SAW filters for mobile communications

Series/Type: B4141

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39941B4141U510		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.

Data Sheet SMD

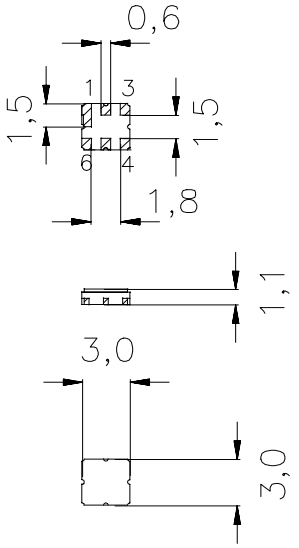
Ceramic package DCC6D

Features

- Low-loss RF filter for mobile telephone EGSM systems, receive path
- Low amplitude ripple
- Usable passband 35 MHz
- Unbalanced to balanced Operation
- Impedance transformation from 50 Ω to 200 Ω
- Ceramic package for **S**urface **M**ounted **T**echnology (**SMT**)

Terminals

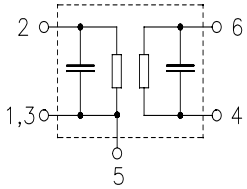
- Ni, gold-plated



Dimensions in mm, approx. weight 0,037 g

Pin configuration

2	Input, unbalanced
1, 3	Input ground
4, 6	Output, balanced
5	To be grounded
1, 3, 5	Case ground



Type	Ordering code	Marking and Package according to	Packing according to
B4141	B39941-B4141-U510	C61157-A7-A68	F61074-V8089-Z000

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

Maximum ratings

Operable temperature range	T	– 10 / + 80	˚C	
Storage temperature range	T_{stg}	– 40 / + 85	˚C	
DC voltage	V_{DC}	0	V	
Input power max. 880 ... 915 MHz	P_{IN}	3,5	dBm	source impedance 50 Ω, load impedance 200 Ω, peak power of GSM signal, duty cycle 2 : 8

Characteristics

Operating temperature range: T = 25+-2 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 200 Ω || 47nH
(L simulated with Q factor 20)

				min.	typ.	max.	
Center frequency			f_C	—	942,5	—	MHz
Maximum insertion attenuation			α_{max}				
	925,0 ... 960,0	MHz		—	2,5	3,2	dB
Amplitude ripple (p-p)			$\Delta\alpha$				
	925,0 ... 960,0	MHz		—	0,9	1,4	dB
Input VSWR							
	925,0 ... 960,0	MHz		—	1,8	2,3	
Output VSWR							
	925,0 ... 960,0	MHz		—	1,8	2,1	
Attenuation			α				
	0,0 ... 600,0	MHz		60	78	—	dB
	600,0 ... 880,0	MHz		50	66	—	dB
	880,0 ... 905,0	MHz		30	47	—	dB
	905,0 ... 915,0	MHz		20	28	—	dB
	980,0 ...1025,0	MHz		22	25	—	dB
	1025,0 ...1050,0	MHz		35	45	—	dB
	1050,0 ...1920,0	MHz		50	70	—	dB
	1920,0 ...2880,0	MHz		30	60	—	dB
	2880,0 ...3840,0	MHz		23	49	—	dB
	3840,0 ...5000,0	MHz		18	36	—	dB
	5000,0 ...6000,0	MHz		10	35	—	dB
Symmetry in band (referenced to the matched operating condition)							
$\lvert S_{31}\rvert/\lvert S_{21}\rvert$	925,0 ... 960,0	MHz		-1,0	0	1,0	dB
$\arg(S_{31}/S_{21})$	925,0 ... 960,0	MHz		170	180	190	°

Characteristics

Operating temperature range: T = +20 to +40 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 200 Ω || 47 nH
(L simulated with Q factor 20)

