



SAW Components

Data Sheet B1706





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B1706

Bandpass Filter

259,86 MHz

Preliminary Data



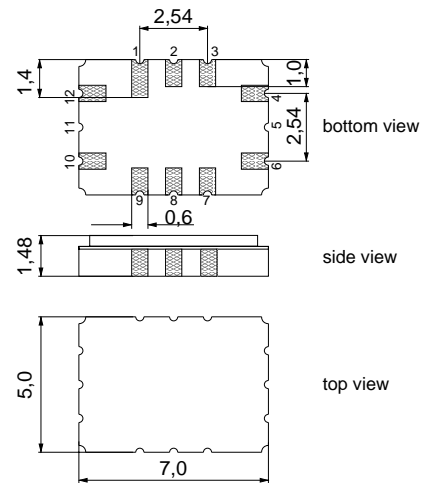
SMD ceramic package QCC12C

Features

- IF filter for digital satellite radio
- Constant group delay
- Ceramic package for Surface Mounted Technology (SMT)

Terminals

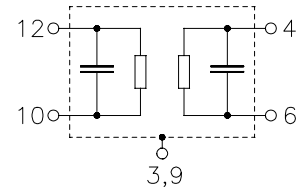
- Ni, gold-plated



Dimensions in mm, approx. weight 0,2 g

Pin configuration

- 10 Input
- 12 Input
- 4 Output
- 6 Output
- 3,9 Case – ground
- 1,7 To be grounded
- 2,8 Ground



Type	Ordering code	Marking and Package according to	Packing according to
B1706	B39261-B1706-H310	C61157-A7-A95	F61074-V8170-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T_A	-40 /+85	°C	between any terminals
Storage temperature range	T_{stg}	-40 /+85	°C	
DC voltage	V_{DC}	0	V	
Source power	P_S	0	dBm	



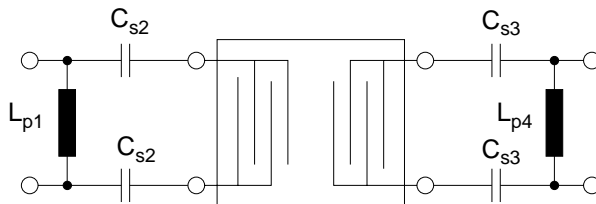
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Characteristics

Operating temperature range: $T = -40\text{ °C} \dots 85\text{ °C}$
Terminating source impedance: $Z_S = 150\ \Omega$ and matching network
Terminating load impedance: $Z_L = 150\ \Omega$ and matching network

		min.	typ.	max.	
Nominal frequency	f_N	—	259,86	—	MHz
Minimum insertion attenuation	α_{\min}	—	14,5	15,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
	253,61 ...266,11 MHz	—	0,8	1,4	dB
	253,61 ...255,47 MHz	—	0,3	0,8	dB
	255,47 ...257,33 MHz	—	0,3	0,8	dB
	257,33 ...259,84 MHz	—	0,3	0,8	dB
	259,89 ...262,40 MHz	—	0,3	0,8	dB
	262,40 ...264,25 MHz	—	0,3	0,8	dB
	264,25 ...266,11 MHz	—	0,7	1,0	dB
Pass bandwidth					
	$\alpha_{\text{rel}} \leq 1,5\text{ dB}$	$B_{1,5\text{dB}}$	12,5	14,1	15,0 MHz
	$\alpha_{\text{rel}} \leq 3\text{ dB}$	$B_{3\text{dB}}$	14,4	14,9	15,4 MHz
	$\alpha_{\text{rel}} \leq 15\text{ dB}$	$B_{15\text{dB}}$	—	17,4	17,4 MHz
Attenuation (relative to α_{\min})					
	α_{rel}				
Lower sidelobe	230,00 ... $f_N - 12,00$ MHz	34,0	36,0	—	dB
	$f_N - 12,00$... $f_N - 10,50$ MHz	32,0	36,0	—	dB
Upper sidelobe	$f_N + 9,00$... $f_N + 10,30$ MHz	13,0	16,0	—	dB
	$f_N + 10,30$... $f_N + 12,00$ MHz	34,0	36,0	—	dB
	$f_N + 12,00$... 290,00 MHz	35,0	37,0	—	dB
Group delay ripple (p-p)	$\Delta\tau$				
	$f_N \pm 6,24$ MHz	—	50	70	ns
Temperature coefficient of frequency	TC_f	—	-18	—	ppm/K

Matching network (based on four port measurement, quality factors $Q_L = 40$, $Q_C = 90$)


$L_{p1} = 22\text{ nH}$
 $C_{s2} = 120\text{ pF}$
 $C_{s3} = 68\text{ pF}$
 $L_{p4} = 22\text{ nH}$



