EPCOS

SAW Components

Data Sheet B3640

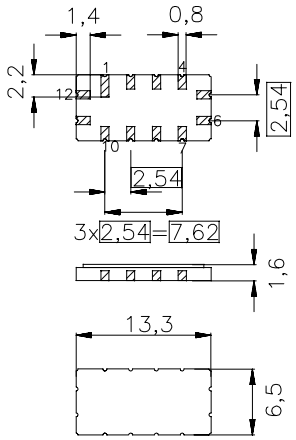
Ceramic package **QCC12**

Features

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

Terminals

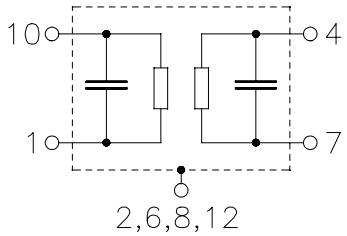
- Gold plated



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



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

Electrostatic **S**ensitive **D**evice (**ESD**)

Maximum ratings

Operable temperature range	T	– 20/+ 75	˚C	
Storage temperature range	T_{stg}	– 40/+ 85	˚C	
DC voltage	V_{DC}	10	V	
Source power	P_s	10	dBm	

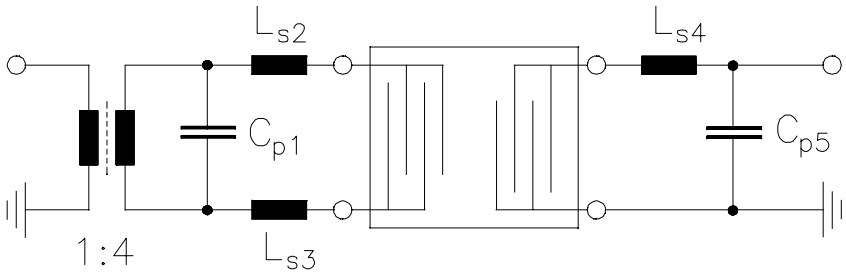
Characteristics

Operating temperature range: T_A = -5 - 75 °C
Terminating source impedance: Z_S = 200 Ω and matching network.
Terminating load impedance: Z_L = 50 Ω and matching network

		min.	typ.	max.	
Nominal frequency	f_N	—	238,0	—	MHz
Minimum insertion attenuation (including matching network)	α_{min}	7	8,5	9,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
$f_N \pm 100$ kHz		—	0,3	1,1	dB
$f_N \pm 300$ kHz		—	1,9	3,0	dB
Absolute group delay	τ	—	1,5	3	µs
Group delay variation	$\Delta\tau$				
$f_N \pm 100$ kHz		—	50	150	ns
$f_N \pm 300$ kHz		—	90	250	ns
Relative attenuation (relative to α_{min})	α_{rel}				
$f_N \pm 0{,}6$ MHz ... $f_N \pm 0{,}8$ MHz		5	8	—	dB
$f_N \pm 0{,}8$ MHz ... $f_N \pm 1{,}8$ MHz		10	25	—	dB
$f_N \pm 1{,}8$ MHz ... $f_N \pm 6{,}0$ MHz		25	45	—	dB
$f_N \pm 6{,}0$ MHz ... $f_N \pm 20$ MHz		30	41	—	dB
$f_N \pm 20$ MHz ... $f_N \pm 120$ MHz		40	42	—	dB
Temperature coefficient of frequency [1]	TC_f	—	–0,036	—	ppm/K²
Turnover temperature	T_0	—	30	—	°C

