



SAW Components

Data Sheet B1706

Data Sheet

A close-up, grayscale image of a circuit board with the EPCOS logo printed on it. The logo is large and white, contrasting with the dark background of the board. The text "EPCOS" is clearly visible, with the "S" being particularly large and prominent.



SAW Components

B1706

Bandpass Filter

259,86 MHz

Preliminary Data



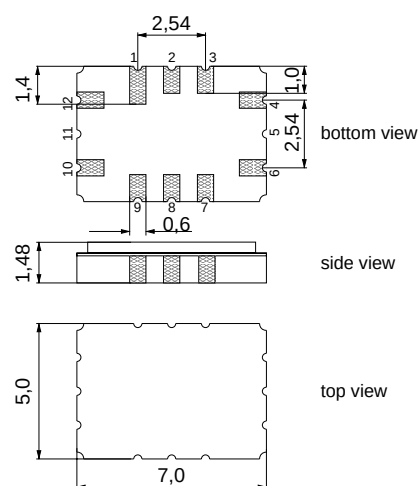
SMD ceramic package QCC12C

Features

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

Terminals

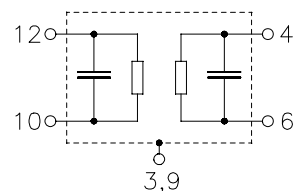
- Ni, gold-plated



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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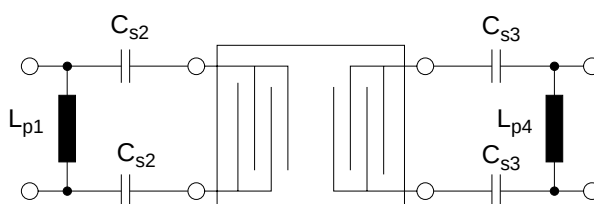


Characteristics

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	$\alpha_{\min}$	—	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	—	MHz
Attenuation (relative to $\alpha_{\min}$)	α_{rel}				
Lower sidelobe	230,00 ... $f_N - 12,00\text{ MHz}$	34,0	36,0	—	dB
	$f_N - 12,00 \dots f_N - 10,50\text{ MHz}$	32,0	36,0	—	dB
Upper sidelobe	$f_N + 9,00 \dots f_N + 10,30\text{ MHz}$	13,0	16,0	—	dB
	$f_N + 10,30 \dots f_N + 12,00\text{ MHz}$	34,0	36,0	—	dB
	$f_N + 12,00 \dots 290,00\text{ MHz}$	35,0	37,0	—	dB
Group delay ripple (p-p)	$\Delta\tau$				
	$f_N \pm 6,24\text{ MHz}$	—	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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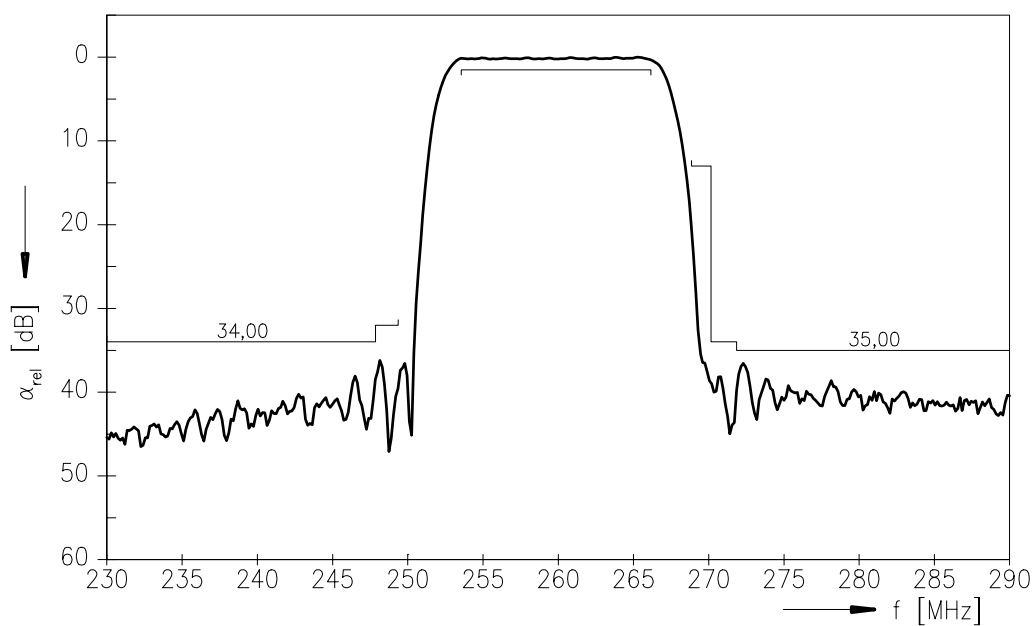
Bandpass Filter

259,86 MHz

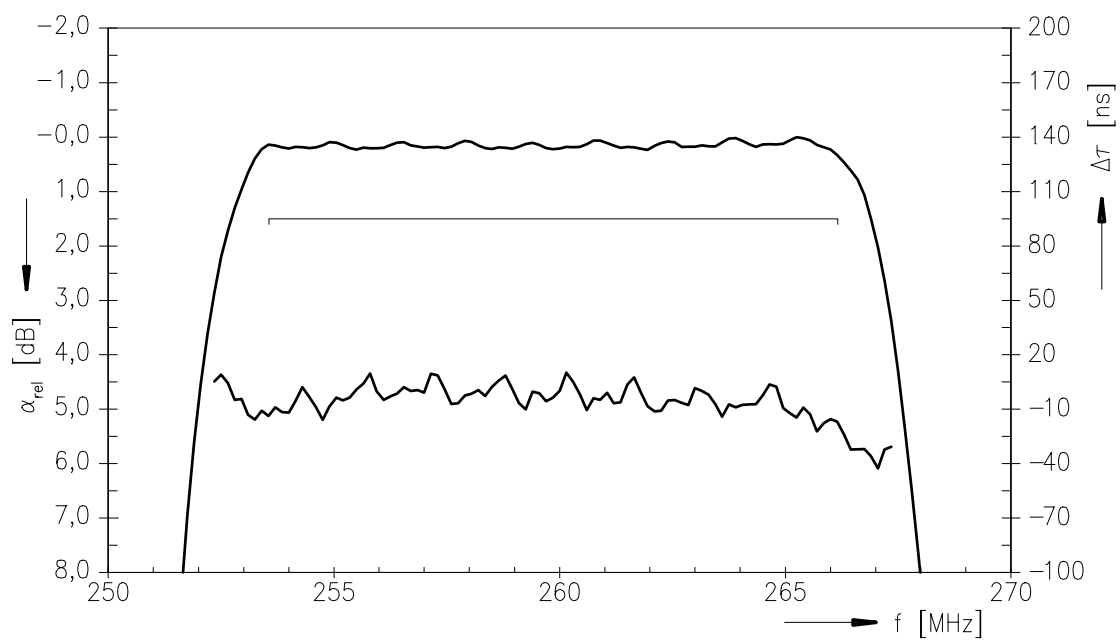
Preliminary Data



Transfer function



Transfer function (passband)





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Bandpass Filter	259,86 MHz
Preliminary Data	SMD

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