				min.	typ.	max.	
Center frequency			f_C	—	942,5	—	MHz
Maximum insertion attenuation			α_{max}				
	925,0 ... 960,0	MHz		—	2,6	3,4	dB
Amplitude ripple (p-p)			$\Delta\alpha$				
	925,0 ... 960,0	MHz		—	1,0	1,6	dB
Input VSWR							
	925,0 ... 960,0	MHz		—	1,8	2,3	
Output VSWR							
	925,0 ... 960,0	MHz		—	1,8	2,1	
Attenuation			α				
	0,0 ... 600,0	MHz		60	78	—	dB
	600,0 ... 880,0	MHz		50	66	—	dB
	880,0 ... 905,0	MHz		30	44	—	dB
	905,0 ... 915,0	MHz		20	28	—	dB
	980,0 ...1025,0	MHz		22	25	—	dB
	1025,0 ...1050,0	MHz		35	45	—	dB
	1050,0 ...1920,0	MHz		50	70	—	dB
	1920,0 ...2880,0	MHz		30	60	—	dB
	2880,0 ...3840,0	MHz		23	48	—	dB
	3840,0 ...5000,0	MHz		18	36	—	dB
	5000,0 ...6000,0	MHz		10	35	—	dB
Symmetry in band (referenced to the matched operating condition)							
$\lvert S_{31}\rvert/\lvert S_{21}\rvert$	925,0 ... 960,0	MHz		-1,0	0	1,0	dB
$\arg(S_{31}/S_{21})$	925,0 ... 960,0	MHz		170	180	190	°

Characteristics

Operating temperature range: T = +10 to +60 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 200 Ω || 47 nH
(L simulated with Q factor 20)

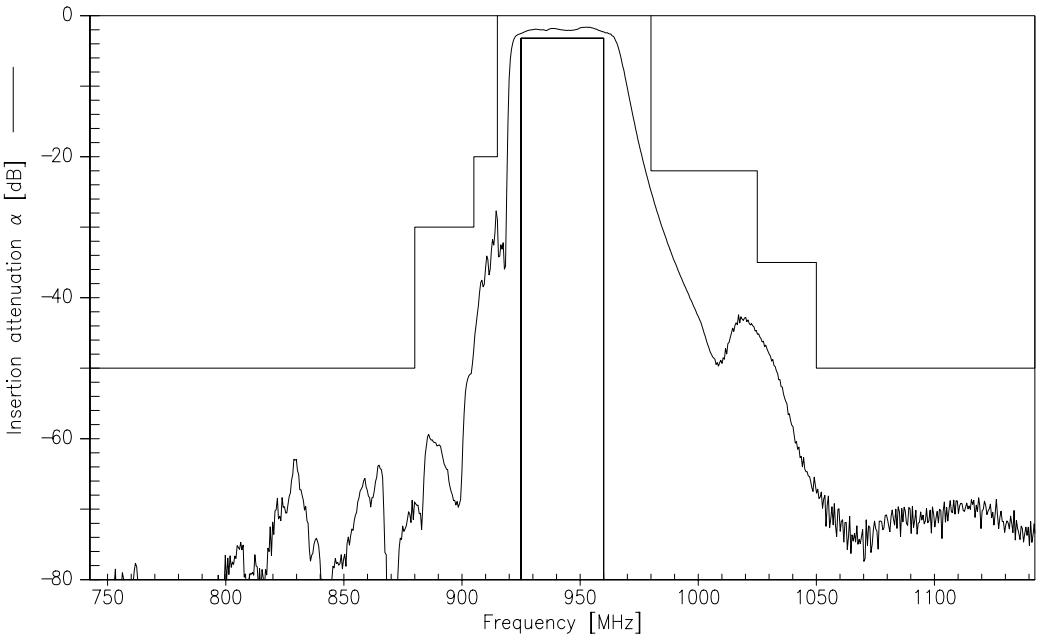
				min.	typ.	max.	
Center frequency			f_C	—	942,5	—	MHz
Maximum insertion attenuation			α_{max}				
	925,0	... 960,0	MHz	—	2,6	3,6	dB
Amplitude ripple (p-p)			$\Delta\alpha$				
	925,0	... 960,0	MHz	—	1,0	1,8	dB
Input VSWR							
	925,0	... 960,0	MHz	—	1,8	2,3	
Output VSWR							
	925,0	... 960,0	MHz	—	1,8	2,1	
Attenuation			α				
	0,0	... 600,0	MHz	60	78	—	dB
	600,0	... 880,0	MHz	50	66	—	dB
	880,0	... 905,0	MHz	30	43	—	dB
	905,0	... 915,0	MHz	20	28	—	dB
	980,0	...1025,0	MHz	21	25	—	dB
	1025,0	...1050,0	MHz	35	44	—	dB
	1050,0	...1920,0	MHz	50	70	—	dB
	1920,0	...2880,0	MHz	30	60	—	dB
	2880,0	...3840,0	MHz	23	49	—	dB
	3840,0	...5000,0	MHz	18	36	—	dB
	5000,0	...6000,0	MHz	10	35	—	dB
Symmetry in band (referenced to the matched operating condition)							
$\lvert S_{31}\rvert/\lvert S_{21}\rvert$	925,0	... 960,0	MHz	-1,0	0	1,0	dB
$\arg(S_{31}/S_{21})$	925,0	... 960,0	MHz	170	180	190	°