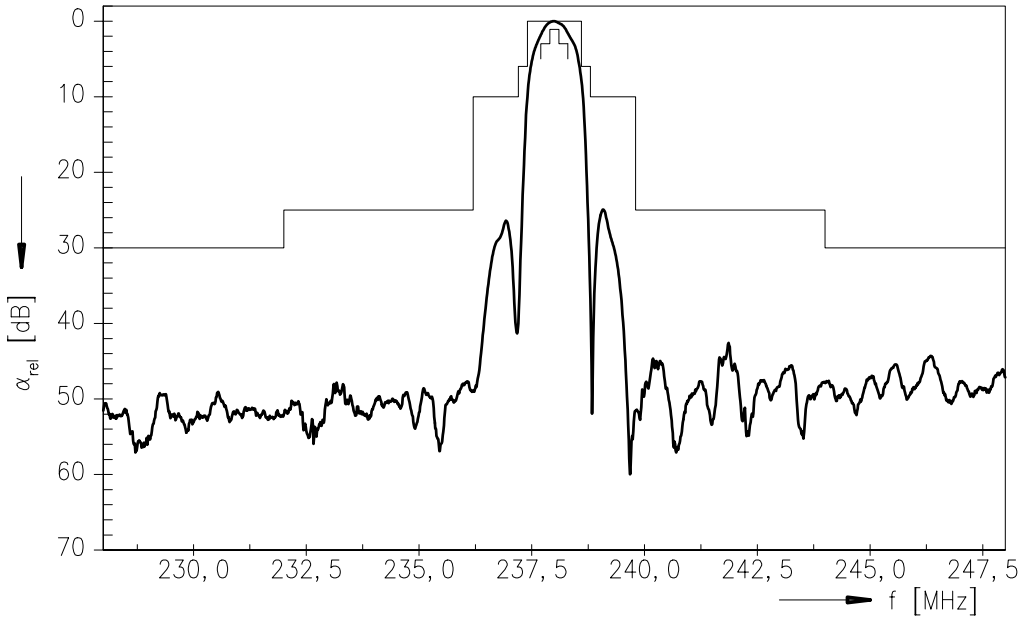
[1] Temperature dependance of f_c: $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$

Matching network (element values depend on pcb layout)

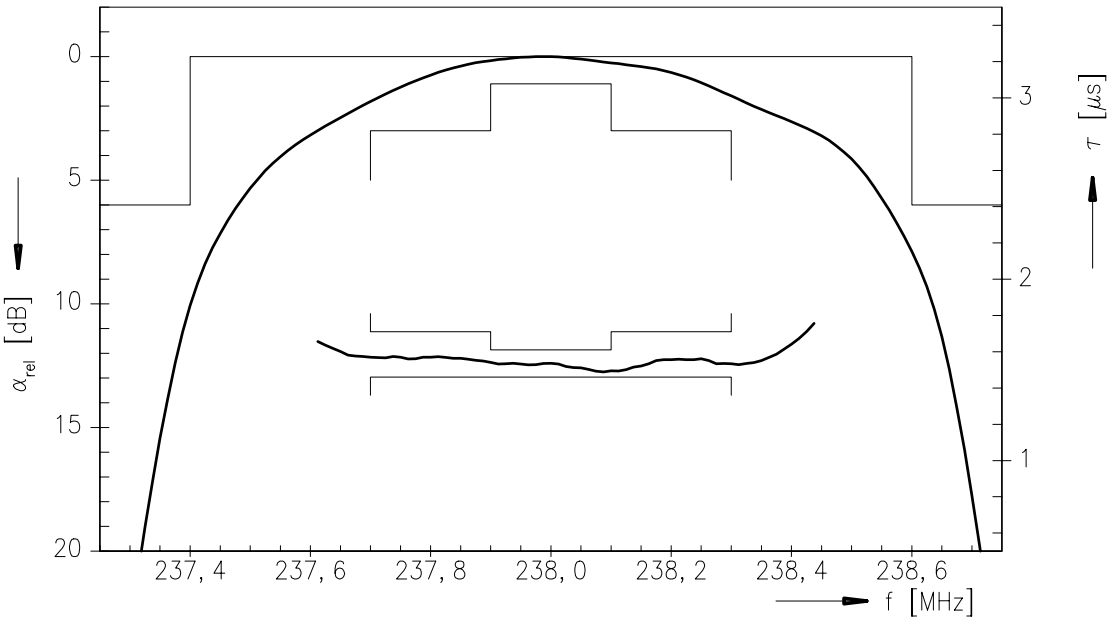


Cp1 = 10 pF
Ls2 = 22 nH
Ls3 = 27 nH
Ls4 = 33 nH
Cp5 = 22 pF

Normalized frequency response



Normalized frequency response (pass band)



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