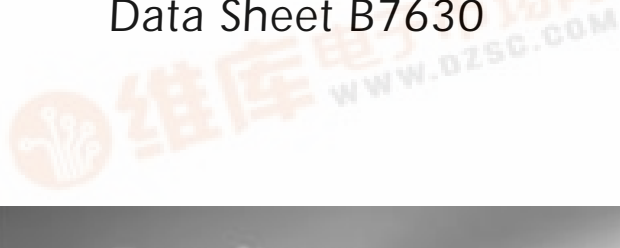




SAW Components

Data Sheet B7630

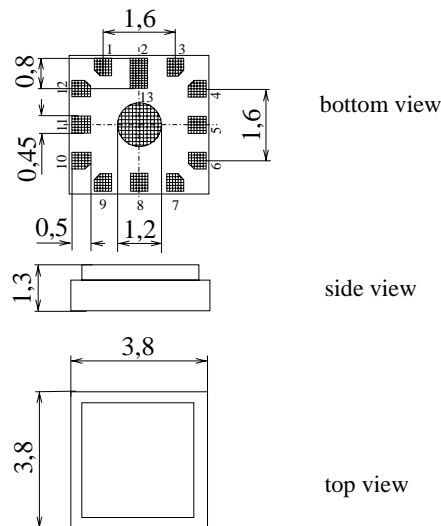




Chip sized SAW package **QCS12H**

Features

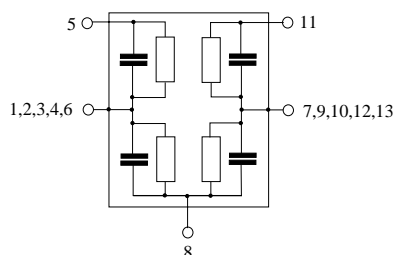
- Low-loss duplexer for cellular band mobile telephone systems
- 50 Ω ports by integrated matching network
- Multifunctional ceramic base material for **Surface Mounted Technology (SMT)**
- Small size and low height
- RoHS compliant



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
B7630	B39881-B7630-P910	C61157-A3-A18	F61074-V8187-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 30/+ 85	°C	MM, JESD22-A115-A HMB, JESD22-A114-B source and load impedance 50 Ω } continuous wave
Storage temperature range	T_{stg}	- 40/+ 85	°C	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	250	V	
	V_{ESD}	500	V	
Input power max.	P_{IN}			
824,0 ... 849,0 MHz		30	dBm	} continuous wave
elsewhere		10	dBm	



Data Sheet



Characteristics

Operating temperature range $T = 25 \pm 2^\circ\text{C}$
 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	—	836,50	—	MHz
Maximum insertion attenuation	α_{max}				
	824,00 ... 849,00 MHz	—	1,9	2,3	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
	824,00 ... 849,00 MHz	—	0,5	0,9	dB
Return loss					
TX - Port	824,00 ... 849,00 MHz	9,0	10,5	—	dB
ANT - Port	824,00 ... 849,00 MHz	10,0	14,0	—	dB
Attenuation	α				
	779,00 ... 804,00 MHz	21	35	—	dB
	869,00 ... 894,00 MHz	45	49	—	dB
	954,00 ... 1400,00 MHz	25	36	—	dB
	1400,00 ... 1698,00 MHz	35	41	—	dB
	1698,00 ... 2000,00 MHz	30	41	—	dB
	2000,00 ... 2400,00 MHz	25	37	—	dB
	2400,00 ... 2485,00 MHz	30	35	—	dB
	2485,00 ... 2700,00 MHz	25	37	—	dB
TX band phase @ TX port reference plane					
	824,00 MHz	—	250	—	°
	836,00 MHz	—	245	—	°
	849,00 MHz	—	275	—	°



Data Sheet



Characteristics

Operating temperature range $T = 25 \pm 2^\circ\text{C}$
 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 ANT - RX				min.	typ.	max.	
Center frequency		f_c		—	881,50	—	MHz
Maximum insertion attenuation		α_{max}		—	2,7	3,2	dB
	869,00 ... 894,00 MHz						
Amplitude ripple (p-p)		$\Delta\alpha$		—	1,0	1,6	dB
	869,00 ... 894,00 MHz						
Return loss							
ANT - Port	869,00 ... 894,00 MHz		8,0	8,5	—	—	dB
RX - Port	869,00 ... 894,00 MHz		9,0	10,0	—	—	dB
Attenuation		α					
	779,00 ... 804,00 MHz		35	41	—	—	dB
	824,00 ... 849,00 MHz		53,5	56	—	—	dB
	954,00 ... 1700,00 MHz		35	40	—	—	dB
	1700,00 ... 2400,00 MHz		35	44	—	—	dB
	2400,00 ... 2500,00 MHz		30	42	—	—	dB
	2500,00 ... 3000,00 MHz		25	38	—	—	dB
TX band phase @ RX port reference plane							
	824,00 ... 849,00 MHz		—	150 - 220	—	—	°

