



SAW Components

Data Sheet B7631

Data Sheet

An abstract graphic featuring the word "EPCOS" in large, glowing, 3D letters. The letters are white with a bright, circular highlight in the center of each, giving them a three-dimensional appearance. They are set against a dark, textured background that includes a faint, glowing globe and circuitry patterns, suggesting a high-tech or electronic theme.



SAW Components

B7631

Low-Loss Filter for Mobile Communication

1765 / 1855 MHz

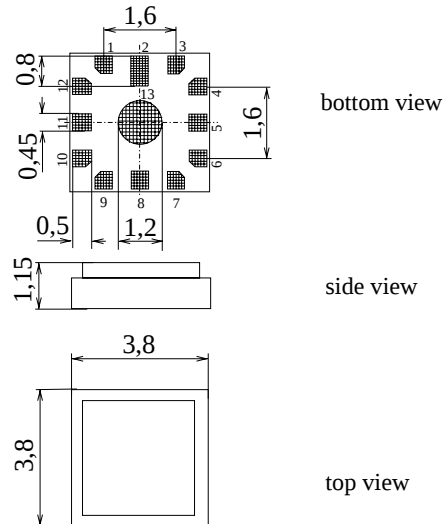
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Chip sized SAW package QCS12F

Features

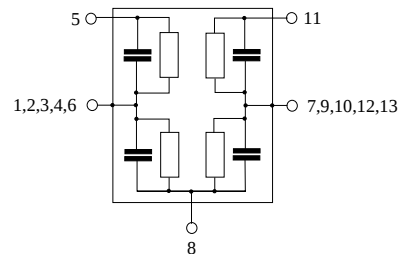
- Low-loss duplexer for Korean PCS mobile telephone systems
- 50 Ω ports by integrated matching network
- Multifunctional ceramic base material for Surface Mounted Technology (SMT)
- Small size and low height



Dimensions in mm, approx. weight 0,08 g

Pin configuration

- 11 TX Input
- 5 RX Output
- 8 Antenna
- 1, 2, 3, 4, 6 Ground
- 7, 9, 10, 12, 13 Ground



Type	Ordering code	Marking and Package according to	Packing according to
B7631	B39192-B7631-D910	C61157-A3-A6	F61074-V8194-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 30/+ 85	$^{\circ}\text{C}$	source and load impedance 50 Ω continuous wave
Storage temperature range	T_{stg}	- 40/+ 85	$^{\circ}\text{C}$	
DC voltage	V_{DC}	0	V	
Input power max. 1750,0 ... 1780,0 MHz elsewhere	P_{IN}	28 10	dBm dBm	



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Characteristics

Operating temperature range	T	$= 25 \pm 2^\circ\text{C}$
ANT terminating impedance	Z_{ANT}	$= 50\ \Omega$
RX terminating impedance	Z_{RX}	$= 50\ \Omega$
TX terminating impedance	Z_{TX}	$= 50\ \Omega$

Characteristics TX - ANT		min.	typ.	max.	
Center frequency	f_c	—	1765,00	—	MHz
Maximum insertion attenuation	α_{max}	—	2,0	2,3	dB
	1750,00 ... 1780,00 MHz	—	2,0	2,3	dB
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,6	1,2	dB
	1750,00 ... 1780,00 MHz	—	0,6	1,2	dB
Return loss		8,0	10,0	—	dB
	1750,00 ... 1780,00 MHz	8,0	10,0	—	dB
Attenuation	α	40	43	—	dB
	1840,00 ... 1870,00 MHz	40	43	—	dB
	2000,00 ... 3000,00 MHz	25	32	—	dB

Characteristics ANT - RX		min.	typ.	max.	
Center frequency	f_c	—	1855,00	—	MHz
Maximum insertion attenuation	α_{max}	—	2,6	3,3	dB
	1840,00 ... 1870,00 MHz	—	2,6	3,3	dB
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,4	1,0	dB
	1840,00 ... 1870,00 MHz	—	0,4	1,0	dB
Return loss		9,0	10,0	—	dB
	1840,00 ... 1870,00 MHz	9,0	10,0	—	dB
Attenuation	α	52	56	—	dB
	1750,00 ... 1780,00 MHz	52	56	—	dB
	2000,00 ... 3000,00 MHz	35	43	—	dB

