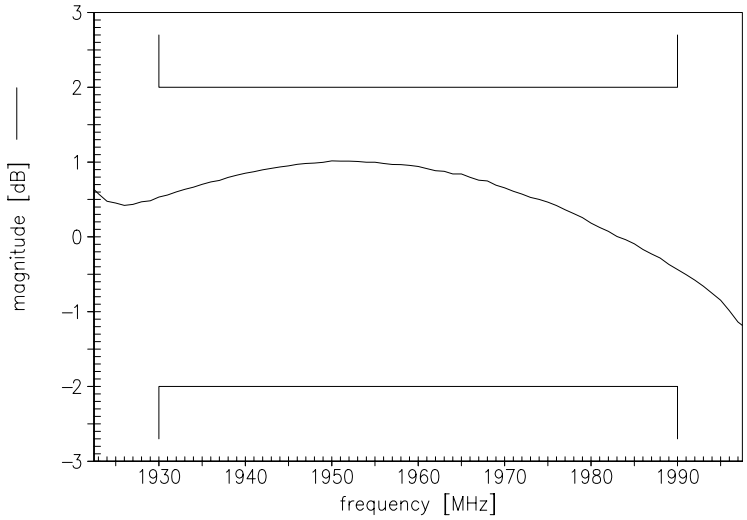


Matching (measurement)

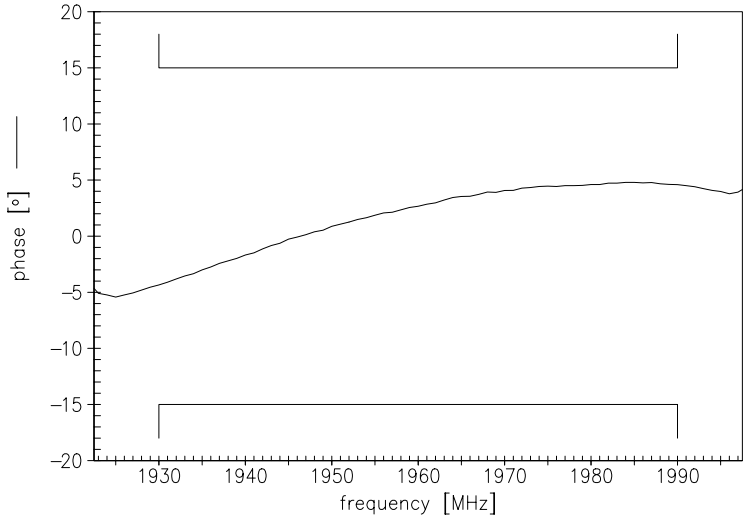




Output amplitude balance ($|S_{31}/S_{21}|$, measurement)



Output phase balance($\phi(S_{31})-\phi(S_{21})+180^o$, measurement)



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