Characteristics TX - RX				min.	typ.	max.	
Isolation between TX and RX path		α					
	824,00 ... 849,00 MHz		55	59	—	—	dB
	869,00 ... 894,00 MHz		46	49	—	—	dB
	1648,00 ... 1698,00 MHz		45	55	—	—	dB



SAW Components

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Low-Loss Filter for Mobile Communication

836,5 / 881,5 MHz

Data Sheet



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	—	836,50	—	MHz
Maximum insertion attenuation	α_{max}				
	824,00 ... 849,00 MHz	—	2,0	2,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
	824,00 ... 849,00 MHz	—	0,5	1,0	dB
Return loss					
TX - Port	824,00 ... 849,00 MHz	9,0	10,0	—	dB
ANT - Port	824,00 ... 849,00 MHz	10,0	12,5	—	dB
Attenuation	α				
	779,00 ... 804,00 MHz	21	35	—	dB
	869,00 ... 894,00 MHz	45	49	—	dB
	954,00 ... 1400,00 MHz	25	36	—	dB
	1400,00 ... 1698,00 MHz	35	41	—	dB
	1698,00 ... 2000,00 MHz	30	41	—	dB
	2000,00 ... 2400,00 MHz	25	37	—	dB
	2400,00 ... 2485,00 MHz	30	35	—	dB
	2485,00 ... 2700,00 MHz	25	37	—	dB
TX band phase @ TX port reference plane					
	824,00 MHz	—	250	—	°
	836,00 MHz	—	245	—	°
	849,00 MHz	—	275	—	°



Data Sheet



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 ANT - RX				min.	typ.	max.	
Center frequency			f_c	—	881,50	—	MHz
Maximum insertion attenuation			α_{max}	—	2,8	3,5	dB
	869,00 ...	894,00 MHz					
Amplitude ripple (p-p)			$\Delta\alpha$	—	1,1	1,7	dB
	869,00 ...	894,00 MHz					
Return loss							
	ANT - Port	869,00 ... 894,00 MHz		7,5	8,0	—	dB
	RX - Port	869,00 ... 894,00 MHz		9,0	10,0	—	dB
Attenuation			α				
	779,00 ...	804,00 MHz		35	41	—	dB
	824,00 ...	849,00 MHz		53,5	56	—	dB
	954,00 ...	1700,00 MHz		35	40	—	dB
	1700,00 ...	2400,00 MHz		35	44	—	dB
	2400,00 ...	2500,00 MHz		30	42	—	dB
	2500,00 ...	3000,00 MHz		25	38	—	dB
TX band phase @ RX port reference plane							
	824,00 ...	849,00 MHz		—	150 - 220	—	$^{\circ}$

Characteristics TX - RX				min.	typ.	max.	
Isolation between TX and RX path			α				
	824,00 ...	849,00 MHz		54	59	—	dB
	869,00 ...	894,00 MHz		46	49	—	dB
	1648,00 ...	1698,00 MHz		45	55	—	dB



