



SAW Components

Data Sheet B5019





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B5019

Low-Loss Filter

288,25 MHz

Data Sheet

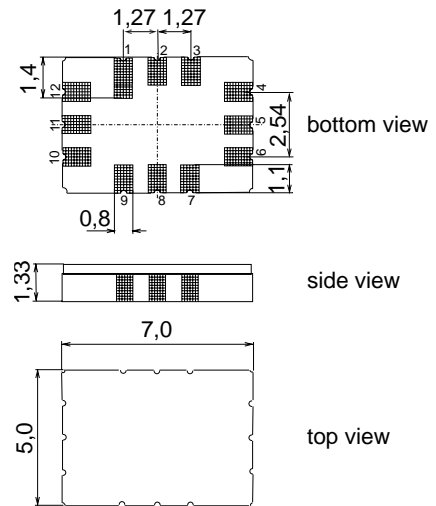
Ceramic package **QCC12E**

Features

- Low-loss IF filter for CDMA2000 base station, receive path
- 3,75 MHz usable bandwidth
- Balanced or unbalanced operation possible
- Temperature stable
- Hermetically sealed ceramic SMD package

Terminals

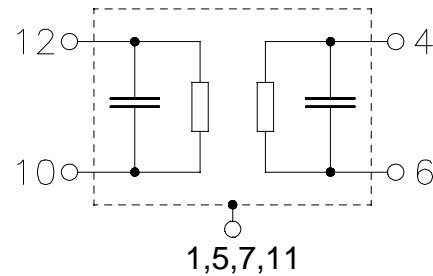
- Gold plated



Dimensions in mm, approx. weight 0,2 g

Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
B5019	B39291-B5019-H810	C61157-A7-A103	F61074-V8170-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	-30 / +85	°C
Storage temperature range	T_{stg}	-30 / +85	°C
DC voltage	V_{DC}	0	V
Source power	P_s	10	dBm


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Characteristics

Operating temperature range:

 $T = -10 \dots 80 \text{ } ^\circ\text{C}$

Terminating source impedance:

 $Z_S = 50 \text{ } \Omega$ unbalanced and matching network

Terminating load impedance:

 $Z_L = 50 \text{ } \Omega$ unbalanced and matching network

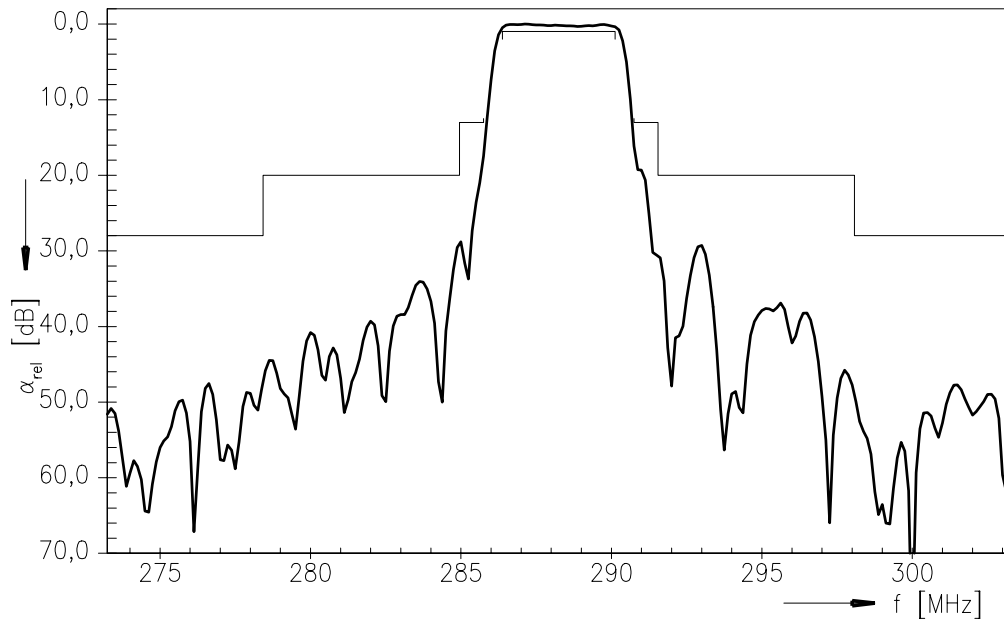
		min.	typ.	max.	
Nominal frequency	f_N	—	288,25	—	MHz
Minimum insertion attenuation (including matching network)	α_{\min}	—	9,3	13,0	dB
Passband width $\alpha_{\text{rel}} \leq 1,0 \text{ dB}$	$B_{1,0\text{dB}}$	3,8	4,0	—	MHz
Amplitude ripple (p-p) $f_N + k \cdot 1,25 \text{ MHz} \pm 0,625 \text{ MHz}$	$\Delta\alpha$	—	0,4	0,8	dB
	$f_N \pm 1,875 \text{ MHz}$	—	0,5	1,0	dB
Group delay ripple (p-p) $f_N \pm 1,875 \text{ MHz}$	$\Delta\tau$	—	80	150	ns
Absolute group delay $f_N \pm 1,875 \text{ MHz}$	τ	—	1,0	2,0	μs
Phase Linearity (rms) $f_N \pm 1,875 \text{ MHz}$	$\Delta\varphi$	—	0,7	1,5	$^\circ$
Average Error Vector Magnitude¹⁾ $f_N + k \cdot 1,25 \text{ MHz} \pm 0,625 \text{ MHz}$	<i>EVM</i>	—	1,5	4,0	%
Relative attenuation (relative to α_{\min}) $f_N \pm 2,5 \text{ MHz} \dots f_N \pm 3,3 \text{ MHz}$	α_{rel}	13	16	—	dB
	$f_N \pm 3,3 \text{ MHz} \dots f_N \pm 9,825 \text{ MHz}$	20	28	—	dB
	$f_N \pm 9,825 \text{ MHz} \dots f_N \pm 39,3 \text{ MHz}$	28	43	—	dB
	$f_N \pm 39,3 \text{ MHz} \dots f_N \pm 50 \text{ MHz}$	40	50	—	dB
Input and Output return loss $f_N \pm 1,875 \text{ MHz}$		10	13	—	dB
Temperature coefficient of frequency²⁾	TC_f	—	-0,036	—	ppm/K ²
Turnover temperature	T_0	—	35	—	$^\circ\text{C}$