Characteristics

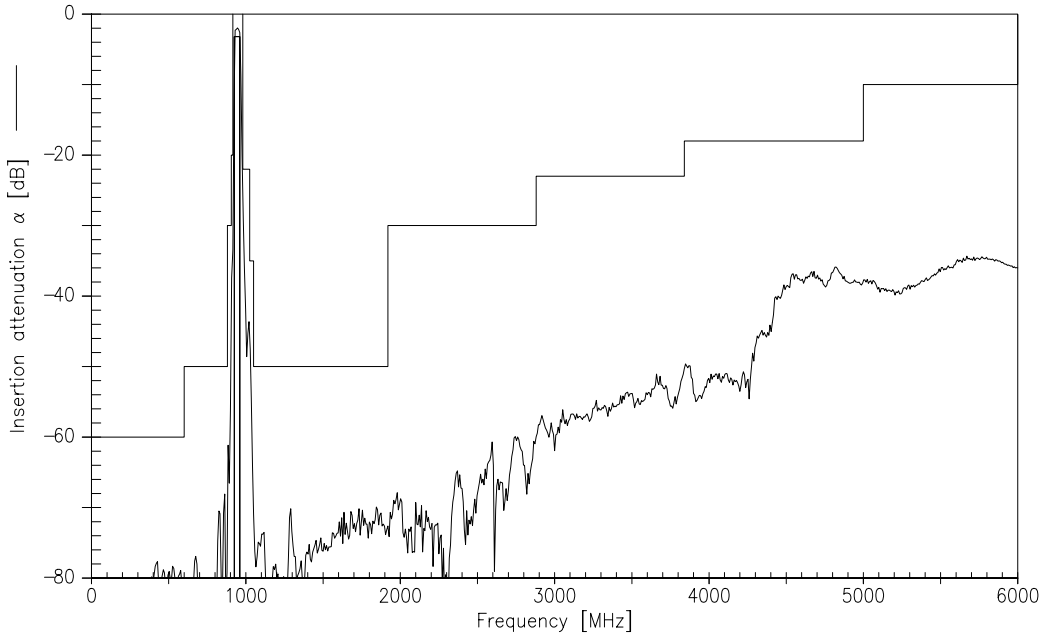
Operating temperature range: T = -10 to +80 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 200 Ω || 47 nH
(L simulated with Q factor 20)

				min.	typ.	max.	
Center frequency			f_C	—	942,5	—	MHz
Maximum insertion attenuation			α_{max}				
	925,0 ... 960,0	MHz		—	2,7	3,8	dB
Amplitude ripple (p-p)			$\Delta\alpha$				
	925,0 ... 960,0	MHz		—	1,1	2,0	dB
Input VSWR							
	925,0 ... 960,0	MHz		—	1,8	2,3	
Output VSWR							
	925,0 ... 960,0	MHz		—	1,8	2,1	
Attenuation			α				
	0,0 ... 600,0	MHz		60	78	—	dB
	600,0 ... 880,0	MHz		50	66	—	dB
	880,0 ... 905,0	MHz		30	40	—	dB
	905,0 ... 915,0	MHz		20	28	—	dB
	980,0 ...1025,0	MHz		20	23	—	dB
	1025,0 ...1050,0	MHz		35	44	—	dB
	1050,0 ...1920,0	MHz		50	70	—	dB
	1920,0 ...2880,0	MHz		30	60	—	dB
	2880,0 ...3840,0	MHz		23	49	—	dB
	3840,0 ...5000,0	MHz		18	36	—	dB
	5000,0 ...6000,0	MHz		10	35	—	dB
Symmetry in band (referenced to the matched operating condition)							
$\lvert S_{31}\rvert/\lvert S_{21}\rvert$	925,0 ... 960,0	MHz		-1,0	0	1,0	dB
$\arg(S_{31}/S_{21})$	925,0 ... 960,0	MHz		170	180	190	°

