EPCOS

SAW Components

Data Sheet B7823

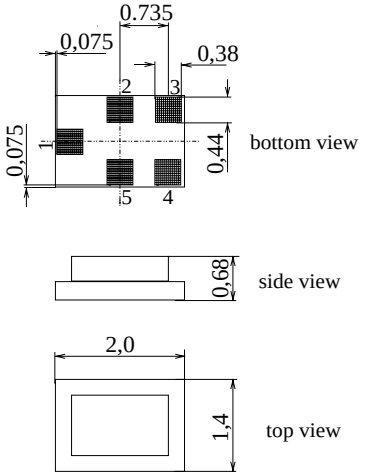


Preliminary Data

Chip sized SAW package QCS5C

Features

- Low-loss RF filter for mobile telephone PCS systems, receive path
- Low amplitude ripple
- Usable passband 60 MHz
- Unbalanced to unbalanced operation
- Package for **S**urface **M**ount **T**echnology (**SMT**)



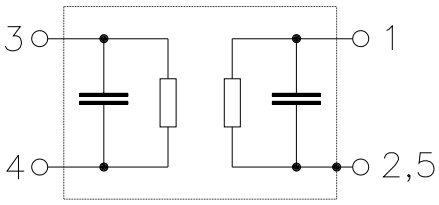
Terminals

- Ni, gold-plated

Dimensions in mm, approx. weight 0,007 g

Pin configuration

1	Input, unbalanced
4	Output, unbalanced
2,5	Case ground
3	to be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B7823	B39202-B7823-C710	C61157-A7-A111	F61074-V8151-Z000

Electrostatic **S**ensitive **D**evice (**ESD**)

Maximum ratings

Operable temperature range	T	– 30 / + 85	˚C	
Storage temperature range	T_{stg}	– 40 / + 85	˚C	
Input Power at				
GSM850, GSM900	P_{IN}	15	dBm	peak power of GSM signal,
GSM1800, GSM1900	P_{IN}	12	dBm	duty cycle 4:8
Tx bands				

Preliminary Data

SMD

Characteristics

Operating Temperature Range: T = +25 ± 2 °C
Terminating source impedance: Z_S = 50Ω (unbalanced)
Terminating load impedance: Z_L = 50Ω (unbalanced)

			min.	typ.	max.	
Center frequency	f_C		—	1960,0	—	MHz
Maximum insertion attenuation	α_{max}					
1930,0 ... 1990,0	MHz		—	2,3	2,8	dB
Amplitude ripple (p-p)	$\Delta\alpha$					
1930,0 ... 1990,0	MHz		—	0,8	1,3	dB
Input VSWR						
1930,0 ...1990,0	MHz		—	1,7	1,9	
Output VSWR						
1930,0 ...1990,0	MHz		—	1,8	2,0	
Attenuation	α					
0,0 ... 1500,0	MHz		35	42	—	dB
1500,0 ... 1700,0	MHz		30	38	—	dB
1700,0 ... 1850,0	MHz		25	30	—	dB
1850,0 ... 1890,0	MHz		22	25	—	dB
1890,0 ... 1910,0	MHz		13	16	—	dB
2010,0 ... 2070,0	MHz		13	16	—	dB
2070,0 ... 2090,0	MHz		20	24	—	dB
2090,0 ... 2200,0	MHz		25	28	—	dB
2200,0 ... 2400,0	MHz		25	32	—	dB
2400,0 ... 2500,0	MHz		30	35	—	dB
2500,0 ... 3600,0	MHz		30	35	—	dB
3600,0 ... 4000,0	MHz		30	38	—	dB
4000,0 ... 6000,0	MHz		25	35	—	dB

Characteristics

Operating Temperature Range: T = -10 to +80˚C
Terminating source impedance: Z_S = 50Ω (unbalanced)
Terminating load impedance: Z_L = 50Ω (unbalanced)

			min.	typ.	max.	
Center frequency	f_C		—	1960,0	—	MHz
Maximum insertion attenuation	α_{max}					
1930,0 ... 1990,0	MHz		—	2,3	3,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$					
1930,0 ... 1990,0	MHz		—	0,8	1,5	dB
Input VSWR						
1930,0 ...1990,0	MHz		—	1,7	1,9	
Output VSWR						
1930,0 ...1990,0	MHz		—	1,8	2,0	
Attenuation	α					
0,0 ... 1500,0	MHz		35	42	—	dB
1500,0 ... 1700,0	MHz		30	38	—	dB
1700,0 ... 1850,0	MHz		25	30	—	dB
1850,0 ... 1890,0	MHz		20	24	—	dB
1890,0 ... 1910,0	MHz		9	13	—	dB
2010,0 ... 2070,0	MHz		9	13	—	dB
2070,0 ... 2090,0	MHz		18	23	—	dB
2090,0 ... 2200,0	MHz		25	28	—	dB
2200,0 ... 2400,0	MHz		25	32	—	dB
2400,0 ... 2500,0	MHz		30	35	—	dB
2500,0 ... 3600,0	MHz		30	35	—	dB
3600,0 ... 4000,0	MHz		30	38	—	dB
4000,0 ... 6000,0	MHz		25	35	—	dB

