



SAW Components

Data Sheet B5015





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B5015

Low-Loss Filter

70,0 MHz

Data Sheet

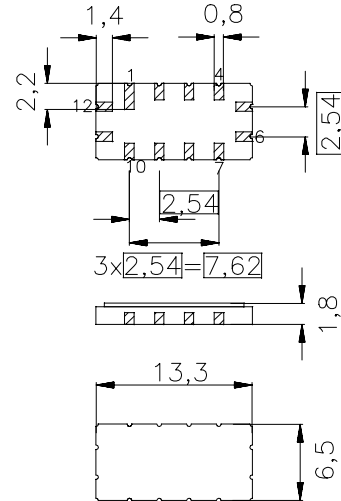
Features

- IF low-loss filter for CDMA base station
- Usable bandwidth 10 MHz
- Balanced or unbalanced operation possible
- Ceramic SMD package

Terminals

- Gold plated

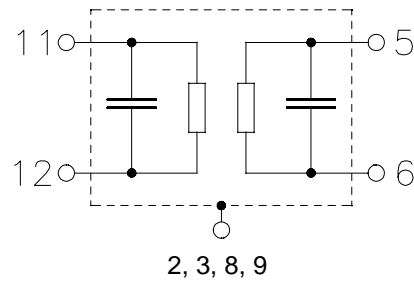
Ceramic package **QCC12**



Dimensions in mm, appr. weight 0,44 g

Pin configuration

- | | |
|-------------|----------------|
| 11 | Input |
| 12 | Input ground |
| 5 | Output |
| 6 | Output ground |
| 2, 3, 8, 9 | Case ground |
| 1, 4, 7, 10 | To be grounded |



Type	Ordering code	Marking and Package according to	Packing according to
B5015	B39700 - B5015 - Z510	C61157-A7-A55	F61074-V8163-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	-40 / +85	°C	
Storage temperature range	T_{stg}	-40 / +85	°C	
DC voltage	V_{DC}	0	V	
Source power	P_s	10	dBm	


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Characteristics

Operating temperature range: $T = -10 \dots 75 \text{ }^\circ\text{C}$
 Terminating source impedance: $Z_S = 50 \text{ } \Omega$ and matching network
 Terminating load impedance: $Z_L = 50 \text{ } \Omega$ and matching network

			min.	typ.	max.	
Nominal frequency		f_N	—	70,0	—	MHz
Minimum insertion attenuation		α_{\min}	—	11,1	12,5	dB
Passband width	$\alpha_{\text{rel}} \leq 1,2 \text{ dB}$	$B_{1,2\text{dB}}$	11,45	11,6	—	MHz
Passband width	$\alpha_{\text{rel}} \leq 3 \text{ dB}$	$B_{3\text{dB}}$	12,0	12,7	—	MHz
Bandwidth	$\alpha_{\text{rel}} \leq 40 \text{ dB}$	$B_{40\text{dB}}$	—	16,9	18,25	MHz
Amplitude ripple (p-p)	$f_N \pm 5 \text{ MHz}$	$\Delta\alpha$	—	0,5	1,0	dB
Absolute group delay (at f_N)		τ	—	0,95	—	μs
Group delay ripple	$f_N \pm 5 \text{ MHz}$	$\Delta\tau$	—	70	—	ns
Phase ripple (p-p)	$f_N \pm 5 \text{ MHz}$	$\Delta\phi$	—	5	11,5	$^\circ$
Phase ripple (rms)	$f_N \pm 5 \text{ MHz}$	$\Delta\phi$	—	0,8	—	$^\circ$ rms
Relative attenuation (relative to α_{\min})		α_{rel}				
	$f_N \pm 9,2 \text{ MHz} \dots f_N \pm 20 \text{ MHz}$		40	43	—	dB
Temperature coefficient of frequency		TC_f	—	-87	—	ppm/K



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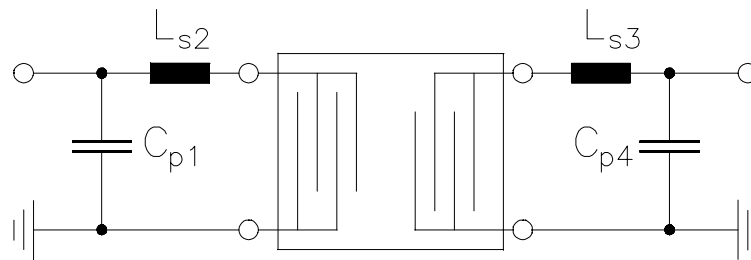
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Matching network to 50Ω

(Element values depend upon PCB layout)