¹⁾ $k = (-1,0,1)$
²⁾ Temperature dependance of fc : $fc(T_A) = fc(T_0)(1 + TC_f(T_A - T_0)^2)$

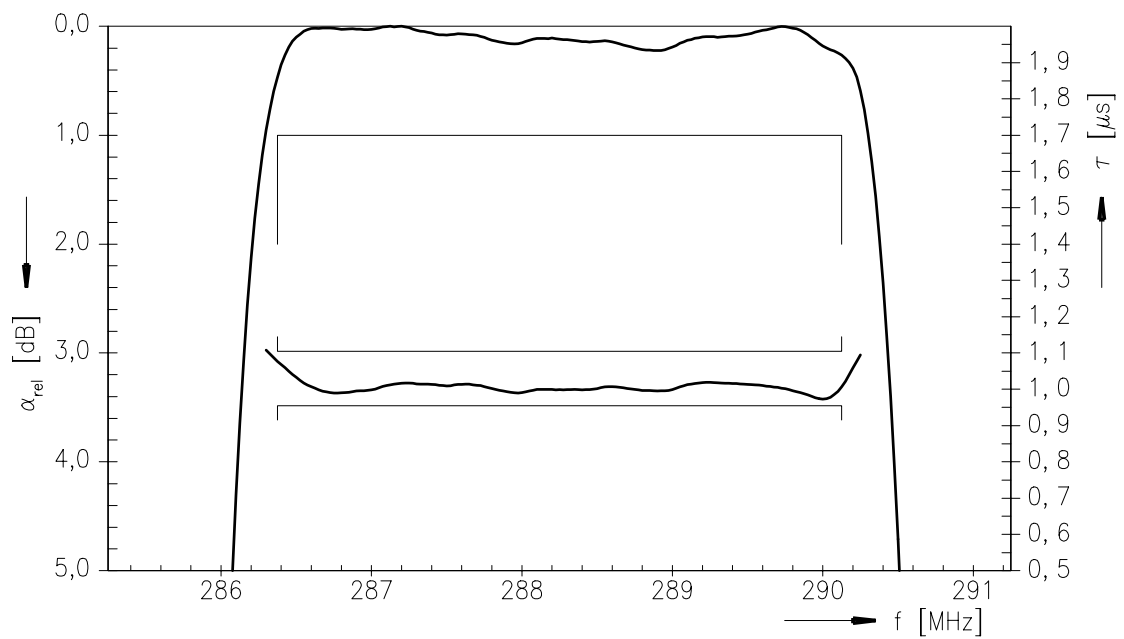


Data Sheet

Normalized frequency response

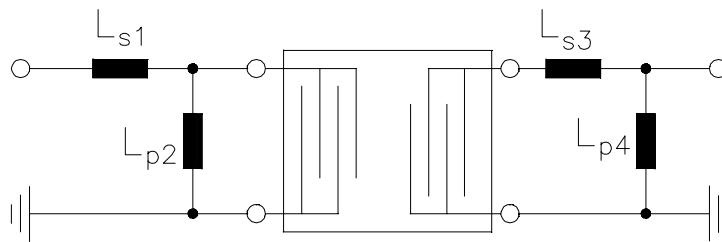


Normalized frequency response (pass band)



**Data Sheet****Matching network to 50Ω**

(Element values depend upon PCB layout)



$$L_{s1} = 62 \text{ nH}$$

$$L_{p2} = 22 \text{ nH}$$

$$L_{s3} = 15 \text{ nH}$$

$$L_{p4} = 8,2 \text{ nH}$$

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