SAW Components

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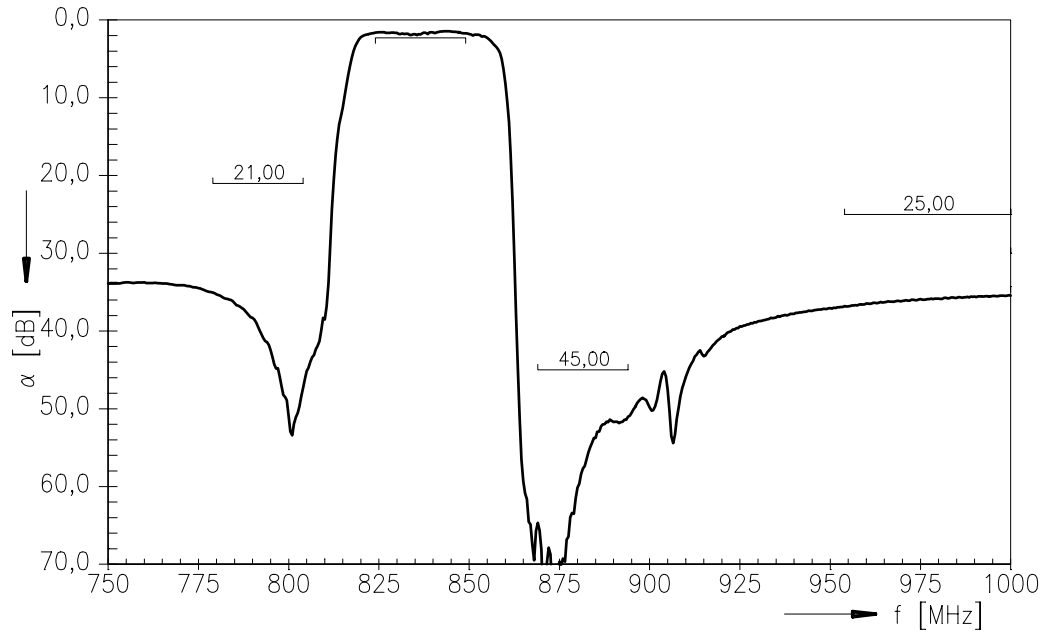
Low-Loss Filter for Mobile Communication

836,5 / 881,5 MHz

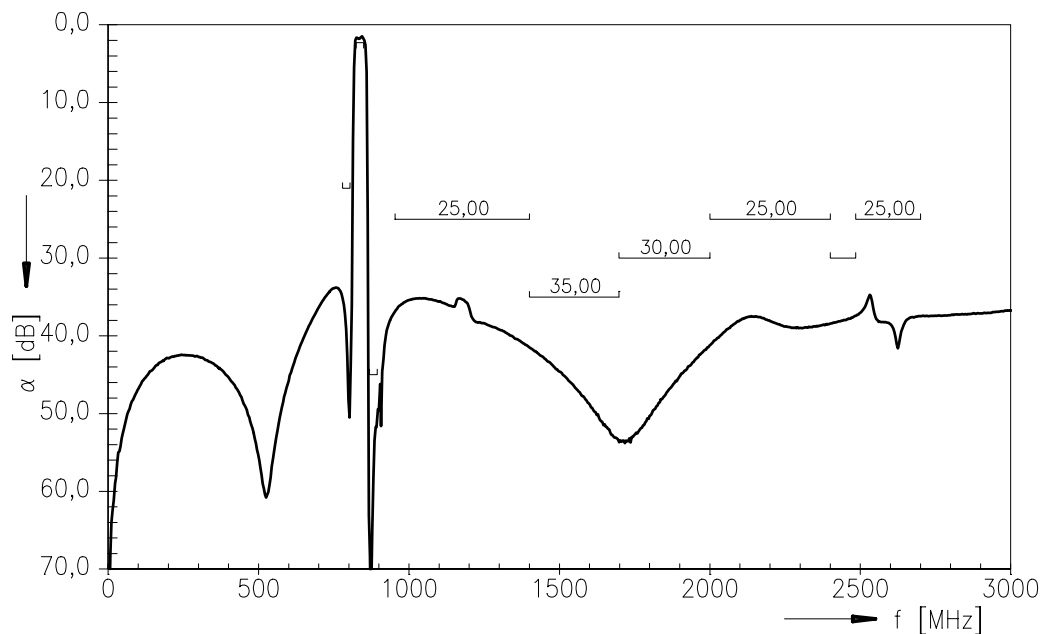
Data Sheet



Frequency Response TX - ANT



Frequency Response TX - ANT (wideband)