Characteristics TX - RX		min.	typ.	max.	
Isolation between TX and RX path	α	55	59	—	dB
	1750,00 ... 1780,00 MHz	55	59	—	dB
	1840,00 ... 1870,00 MHz	43	45	—	dB



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Characteristics

Operating temperature range $T = -30$ to 85°C

ANT terminating impedance $Z_{\text{ANT}} = 50\ \Omega$

RX terminating impedance $Z_{\text{RX}} = 50\ \Omega$

TX terminating impedance $Z_{\text{TX}} = 50\ \Omega$

Characteristics TX - ANT		min.	typ.	max.	
Center frequency	f_c	—	1765,00	—	MHz
Maximum insertion attenuation	α_{max}	—	2,1	2,5	dB
	1750,00 ... 1780,00 MHz	—	2,1	2,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,8	1,5	dB
	1750,00 ... 1780,00 MHz	—	0,8	1,5	dB
Return loss		8,0	10,0	—	dB
	1750,00 ... 1780,00 MHz	8,0	10,0	—	dB
Attenuation	α	40	43	—	dB
	1840,00 ... 1870,00 MHz	40	43	—	dB
	2000,00 ... 3000,00 MHz	25	32	—	dB

Characteristics ANT - RX		min.	typ.	max.	
Center frequency	f_c	—	1855,00	—	MHz
Maximum insertion attenuation	α_{max}	—	2,7	3,5	dB
	1840,00 ... 1870,00 MHz	—	2,7	3,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,5	1,3	dB
	1840,00 ... 1870,00 MHz	—	0,5	1,3	dB
Return loss		9,0	10,0	—	dB
	1840,00 ... 1870,00 MHz	9,0	10,0	—	dB
Attenuation	α	52	55	—	dB
	1750,00 ... 1780,00 MHz	52	55	—	dB
	2000,00 ... 3000,00 MHz	35	43	—	dB

Characteristics TX - RX		min.	typ.	max.	
Isolation between TX and RX path	α	54	55	—	dB
	1750,00 ... 1780,00 MHz	54	55	—	dB
	1840,00 ... 1870,00 MHz	42	44	—	dB



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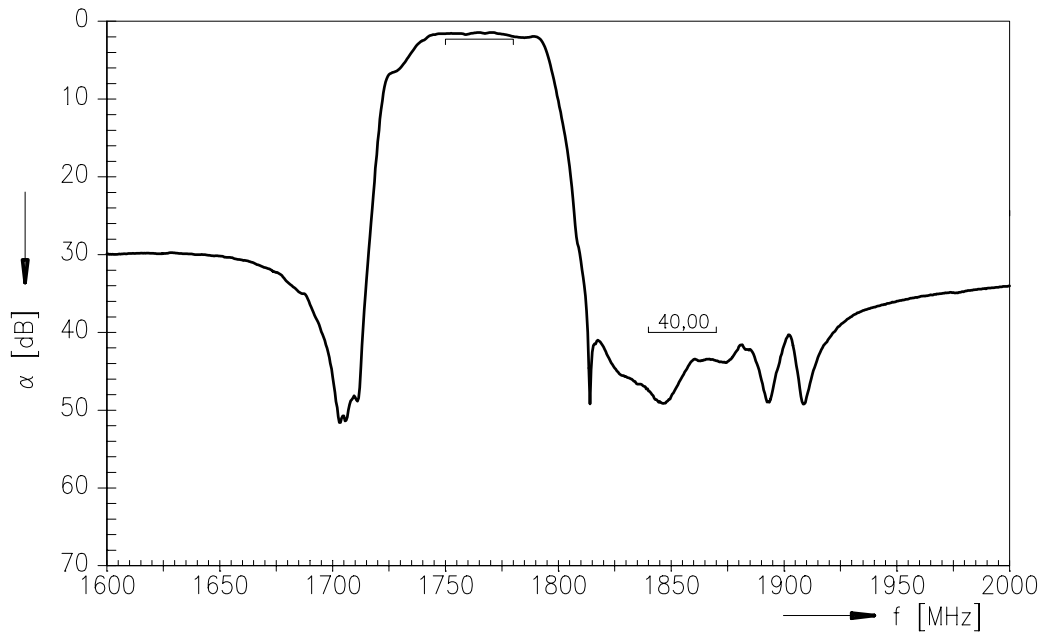
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1765 / 1855 MHz

