



SAW Components

Data Sheet B3869





SAW Components

B3869

Low-Loss Filter

150,0 MHz

Data Sheet

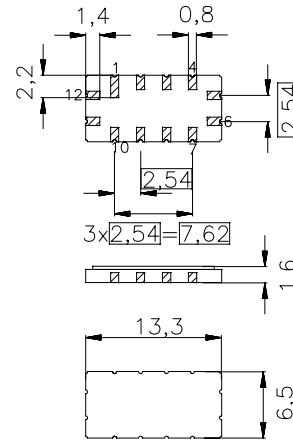
Ceramic package QCC12

Features

- Low-loss IF-filter for CDMA base station
- Usable bandwidth 8 MHz
- Ceramic SMD package

Terminals

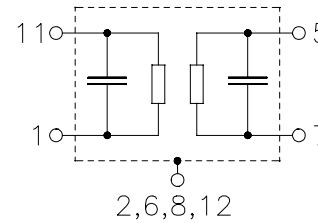
- Gold plated



Dimensions in mm, approx. weight 0,4 g

Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
B3869	B39151-B3869-Z510	C61157-A7-A55	F61074-V8163-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T_A	-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: $T = -40^{\circ}\text{C} \dots 85^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50\ \Omega$ and external matching network
 Terminating load impedance: $Z_L = 50\ \Omega$ and external matching network

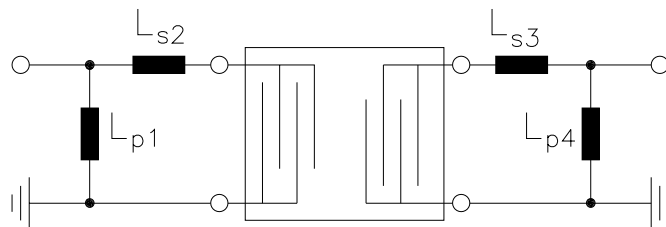
		min.	typ.	max.	
Nominal frequency	f_N	—	150,0	—	MHz
Pass bandwidth	$B_{1,0\text{dB}}$				
$\alpha_{\text{rel}} \leq 1,0\ \text{dB}$		8	9,3	—	MHz
Minimum insertion attenuation (including matching network)	α_{min}	—	10,8	13,0	dB
Pass band ripple (p-p) $f_N - 4,0\ \text{MHz} \dots f_N + 4,0\ \text{MHz}$	$\Delta\alpha$	—	0,45	0,75	dB
Average group delay $f_N - 4,0\ \text{MHz} \dots f_N + 4,0\ \text{MHz}$	τ	—	0,9	1,8	μs
Group delay ripple (p-p) $f_N - 4,00\ \text{MHz} \dots f_N + 4,00\ \text{MHz}$	$\Delta\tau$	—	45	150	ns
Phase ripple (p-p) $f_N - 4,00\ \text{MHz} \dots f_N + 4,00\ \text{MHz}$	$\Delta\varphi$	—	4,5	7,0	$^{\circ}$
Relative attenuation (relative to α_{min}) $f_N \pm 7,125\ \text{MHz} \dots f_N \pm 100,0\ \text{MHz}$	α_{rel}	35	45	—	dB
VSWR $f_N - 4,00\ \text{MHz} \dots f_N + 4,00\ \text{MHz}$		—	1.55:1	1.8:1	dB
Temperature coefficient of frequency	TC_f	—	-18	—	ppm/K



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Matching network

(Element values depend upon PCB layout)



- $L_{p1} = 22 \text{ nH}$
- $L_{s2} = 47 \text{ nH}$
- $L_{s3} = 39 \text{ nH}$
- $L_{p4} = 27 \text{ nH}$



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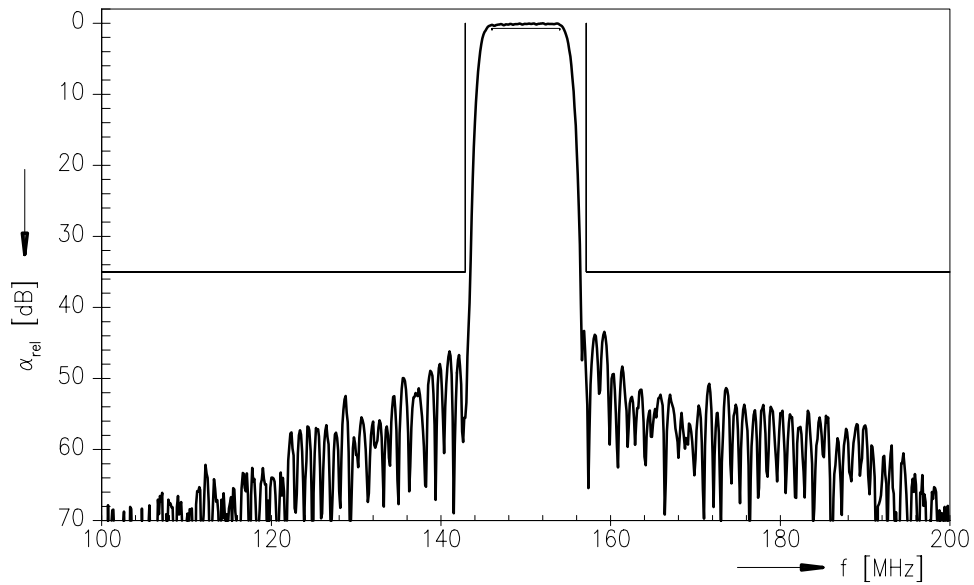
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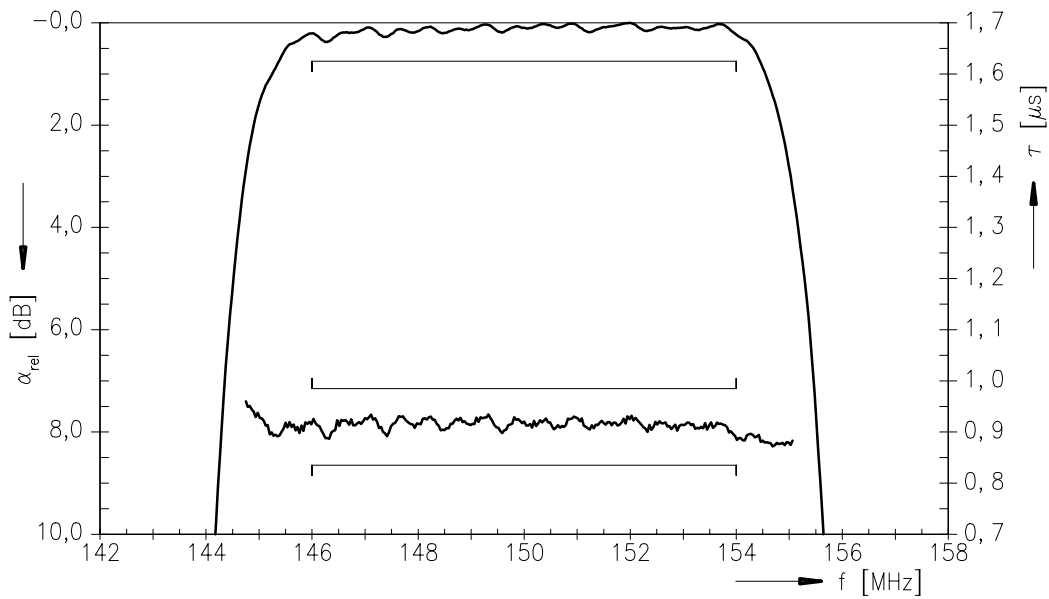
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Transfer function



Transfer function (pass band)





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