

SAW Components

Data Sheet B4166





SAW Components	B4166	
Low-Loss Filter for Mo	bbile Communication	1842,50 MHz
Data Sheet	SMD	

Ceramic package DCC6C

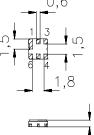
- Low-loss RF filter for mobile telephone PCN system, receive path
- High selectivity

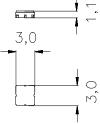
Features

- Usable passband: 75 MHz
- No matching network required for operation at 50 Ω
- Suitable for GPRS class 1 to 12
- Ceramic Package for Surface Mounted Technology (SMT)

Terminals

Ni, gold-plated

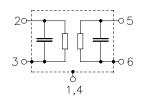




Dimensions in mm, approx. weight 0,037

Pin configuration

2	Input
5	Output
1, 3, 4, 6	To be grounded



Туре		Marking and Package according to	Packing according to
B4166	B39182-B4166-U410	C61157-A7-A67	F61074-V8088-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	Т	- 20 / + 80	°C	
Storage temperature range	T _{stg}	– 40 / + 85	°C	
DC voltage	V _{DC}	5	V	
Input Power at				pook power of CSM signal
GSM850, GSM900,	P _{IN}	15	dBm	peak power of GSM signal duty cycle 4:8
GSM1800, GSM1900	P _{IN}	12	dBm	
Tx bands				