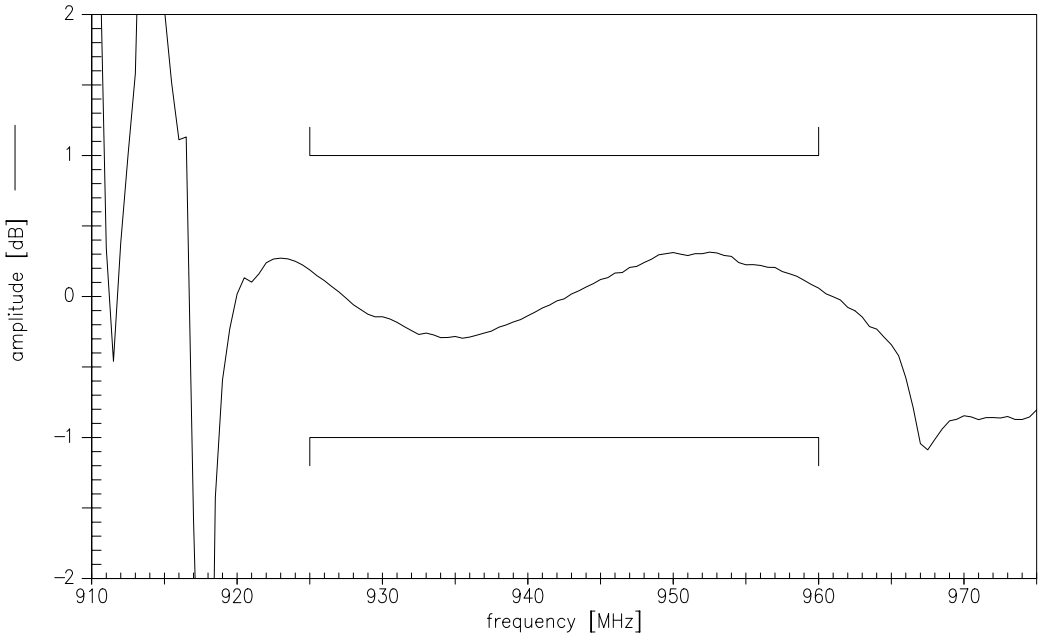
Transfer function (spec at 25 ˚C)



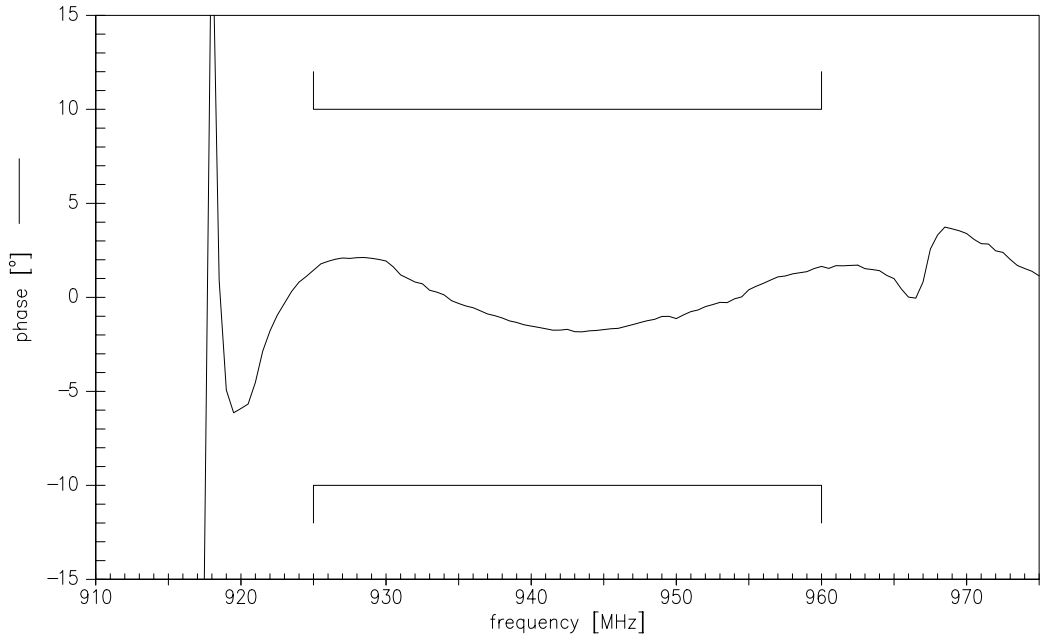
Transfer function (wideband)



Amplitude Symmetry $|S_{31}|/|S_{21}|$ (referenced to the matched operating condition)



Phase Symmetry $\arg(S_{31}/S_{21})$ - 180° (referenced to the matched operating condition)



Published by EPCOS AG
Surface Acoustic Wave Components Division, OFW E MF
P.O. Box 80 17 09, D-81617 München

As far as patents or other rights of third parties are concerned, liability is only assumed for components per se, not for applications, processes and circuits implemented within components or assemblies.

The information describes the type of component and shall not be considered as assured characteristics.
Terms of delivery and rights to change design reserved.

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.