SAW Components

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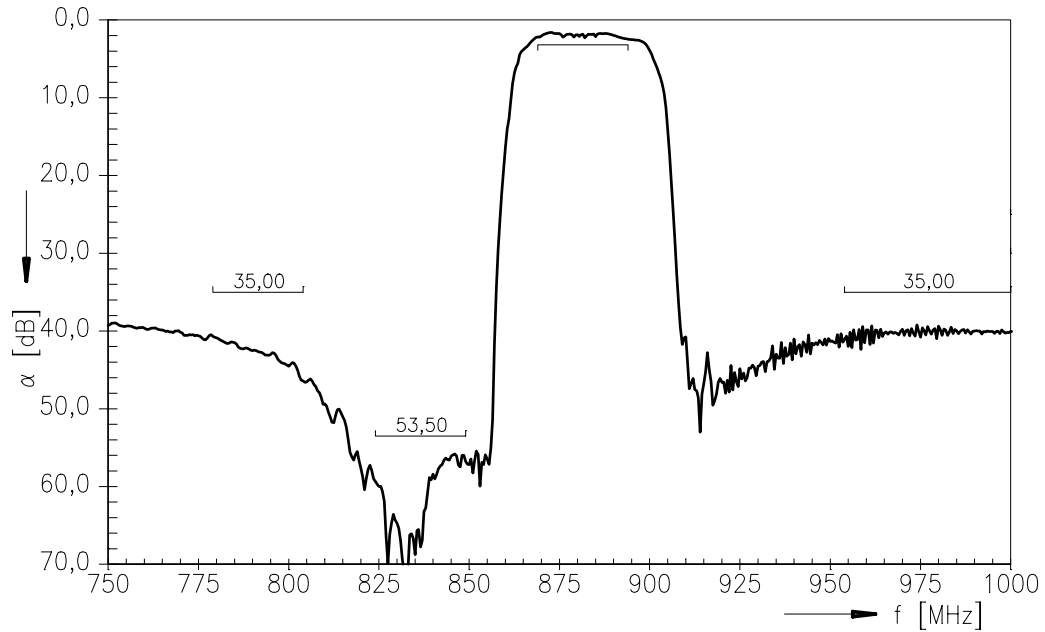
Low-Loss Filter for Mobile Communication

836,5 / 881,5 MHz

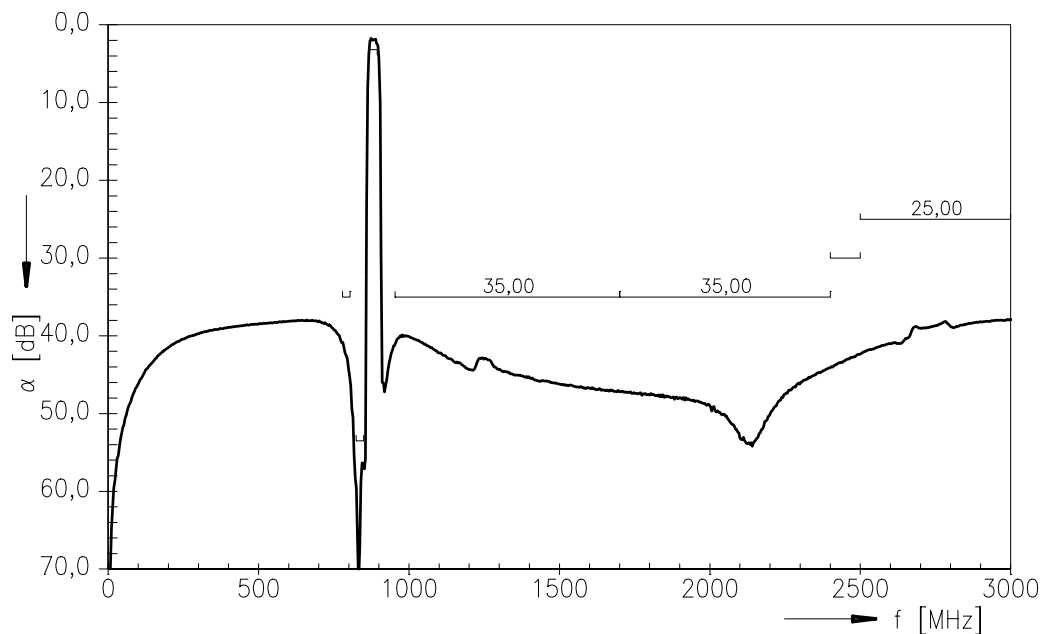
Data Sheet



Frequency Response ANT - RX



Frequency Response ANT - RX (wideband)