Jun 03, 2002



$\begin{tabular}{ c c c c c c } \hline Low-Loss Filter for Mobile Communication 1842,50 MHz \\ \hline Data Sheet $$$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$	SAW Components						B4166
Arrange: T = 25 + 2°C Terminating source impedance: $Z_{S} = 50 \ \Omega$ Terminating load impedance: $Z_{L} = 50 \ \Omega$ Terminating load impedance: $Z_{L} = 50 \ \Omega$ Center frequency reminating load impedance: $Z_{L} = 50 \ \Omega$ Center frequency reminating load impedance: $Z_{L} = 50 \ \Omega$ Maximum insertion attenuation 1805,01880,0 MHz MHz Maximum insertion attenuation 1805,01880,0 MHz C - 2,9 3,3 dB Maximum insertion attenuation 1800,0 MHz C - 2,9 3,3 dB Maximum insertion attenuation α α Maximum insertion attenuation Maximum insertion attenuation α α α α Maximum insertion attenuation α <t< th=""><th colspan="6">Low-Loss Filter for Mobile Communication</th><th>50 MHz</th></t<>	Low-Loss Filter for Mobile Communication						50 MHz
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Data Sheet	=MI					
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Characteristics						
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Operating temperature range:	T =	: 25 +-	2°C			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				- •			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Terminating load impedance:	$Z_{L}^{o} =$	= 50 Ω				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			1			I	1
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				min.	-	max.	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Center frequency	1	f _c	—	1842,5	_	MHz
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	•• • • • •						
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			x _{max}				15
1805,0 1880,0 MHz 0,9 1,3 dB Input VSWR 1805,0 1880,0 MHz 2,0 2,2 Output VSWR 1805,0 1880,0 MHz 2,2 2,4 Attenuation α 2,2 2,4 <t< td=""><td>1805,01880,0</td><td>MHZ</td><td></td><td>—</td><td>2,9</td><td>3,3</td><td>aв</td></t<>	1805,01880,0	MHZ		—	2,9	3,3	aв
1805,0 1880,0 MHz 0,9 1,3 dB Input VSWR 1805,0 1880,0 MHz 2,0 2,2 Output VSWR 1805,0 1880,0 MHz 2,2 2,4 Attenuation α 2,2 2,4 <t< td=""><td>Amplitude ripple (p-p)</td><td>,</td><td>10</td><td></td><td></td><td></td><td></td></t<>	Amplitude ripple (p-p)	,	10				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			30	_	0 9	13	dB
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1000,0 1000,0	111112			0,0	1,0	ub l
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Input VSWR						
Output VSWR 1805,0 1880,0 MHz 2,2 2,4 Attenuation α 40,0 43,5 dB 370,0 1300,0 MHz 37,0 38,5 dB 1300,0 1705,0 MHz 30,0 36,0 dB 1705,0 1785,0 MHz 12,0 14,0 dB 1920,0 1980,0 MHz 12,0 25,0 dB 1920,0 1980,0 MHz 23,0 28,0 dB 2530,0 2680,0 MHz 31,0 35,0 dB 2680,0 3400,0 MHz 24,0 30,0 dB 3975,0 4200,0 MHz 23,0 27,0 dB 3975,0 4200,0 MHz 15,0 19,0 dB	-	MHz		_	2,0	2,2	
Attenuation α 40,0 43,5 — dB 370,0 1300,0 MHz 37,0 38,5 — dB 1300,0 1705,0 MHz 30,0 36,0 — dB 1705,0 1785,0 MHz 12,0 14,0 — dB 1920,0 1980,0 MHz 12,0 25,0 — dB 1920,0 2530,0 MHz 12,0 28,0 — dB 2530,0 2680,0 MHz 31,0 35,0 — dB 2680,0 3975,0 MHz 24,0 30,0 — dB 3975,0 4200,0 MHz 23,0 27,0 — dB 3975,0 4920,0 MHz 15,0 19,0 — dB					·		
10,0 370,0 MHz 40,0 43,5 dB 370,0 1300,0 MHz 37,0 38,5 dB 1300,0 1705,0 MHz 30,0 36,0 dB 1705,0 1785,0 MHz 12,0 14,0 dB 1920,0 1980,0 MHz 12,0 25,0 dB 1980,0 2530,0 MHz 23,0 28,0 dB 2530,0 2680,0 MHz 31,0 35,0 dB 2680,0 3975,0 MHz 24,0 30,0 dB 3975,0 4200,0 MHz 23,0 27,0 dB 4200,0 4920,0 MHz 15,0 19,0 dB	1805,01880,0	MHz		_	2,2	2,4	
10,0 370,0 MHz 40,0 43,5 dB 370,0 1300,0 MHz 37,0 38,5 dB 1300,0 1705,0 MHz 30,0 36,0 dB 1705,0 1785,0 MHz 12,0 14,0 dB 1920,0 1980,0 MHz 12,0 25,0 dB 1980,0 2530,0 MHz 23,0 28,0 dB 2530,0 2680,0 MHz 31,0 35,0 dB 2680,0 3975,0 MHz 24,0 30,0 dB 3975,0 4200,0 MHz 23,0 27,0 dB 4200,0 4920,0 MHz 15,0 19,0 dB							
370,0 1300,0 MHz 37,0 38,5 — dB 1300,0 1705,0 MHz 30,0 36,0 — dB 1705,0 1785,0 MHz 12,0 14,0 — dB 1920,0 1980,0 MHz 12,0 25,0 — dB 1980,0 2530,0 MHz 23,0 28,0 — dB 2530,0 2680,0 MHz 31,0 35,0 — dB 2680,0 3400,0 MHz 28,0 34,0 — dB 3400,0 3975,0 MHz 23,0 27,0 — dB 3975,0 4200,0 MHz 15,0 19,0 — dB			α				
1300,0 1705,0 MHz 30,0 36,0 — dB 1705,0 1785,0 MHz 12,0 14,0 — dB 1920,0 1980,0 MHz 12,0 25,0 — dB 1980,0 2530,0 MHz 23,0 28,0 — dB 2530,0 2680,0 MHz 31,0 35,0 — dB 2680,0 3400,0 MHz 28,0 34,0 — dB 3400,0 3975,0 MHz 24,0 30,0 — dB 3975,0 4200,0 MHz 23,0 27,0 — dB 4200,0 4920,0 MHz 15,0 19,0 — dB						_	
1705,0 1785,0 MHz 12,0 14,0 — dB 1920,0 1980,0 MHz 12,0 25,0 — dB 1980,0 2530,0 MHz 23,0 28,0 — dB 2530,0 2680,0 MHz 31,0 35,0 — dB 2680,0 3400,0 MHz 28,0 34,0 — dB 3400,0 3975,0 MHz 24,0 30,0 — dB 3975,0 4200,0 MHz 23,0 27,0 — dB 4200,0 4920,0 MHz 15,0 19,0 — dB						_	
1920,0 1980,0 MHz 12,0 25,0 — dB 1980,0 2530,0 MHz 23,0 28,0 — dB 2530,0 2680,0 MHz 31,0 35,0 — dB 2680,0 3400,0 MHz 28,0 34,0 — dB 3400,0 3975,0 MHz 24,0 30,0 — dB 3975,0 4200,0 MHz 23,0 27,0 — dB 4200,0 4920,0 MHz 15,0 19,0 — dB					•	-	-
1980,0 2530,0 MHz 23,0 28,0 — dB 2530,0 2680,0 MHz 31,0 35,0 — dB 2680,0 3400,0 MHz 28,0 34,0 — dB 3400,0 3975,0 MHz 24,0 30,0 — dB 3975,0 4200,0 MHz 23,0 27,0 — dB 4200,0 4920,0 MHz 15,0 19,0 — dB						-	-
2530,02680,0MHz31,035,0—dB2680,03400,0MHz28,034,0—dB3400,03975,0MHz24,030,0—dB3975,04200,0MHz23,027,0—dB4200,04920,0MHz15,019,0—dB							-
2680,03400,0MHz28,034,0—dB3400,03975,0MHz24,030,0—dB3975,04200,0MHz23,027,0—dB4200,04920,0MHz15,019,0—dB							
3400,03975,0MHz24,030,0—dB3975,04200,0MHz23,027,0—dB4200,04920,0MHz15,019,0—dB							
3975,04200,0MHz23,027,0—dB4200,04920,0MHz15,019,0—dB							
4200,04920,0 MHz 15,0 19,0 — dB							-
						_	
4920,05200,0 MHz 10,0 17.0 — dB	4920,05200,0	MHz		10,0	17,0	_	dB
5200,06000,0 MHz 5,0 11,0 — dB						_	



