



SAW filters for mobile communications

Series/Type: **B7837**

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39941B7837K410	B39941B9401K610	2009-04-30	2009-10-31	2010-01-31

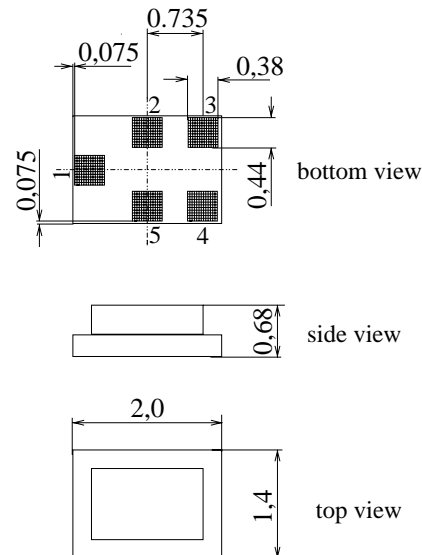
For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at www.epcos.com/sales.


Chip Size SAW package QCS5E
Features

- Low-loss RF filter for mobile telephone EGSM system, receive path
- Very low insertion attenuation
- Low amplitude ripple
- Usable passband 35 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50 Ω to 150 Ω
- Suitable for GPRS class 1 to 12
- Package for **Surface Mounted Technology (SMT)**
- Pb-free

Terminals

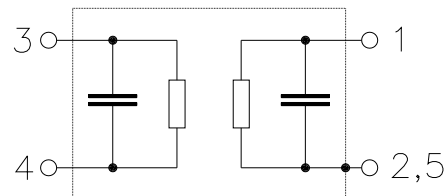
- Ni, gold-plated



Dimensions in mm, approx. weight 0,007g

Pin configuration

- | | |
|------|-------------------|
| 1 | Input, unbalanced |
| 3, 4 | Output, balanced |
| 2, 5 | Case ground |



Type	Ordering code	Marking and Package according to	Packing according to
B7837	B39941-B7837-K410	C61157-A7-A131	F61074-V8151-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 30 / + 85	°C	machine model, 10 pulses peak power of GSM signal, duty cycle 4:8
Storage temperature range	T_{stg}	- 40 / + 85	°C	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	100*	V	
Input Power at GSM850, GSM900 GSM1800, GSM1900 Tx bands	P_{IN}	15	dBm	

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


Characteristics

Operating temperature range: $T = 25\text{ }^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 150\ \Omega \parallel 82\ \text{nH}$ (balanced)

		min.	typ.	max.	
Center frequency	f_C	—	942,5	—	MHz
Maximum insertion attenuation	α_{\max}				
925,0 ... 960,0 MHz		—	1,4	1,7	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
925,0 ... 960,0 MHz		—	0,7	1,0	dB
Input VSWR					
925,0 ... 960,0 MHz		—	1,8	2,0	
Output VSWR					
925,0 ... 960,0 MHz		—	1,8	2,0	
Attenuation					
0,0 ... 480,0 MHz		45	53	—	dB
480,0 ... 905,0 MHz		30	34	—	dB
905,0 ... 915,0 MHz		25	27	—	dB
980,0 ... 1000,0 MHz		25	29	—	dB
1000,0 ... 1850,0 MHz		28	38	—	dB
1850,0 ... 6000,0 MHz		40	44	—	dB
Amplitude balance (S_{31}/S_{21})					
925,0 ... 960,0 MHz		-1,0	-0,5 / +0,7	1,0	dB
phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^{\circ}$)					
925,0 ... 960,0 MHz		-5	-3 / +2	5	degree
Diff. to common mode suppression	S_{sc12}				
925,0 ... 960,0 MHz		22	29	—	dB
824,0 ... 995,0 MHz		22	29	—	dB
1648,0 ... 1990,0 MHz		22	45	—	dB
3296,0 ... 3980,0 MHz		20	48	—	dB

Data Sheet

Characteristics

Operating temperature range: $T = -10$ to $+80$ °C
 Terminating source impedance: $Z_S = 50 \Omega$
 Terminating load impedance: $Z_L = 150 \Omega \parallel 82$ nH (balanced)