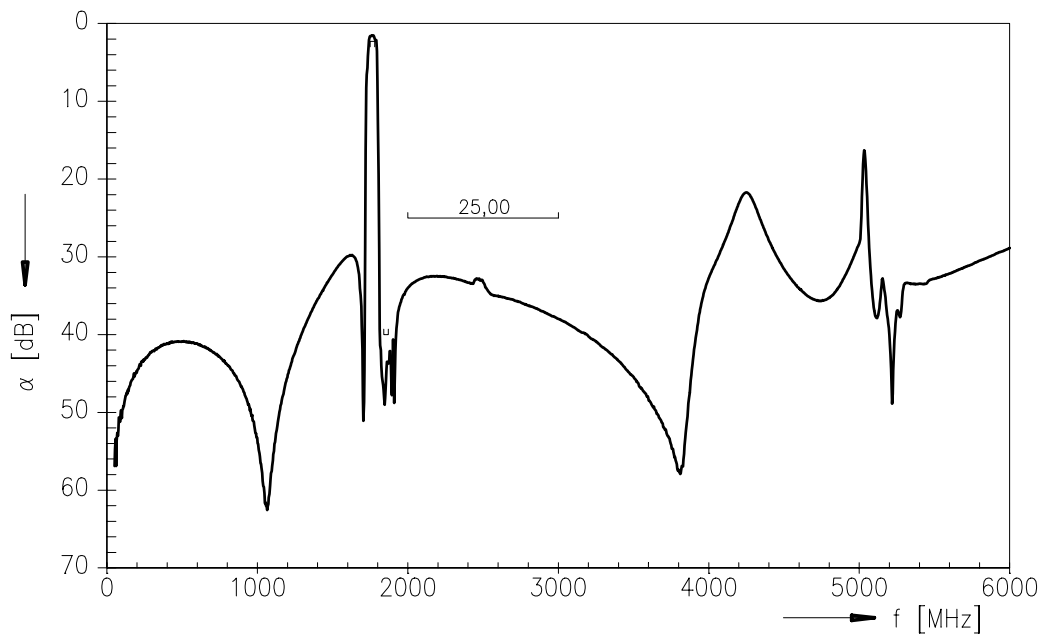
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Frequency Response TX - ANT



Frequency Response TX - ANT (wideband)