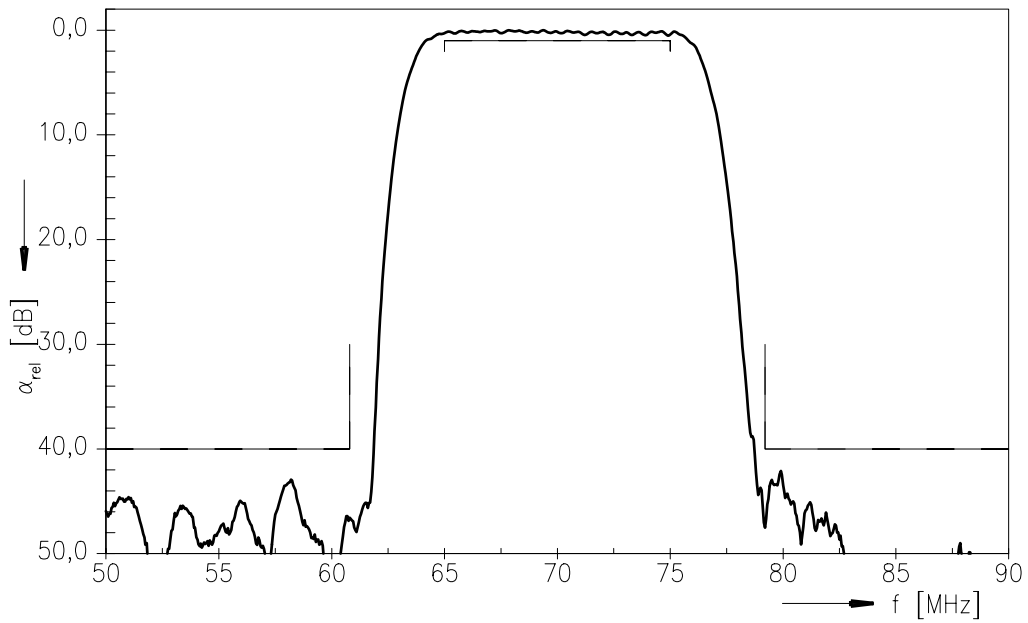
$$C_{p1} = 68 \text{ pF} \quad L_{s2} = 130 \text{ nH}$$

$$L_{s3} = 160 \text{ nH} \quad C_{p4} = 33 \text{ pF}$$

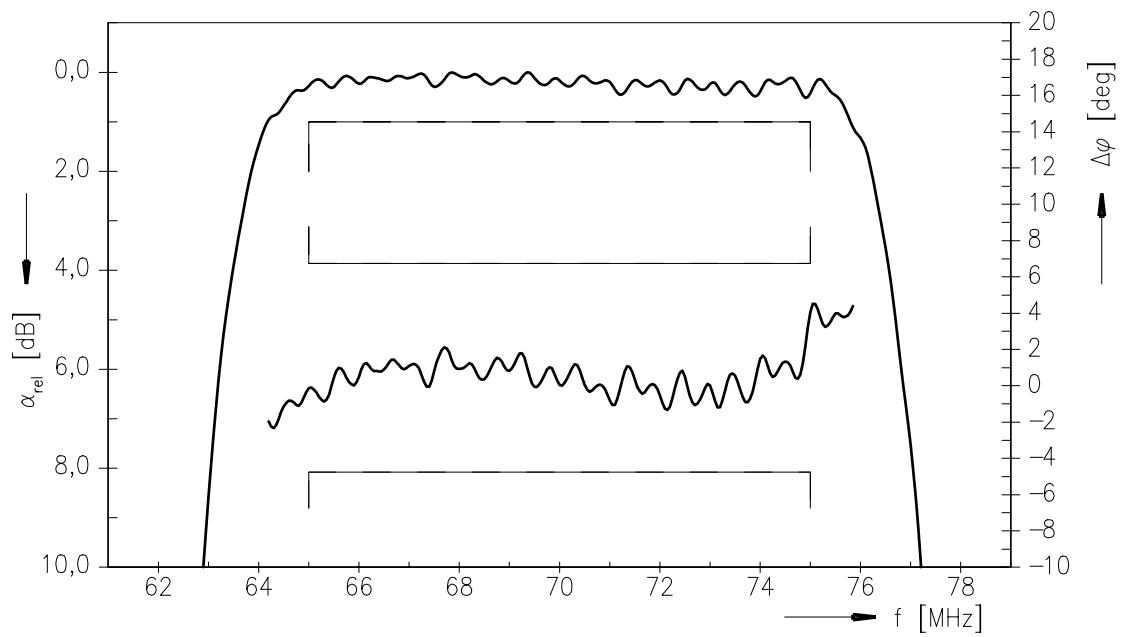


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Transfer function



Transfer function (pass band)





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