SAW Components						B4166
Low-Loss Filter for Mobile Communication					1842,	50 MHz
Data Sheet						
Characteristics						
Operating temperature range: Terminating source impedance: Terminating load impedance:	0	= -20 to = 50 Ω = 50 Ω				
			min.	typ.	max.	
Center frequency		f _c	—	1842,5		MHz
Maximum insertion attenuation 1805,01880,0	MHz	$lpha_{max}$	_	3,2	3,9	dB
Amplitude ripple (p-p) 1805,01880,0	MHz	Δα	_	1,2	1,9	dB
Input VSWR						
1805,01880,0 Output VSWR	MHz		_	2,1	2,3	
1805,01880,0	MHz		—	2,3	2,5	
Attenuation		α				
10,0 370,0	MHz		40,0	43,5	_	dB
370,01300,0	MHz		37,0	38,5	—	dB
1300,01705,0	MHz		30,0	36,0	—	dB
1705,01785,0	MHz		10,0	13,0	—	dB
1920,01980,0	MHz		10,0	25,0		dB
1980,02530,0	MHz		23,0	28,0	—	dB
2530,02680,0	MHz		31,0	35,0	—	dB
2680,03400,0	MHz		28,0	34,0	—	dB
3400,03975,0	MHz		24,0	30,0		dB
3975,04200,0	MHz		23,0	27,0	—	dB
4200,04920,0	MHz		15,0	19,0	—	dB
4920,05200,0	MHz		10,0	17,0	—	dB
5200,06000,0	MHz		5,0	11,0	—	dB



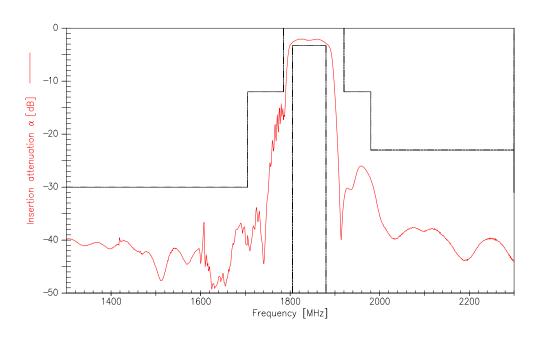
Jun 03, 2002



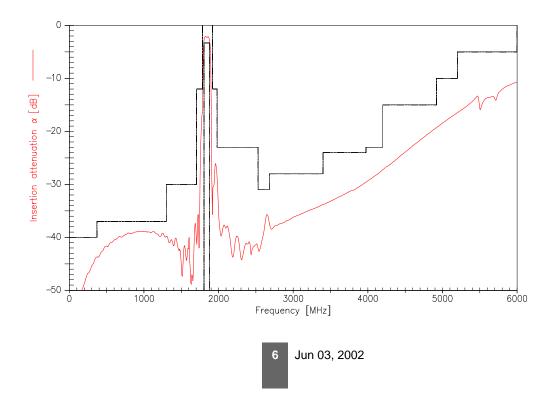
SAW Components B4166						B4166		
Low-Loss Filter for Mobile Communication						1842,	50 MHz	
Data Sheet			=M					
Characteristics								
Characteristics			_					
Operating temperatu			T		o +85°C			
Terminating source in Terminating load imp		-	Z_{S}	= 50 Ω = 50 Ω				
	cuance.		<u>~</u> L	- 00 32				
					min.	typ.	max.	
Center frequency				f _c	-	1842,5	—	MHz
•• • • •								
Maximum insertion				α_{max}			4.5	ID
	1805,0	1880,0	MHz			3,2	4,5	dB
Amplitude ripple (p-	n)			Δα				
		1880,0	MHz	Δα		1,2	2,5	dB
	1000,0	1000,0	101112			1,2	2,0	u D
Input VSWR								
•	1805,0	1880,0	MHz		_	2,1	2,5	
Output VSWR								
	1805,0	1880,0	MHz		—	2,3	2,7	
Attenuation				α				
	10,0		MHz		40,0	43,5	_	dB
	370,0		MHz		37,0	38,5		dB
	1300,0		MHz		30,0	36,0		dB
	1705,0		MHz		9,0 10,0	13,0		dB
	1920,0 1980,0		MHz MHz		10,0 23,0	25,0 28,0		dB dB
	2530,0		MHz		23,0 31,0	28,0 35,0		dВ
	2530,0 2680,0	2680,0	MHz		28,0	35,0 34,0		dВ
	2080,0 3400,0		MHz		28,0 24,0	34,0 30,0		dB dB
	3975,0		MHz		23,0	27,0	_	dB
	4200,0		MHz		15,0	19,0	_	dB
	4920,0	5200,0	MHz		10,0	17,0	_	dB
	5200,0	6000,0	MHz		5,0	11,0	_	dB



Transfer function (spec for 25°C)



Transfer function (wideband)



	ÉPCOS	
SAW Components		B4166
Low-Loss Filter for Mob	ile Communication	1842,50 MHz
Data Sheet		

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

© EPCOS AG 2002. 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.



Jun 03, 2002