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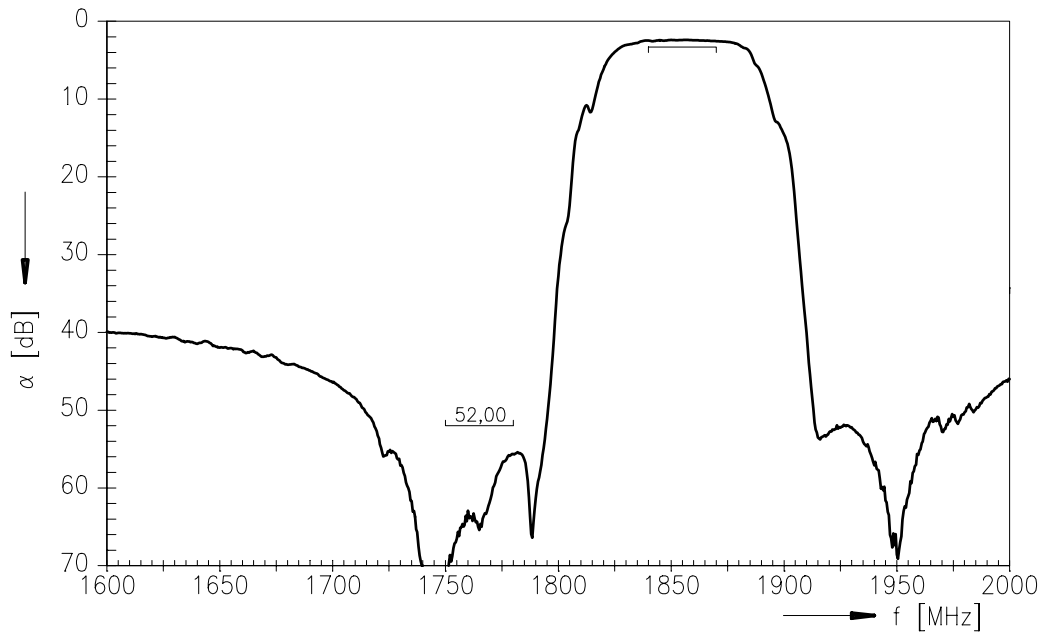
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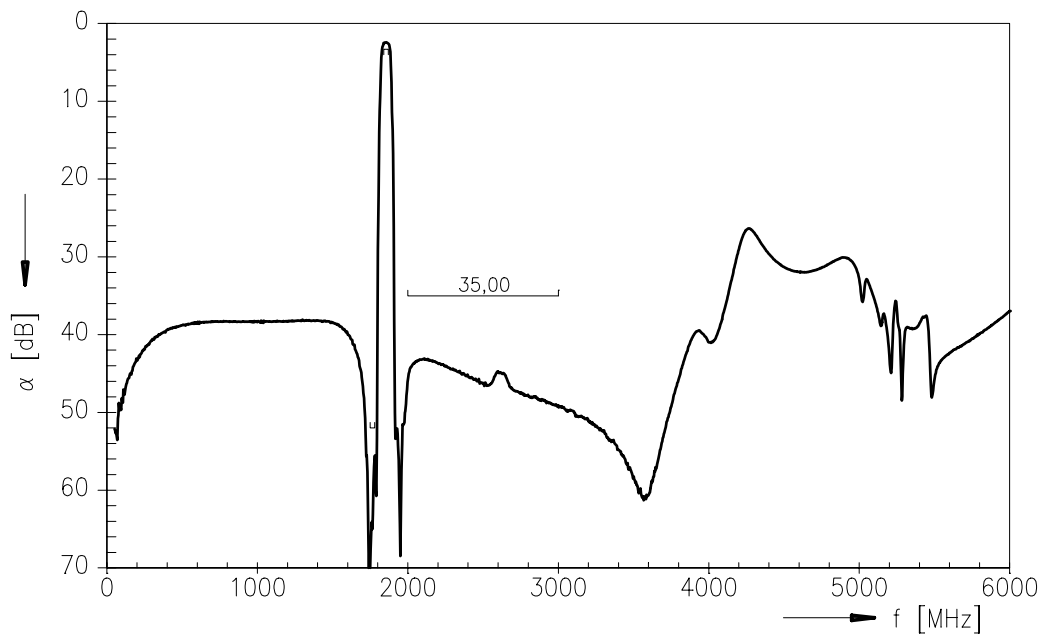
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Frequency Response ANT - RX



Frequency Response ANT - RX (wideband)