SAW Components

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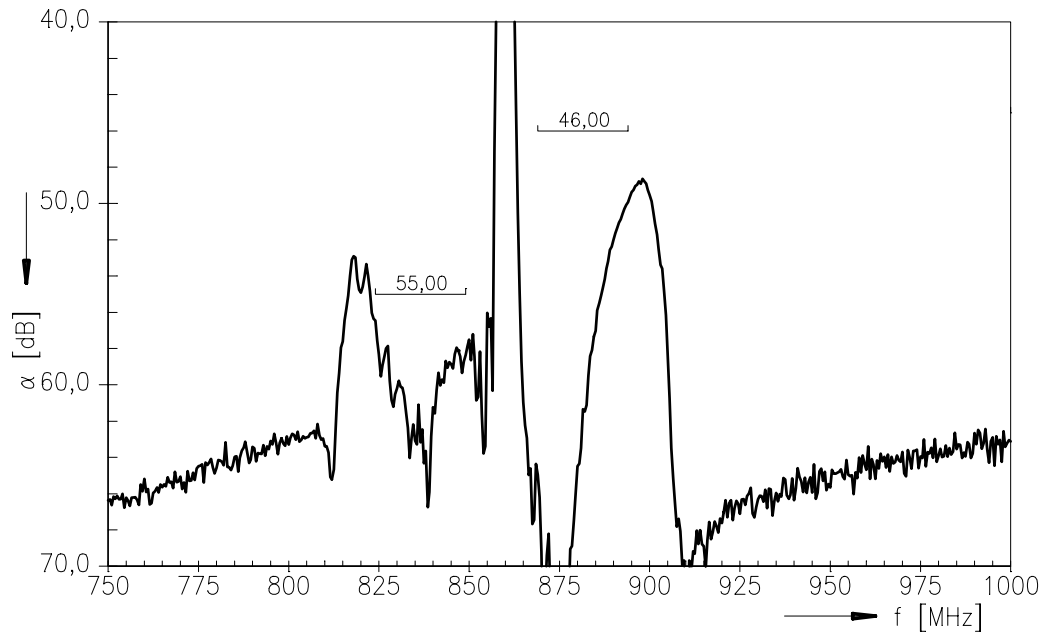
Low-Loss Filter for Mobile Communication

836,5 / 881,5 MHz

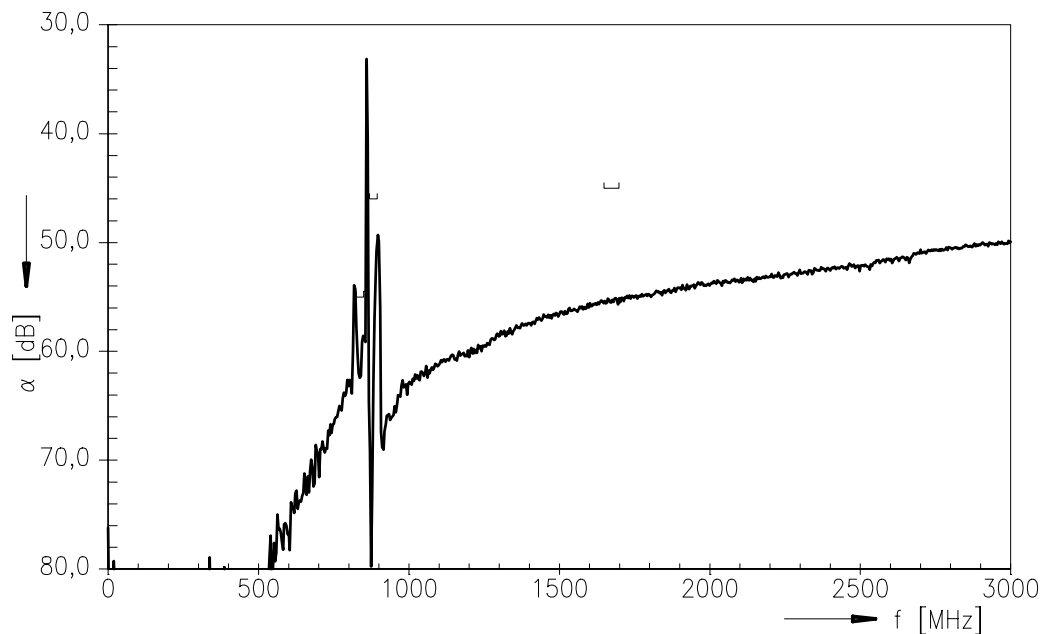
Data Sheet



Frequency Response TX - RX



Frequency Response TX - RX (wideband)





SAW Components

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Low-Loss Filter for Mobile Communication

836,5 / 881,5 MHz

Data Sheet



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