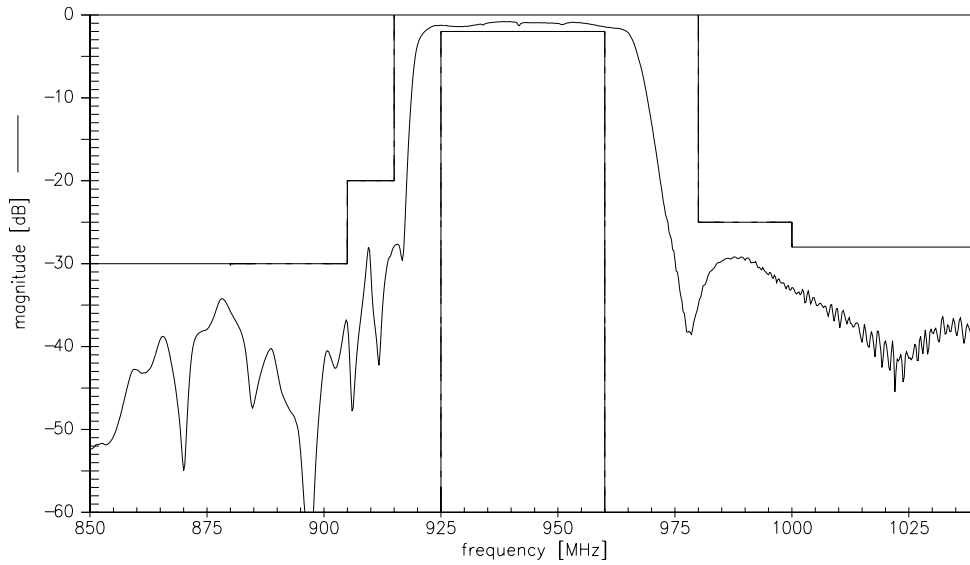
		min.	typ.	max.	
Center frequency	f_C	—	942,5	—	MHz
Maximum insertion attenuation	α_{max}	—	1,5	2,0 ¹⁾	dB
925,0 ... 960,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,8	1,2	dB
925,0 ... 960,0 MHz					
Input VSWR		—	1,8	2,0	
925,0 ... 960,0 MHz					
Output VSWR		—	1,8	2,0	
925,0 ... 960,0 MHz					
Attenuation					
0,0 ... 480,0 MHz		45	53	—	dB
480,0 ... 905,0 MHz		30	34	—	dB
905,0 ... 915,0 MHz		20 ²⁾	27	—	dB
980,0 ... 1000,0 MHz		25	29	—	dB
1000,0 ... 1850,0 MHz		28	38	—	dB
1850,0 ... 6000,0 MHz		40	44	—	dB
Amplitude balance (S_{31}/S_{21})					
925,0 ... 960,0 MHz		-1,0	-0,5 / +0,7	1,0	dB
phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^\circ$)					
925,0 ... 960,0 MHz		-5	-3 / +2	5	degree
Diff. to common mode suppression	S_{sc12}				
925,0 ... 960,0 MHz		22	29	—	dB
824,0 ... 995,0 MHz		22	29	—	dB
1648,0 ... 1990,0 MHz		22	45	—	dB
3296,0 ... 3980,0 MHz		20	48	—	dB

1) 2,2 dB for $T = -30$ °C to $+85$ °C

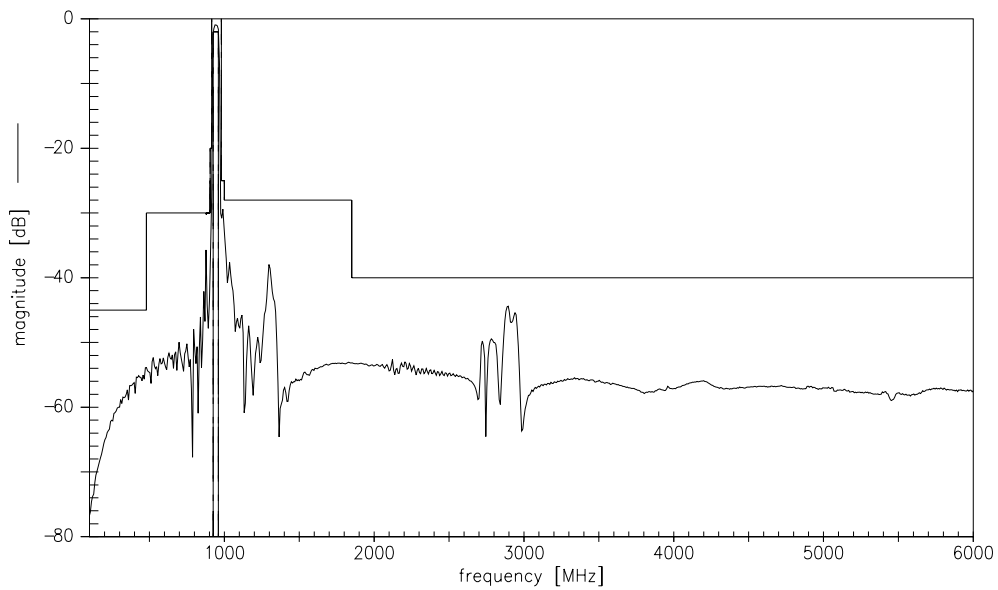
2) 17 dB for $T = -30$ °C to $+85$ °C



Transfer function (passband)



Transfer function (wideband)



**Published by EPCOS AG****Surface Acoustic Wave Components Division, SAW MC WT****P.O. Box 80 17 09, 81617 Munich, GERMANY**

© EPCOS AG 2004. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.



This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View B39941B7837K410 on WIN SOURCE](#)
-  [EPCOS \(TDK\) Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management