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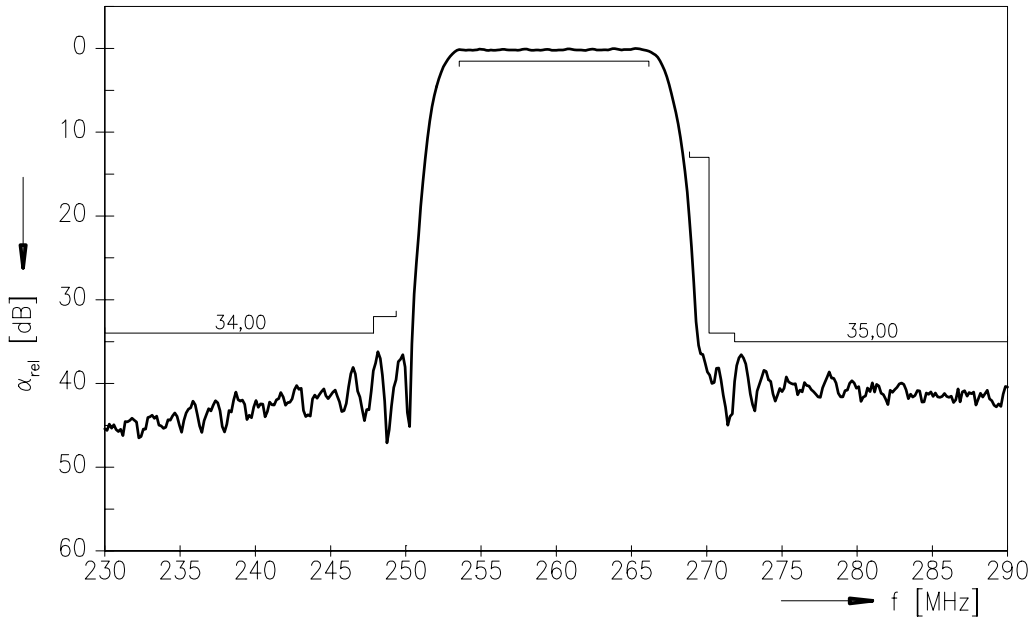
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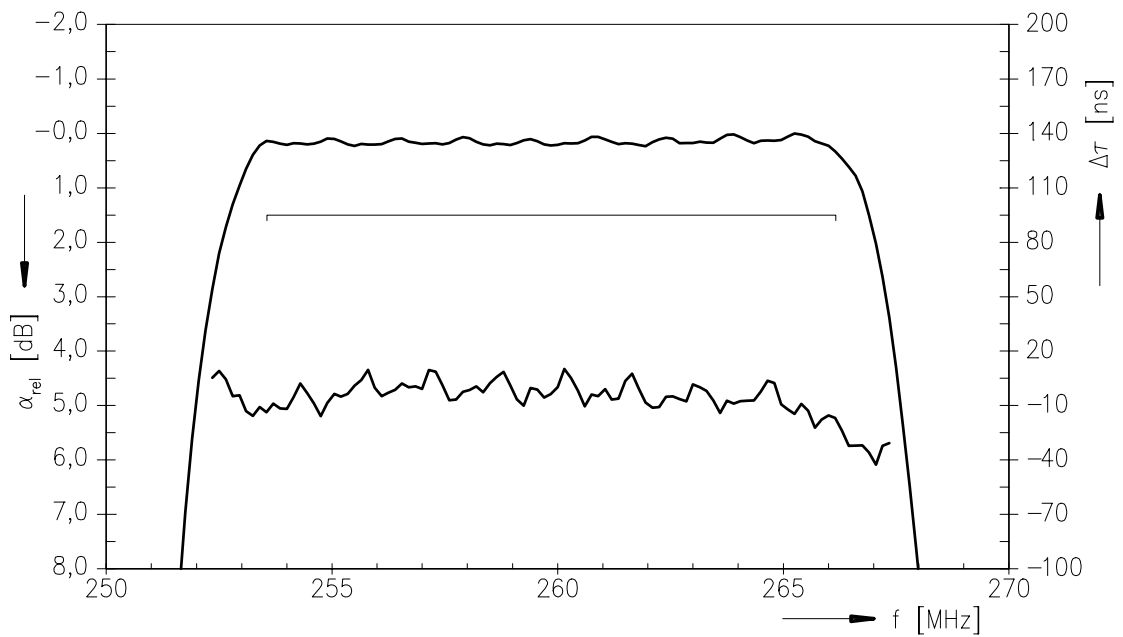
Preliminary Data



Transfer function



Transfer function (passband)





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Preliminary Data	The SMD logo is a stylized, bold, sans-serif font with a horizontal line through the middle of the letters, giving it a modern, industrial appearance.

Published by EPCOS AG

Surface Acoustic Wave Components Division, SAW MC PD 2

P.O. Box 80 17 09, 81617 Munich, GERMANY

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