Preliminary Data

SMD

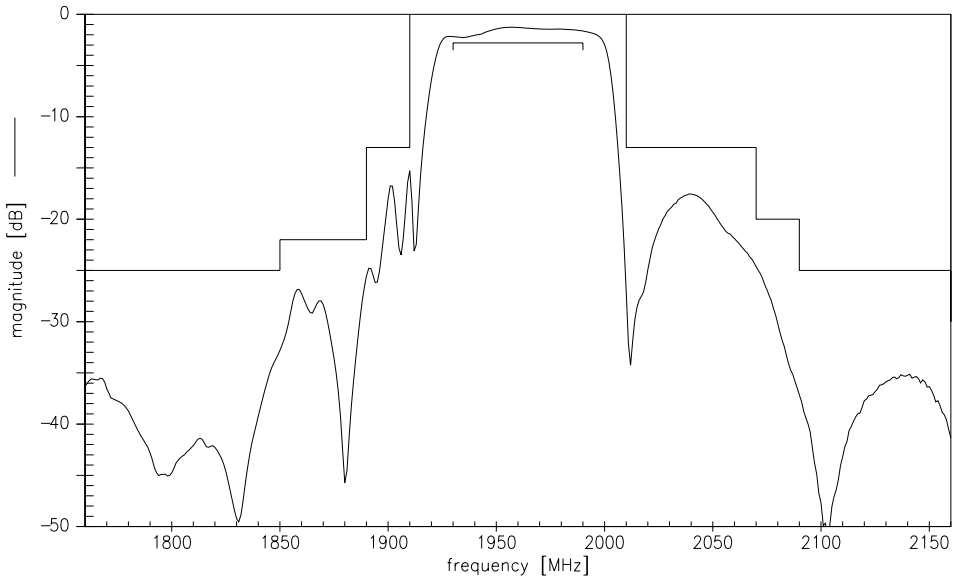
Characteristics

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

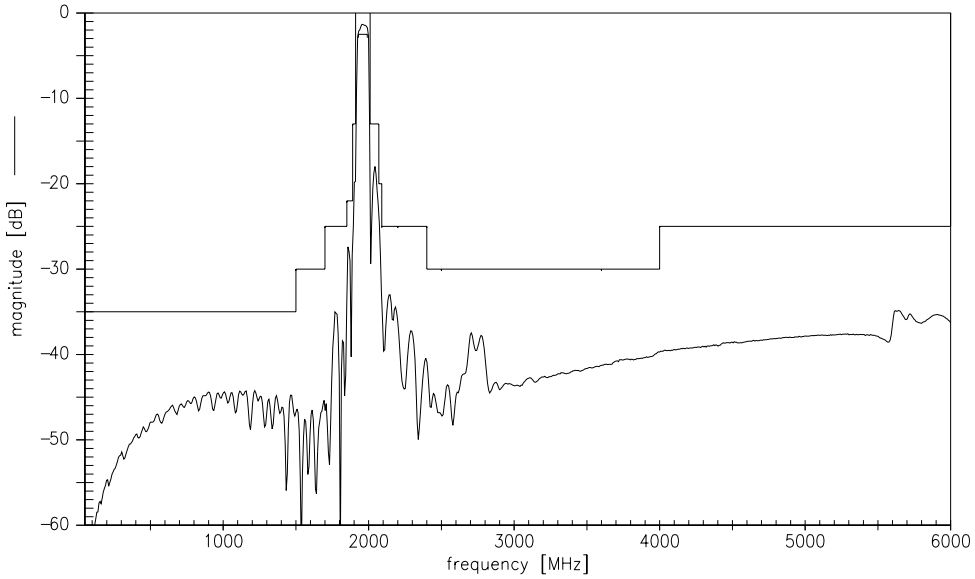
		min.	typ.	max.	
Center frequency	f_C	—	1960,0	—	MHz
Maximum insertion attenuation	α_{max}				
1930,0 ... 1990,0 MHz		—	2,6	3,3	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1930,0 ... 1990,0 MHz		—	1,1	1,8	dB
Input VSWR					
1930,0 ...1990,0 MHz		—	1,9	2,1	
Output VSWR					
1930,0 ...1990,0 MHz		—	2,0	2,2	
Attenuation	α				
0,0 ... 1500,0 MHz		35	42	—	dB
1500,0 ... 1700,0 MHz		30	38	—	dB
1700,0 ... 1850,0 MHz		25	30	—	dB
1850,0 ... 1890,0 MHz		20	24	—	dB
1890,0 ... 1910,0 MHz		8	12	—	dB
2010,0 ... 2070,0 MHz		6*	10*	—	dB
2070,0 ... 2090,0 MHz		18	23	—	dB
2090,0 ... 2200,0 MHz		25	28	—	dB
2200,0 ... 2400,0 MHz		25	32	—	dB
2400,0 ... 2500,0 MHz		30	35	—	dB
2500,0 ... 3600,0 MHz		30	35	—	dB
3600,0 ... 4000,0 MHz		30	38	—	dB
4000,0 ... 6000,0 MHz		25	35	—	dB

* 7dB (min.) (11dB typ.) for T= -20 to +85˚C

Transfer function (spec for 25°C)



Transfer function (wideband)



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