



SAW Components

Data Sheet B4139





SAW Components

B4139

Low-Loss Filter for Mobile Communication

1842,50 MHz

Data Sheet



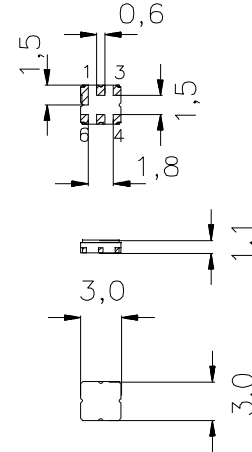
Ceramic package DCC6C

Features

- Low-loss RF filter for mobile telephone PCN system, receive path
- High selectivity
- Usable passband: 75 MHz
- No matching network required for operation at 50 Ω
- Ceramic Package for Surface Mounted Technology (SMT)

Terminals

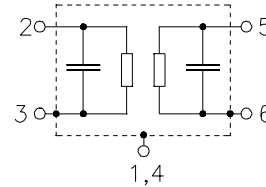
- Ni, gold-plated



Dimensions in mm, approx. weight 0,037 g

Pin configuration

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



Electrostatic Sensitive Device (ESD)

Type	Ordering code	Marking and Package according to	Packing according to
B4139	B39182-B4139-U410	C61157-A7-A67	F61074-V8088-Z000

Maximum ratings

Operable temperature range	T	- 25 / + 75	°C	source and load impedance 50 Ω peak power of GSM signal, duty cycle 1 : 8
Storage temperature range	T_{stg}	- 40 / + 85	°C	
DC voltage	V_{DC}	0	V	
Input power max.				
1805 ... 1880 MHz	P_{IN}	15	dBm	
1710 ... 1785 MHz	P_{IN}	13	dBm	
925 ... 960 MHz	P_{IN}	17	dBm	duty cycle 1 : 8
880 ... 915 MHz	P_{IN}	17	dBm	duty cycle 1 : 8
1850 ... 1910 MHz	P_{IN}	10	dBm	continuous wave, 2000h
1930 ... 1990 MHz	P_{IN}	10	dBm	continuous wave, 2000h
elsewhere		0	dBm	continuous wave



Characteristics

Operating temperature range: $T = 25 \pm 2^\circ \text{C}$
 Terminating source impedance: $Z_S = 50 \Omega$
 Terminating load impedance: $Z_L = 50 \Omega$

				min.	typ.	max.	
Center frequency		f_c		—	1842,5	—	MHz
Maximum insertion attenuation		α_{\max}					
	1805,0 ... 1810,0	MHz		—	2,2	2,5	dB
	1810,0 ... 1880,0	MHz		—	2,2	2,5	dB
Amplitude ripple (p-p)		$\Delta\alpha$					
	1805,0 ... 1810,0	MHz		—	0,8	1,1	dB
	1810,0 ... 1880,0	MHz		—	0,8	1,1	dB
Input return loss							
	1805,0 ... 1880,0	MHz		6,0	6,5	—	dB
Output return loss							
	1805,0 ... 1880,0	MHz		6,0	6,5	—	dB
Attenuation		α					
	10,0 ... 1760,0	MHz		20,0	21,5	—	dB
	1760,0 ... 1785,0	MHz		7,0	12,0	—	dB
	1920,0 ... 1980,0	MHz		12,0	25,0	—	dB
	1980,0 ... 3500,0	MHz		23,0	24,5	—	dB
	3500,0 ... 4000,0	MHz		20,0	27,0	—	dB
	4000,0 ... 4500,0	MHz		8,0	14,0	—	dB



Characteristics

Operating temperature range: $T = -25$ to $+75^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

			min.	typ.	max.	
Center frequency	f_c		—	1842,5	—	MHz
Maximum insertion attenuation	α_{\max}					
		1805,0 ... 1810,0 MHz	—	2,7	3,0	dB
		1810,0 ... 1880,0 MHz	—	2,2	2,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$					
		1805,0 ... 1810,0 MHz	—	1,3	1,6	dB
		1810,0 ... 1880,0 MHz	—	0,8	1,1	dB
Input return loss						
		1805,0 ... 1880,0 MHz	6,0	6,5	—	dB
Output return loss						
		1805,0 ... 1880,0 MHz	6,0	6,5	—	dB
Attenuation	α					
		10,0 ... 1760,0 MHz	20,0	21,5	—	dB
		1760,0 ... 1785,0 MHz	5,0	9,0	—	dB
		1920,0 ... 1980,0 MHz	12,0	20,0	—	dB
		1980,0 ... 3500,0 MHz	23,0	24,5	—	dB
		3500,0 ... 4000,0 MHz	20,0	27,0	—	dB
		4000,0 ... 4500,0 MHz	8,0	14,0	—	dB