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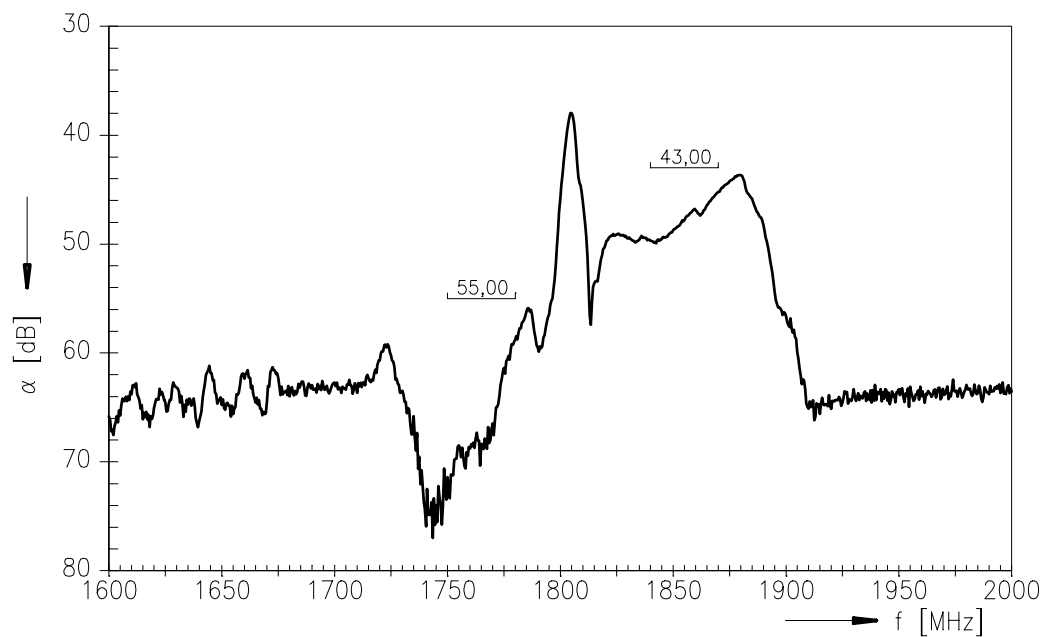
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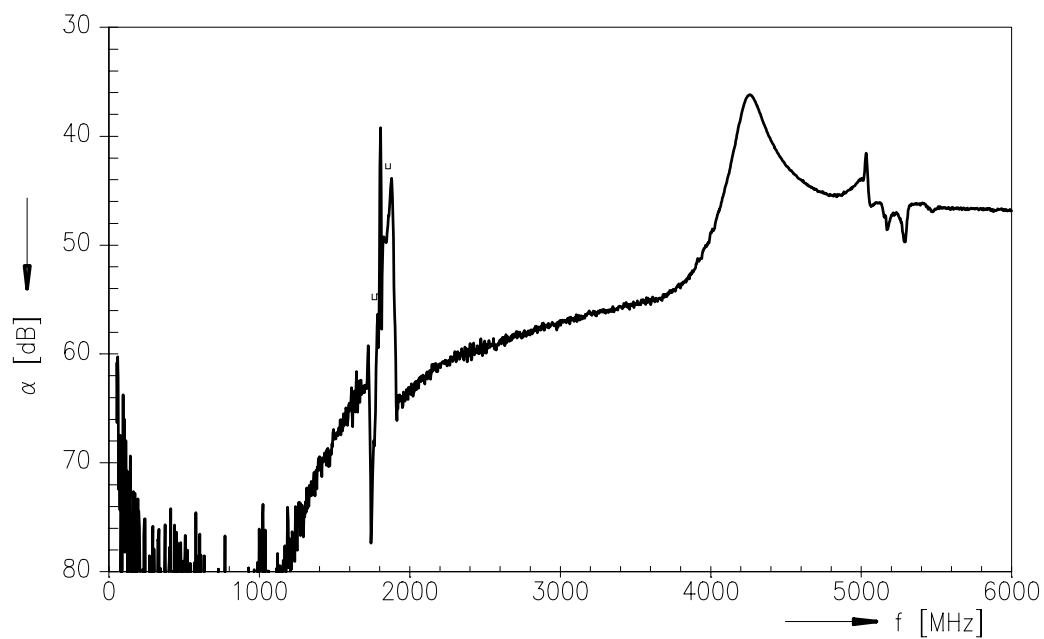
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Frequency Response TX - RX



Frequency Response TX - RX (wideband)





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