

# SAW Components

Data Sheet B3640





SAW Components	B3640
Low-Loss Filter	238,0 MHz

**Data Sheet** 

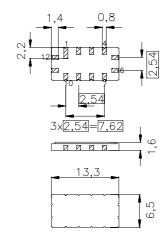
# Ceramic package QCC12

#### **Features**

- Low-loss IF filter for DCS base station
- Tx path
- Temperature stable
- Ceramic SMD package

### **Terminals**

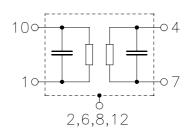
Gold plated



Dim. in mm, aprox. weight 0,4 g

# Pin configuration

1, 10	Input (balanced)
7	Output
4	Output ground
3, 9	To be grounded
2, 6, 8, 12	Case ground
5, 11	Not connected



Туре	Ordering code	Marking and Package according to	Packing according to		
B3640	B39231-B3640-Z510	C61157-A7-A55	F61074-V8026-Z000		

Electrostatic Sensitive Device (ESD)

# **Maximum ratings**

Operable temperature range	T	<b>- 20/+ 75</b>	°C
Storage temperature range	$T_{stg}$	<b>- 40/+ 85</b>	°C
DC voltage	$V_{\rm DC}$	10	V
Source power	$P_{s}$	10	dBm



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#### **Characteristics**

Operating temperature range:

 $T_{\rm A} = -5 - 75\,^{\circ}{\rm C}$   $Z_{\rm S} = 200\,\Omega$  and matching network.  $Z_{\rm L} = 50\,\Omega$  and matching network Terminating source impedance: Terminating load impedance:

		min.	typ.	max.	
Nominal frequency	$f_{N}$	_	238,0	_	MHz
Minimum insertion attenuation (including matching network)		7	8,5	9,5	dB
Amplitude ripple (p-p) $f_N \pm 100 \; \text{kHz} \\ f_N \pm 300 \; \text{kHz}$	Δα	_ _	0,3 1,9	1,1 3,0	dB dB
Absolute group delay	τ	_	1,5	3	μs
Group delay variation $f_N \pm 100 \text{ kHz} \\ f_N \pm 300 \text{ kHz}$	Δτ		50 90	150 250	ns ns
$\label{eq:Relative attenuation} \begin{array}{l} \text{Relative attenuation} \text{ (relative to } \alpha_{\text{min}}) \\ f_N \pm 0,6 \text{ MHz} & & f_N \pm 0,8 \text{ MHz} \\ f_N \pm 0,8 \text{ MHz} & & f_N \pm 1,8 \text{ MHz} \\ f_N \pm 1,8 \text{ MHz} & & f_N \pm 6,0 \text{ MHz} \\ f_N \pm 6,0 \text{ MHz} & & f_N \pm 20 \text{ MHz} \\ f_N \pm 20 \text{ MHz} & & f_N \pm 120 \text{ MHz} \end{array}$	$lpha_{rel}$	5 10 25 30 40	8 25 45 41 42	_ _ _ _ _	dB dB dB dB
Temperature coefficient of frequency 1) Turnover temperature	TC <sub>f</sub>	_ _	-0,036 30	_ _	ppm/K <sup>2</sup>

<sup>&</sup>lt;sup>1)</sup> Temperature dependance of  $f_c$ :  $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$ 

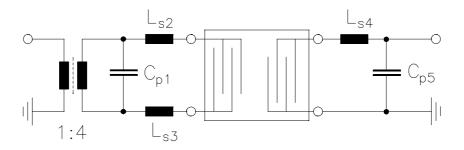


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# Matching network (element values depend on pcb layout)



Cp1 = 10 pF

Ls2 = 22 nH

Ls3 = 27 nH

Ls4 = 33 nH

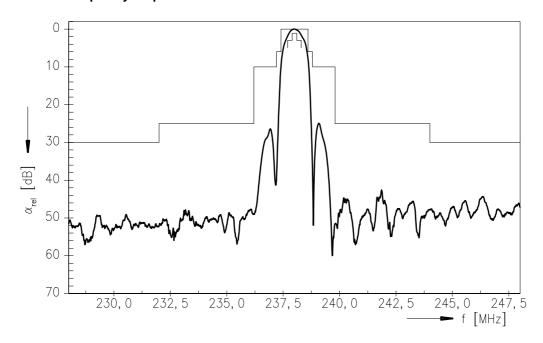
Cp5 = 22 pF



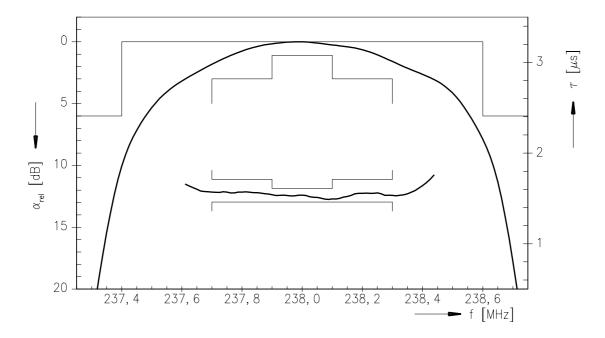
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# Normalized frequency response



# Normalized frequency response (pass band)





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