



# SAW Components

Data Sheet B4139

Data Sheet

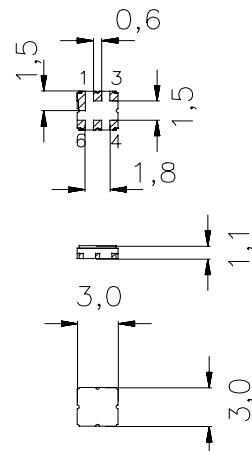


**Features**

- 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**

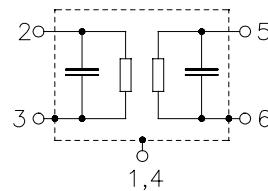
- Ni, gold-plated



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	
Storage temperature range	$T_{stg}$	-40 / +85	°C	
DC voltage	$V_{DC}$	0	V	
Input power max.				source and load impedance 50 Ω peak power of GSM signal,
1805 ... 1880 MHz	$P_{IN}$	15	dBm	duty cycle 1 : 8
1710 ... 1785 MHz	$P_{IN}$	13	dBm	duty cycle 1 : 8
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

**SAW Components****B4139****Low-Loss Filter for Mobile Communication****1842,50 MHz**

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**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.	
<b>Center frequency</b>		$f_c$	—	1842,5	—	MHz
<b>Maximum insertion attenuation</b>		$\alpha_{\max}$				
1805,0 ... 1810,0	MHz		—	2,2	2,5	dB
1810,0 ... 1880,0	MHz		—	2,2	2,5	dB
<b>Amplitude ripple (p-p)</b>		$\Delta\alpha$				
1805,0 ... 1810,0	MHz		—	0,8	1,1	dB
1810,0 ... 1880,0	MHz		—	0,8	1,1	dB
<b>Input return loss</b>						
1805,0 ... 1880,0	MHz		6,0	6,5	—	dB
<b>Output return loss</b>						
1805,0 ... 1880,0	MHz		6,0	6,5	—	dB
<b>Attenuation</b>		$\alpha$				
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

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**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.	
						MHz
<b>Center frequency</b>		$f_c$	—	1842,5	—	
<b>Maximum insertion attenuation</b>		$\alpha_{\max}$				
	1805,0 ... 1810,0	MHz	—	2,7	3,0	dB
	1810,0 ... 1880,0	MHz	—	2,2	2,5	dB
<b>Amplitude ripple (p-p)</b>		$\Delta\alpha$				
	1805,0 ... 1810,0	MHz	—	1,3	1,6	dB
	1810,0 ... 1880,0	MHz	—	0,8	1,1	dB
<b>Input return loss</b>						
	1805,0 ... 1880,0	MHz	6,0	6,5	—	dB
<b>Output return loss</b>						
	1805,0 ... 1880,0	MHz	6,0	6,5	—	dB
<b>Attenuation</b>		$\alpha$				
	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



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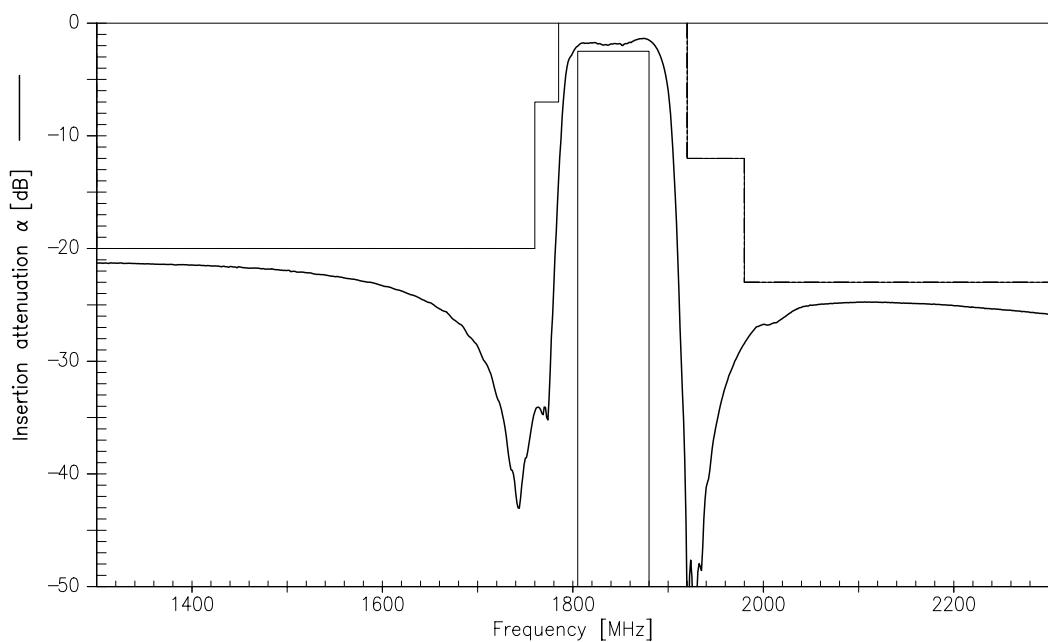
Low-Loss Filter for Mobile Communication

1842,50 MHz

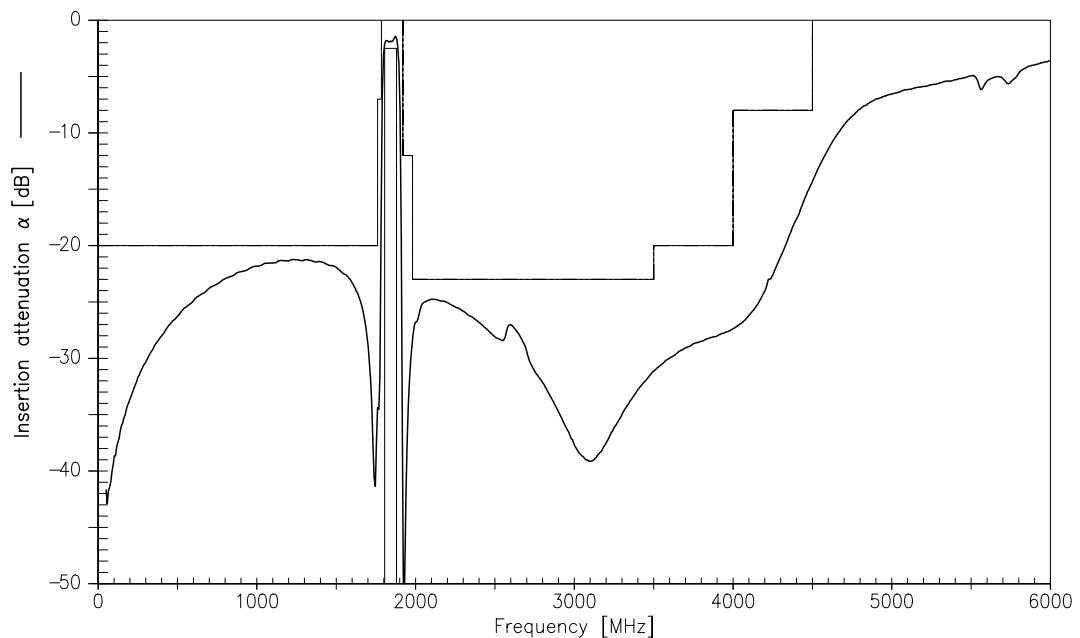
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Transfer function (spec for 25°C)



Transfer function (wideband)





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**B4139**

**Low-Loss Filter for Mobile Communication**

**1842,50 MHz**

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