SAW Components

B4139

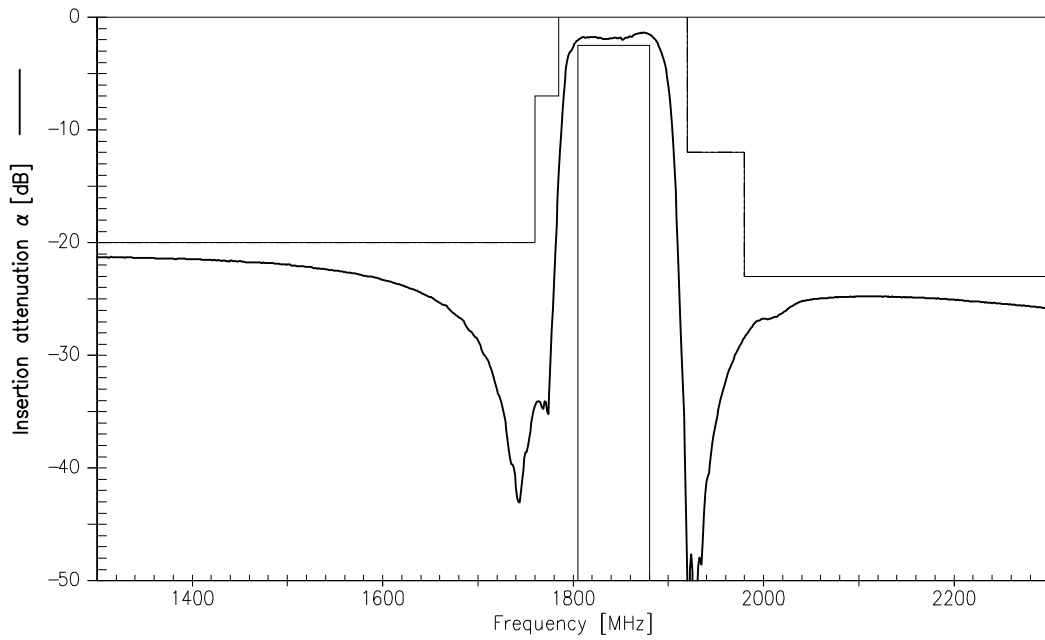
Low-Loss Filter for Mobile Communication

1842,50 MHz

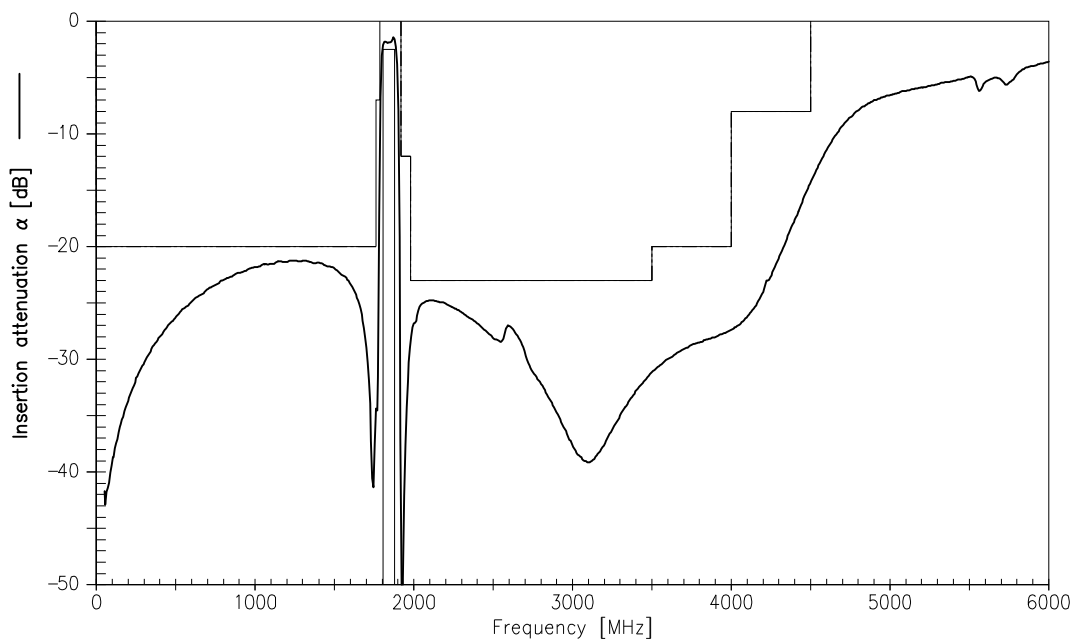
Data Sheet



Transfer function (spec for 25°C)



Transfer function (wideband)





SAW Components

B4139

Low-Loss Filter for Mobile Communication

1842,50 MHz

Data Sheet



Published by EPCOS AG

Surface Acoustic Wave Components Division, OFW E MF

P.O. Box 80 17 09, D-81617 München

© EPCOS AG 1999. All Rights Reserved.

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.