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# *SAW Components*

*Data Sheet B3647*

Data Sheet

A large, stylized, 3D-rendered graphic of the EPCOS logo. The letters "EPCOS" are rendered in a white, glowing, sans-serif font, appearing to be part of a larger, curved structure that resembles a stylized globe or a series of overlapping planes. The background is dark and textured.



SAW Components

B3647

Low-Loss Filter

125,0 MHz

Data Sheet

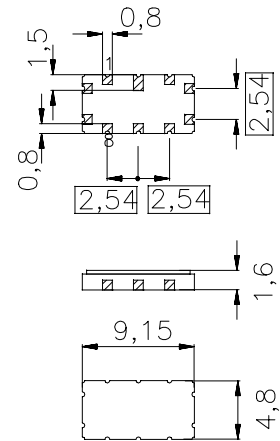
Ceramic package QCC10B

Features

- Low-loss wideband IF filter
- No matching required for operation at 50 Ω
- Package for Surface Mounted Technology (SMT)

Terminals

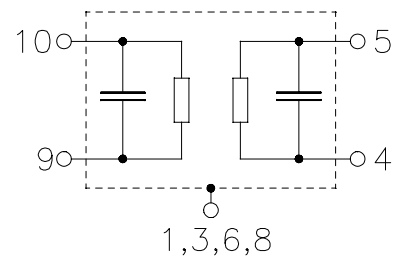
- Gold-plated



Dimensions in mm, approx. weight 0,2 g

Pin configuration

- 10 Input
- 9 Input ground
- 5 Output
- 4 Output ground
- 2, 7 Ground
- 1, 3, 6, 8 Case – ground



Type	Ordering code	Marking and Package according to	Packing according to
B3647	B39131-B3647-Z710	C61157-A7-A49	F61064-V8035-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	$T$	- 25/+ 85	°C	
Storage temperature range	$T_{stg}$	- 40/+ 125	°C	
DC voltage	$V_{DC}$	0	V	
Source power	$P_s$	10	dBm	


**SAW Components**
**B3647**
**Low-Loss Filter**
**125,0 MHz**
**Data Sheet**
**Characteristics**

Operating temperature:  $T_A = -10 - +85 \text{ }^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 50 \text{ } \Omega$   
 Terminating load impedance:  $Z_L = 50 \text{ } \Omega$

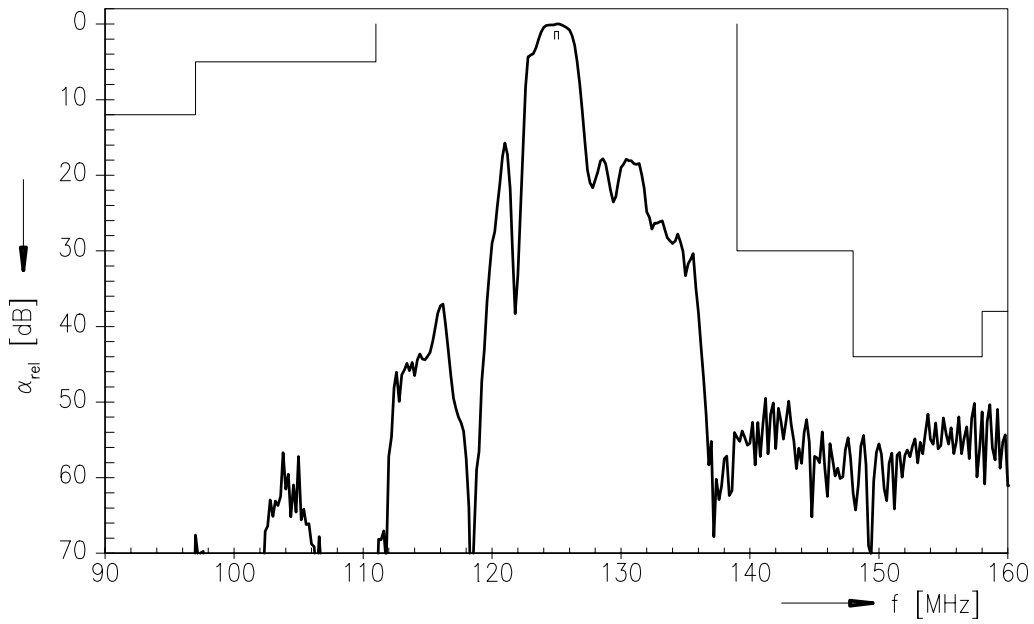
			min.	typ.	max.	
<b>Nominal frequency</b>	$f_N$		—	125,0	—	MHz
<b>Insertion attenuation</b>	$f_N \pm 150 \text{ kHz}$	$\alpha_{\max}$	1,2	1,5	3,2	dB
<b>Passband width</b>	$\alpha_{\text{rel}} \leq 1,0 \text{ dB}$	$B_{1,0\text{dB}}$	—	2,2	—	MHz
<b>Amplitude ripple (p-p)</b>	$f_N \pm 150 \text{ kHz}$	$\Delta\alpha$	—	0,15	1,0	dB
<b>Absolute group delay (at <math>f_N</math>)</b>		$\tau$	—	250	300	ns
<b>Group delay ripple (p-p)</b>	$f_N \pm 150 \text{ kHz}$	$\Delta\tau$	—	20	30	ns
<b>Relative attenuation (relative to <math>\alpha_{\max}</math>)</b>		$\alpha_{\text{rel}}$				
	10,0 MHz ... $f_N - 28,0 \text{ MHz}$		12,0	70,0	—	dB
	$f_N - 28,0 \text{ MHz}$ ... $f_N - 14,0 \text{ MHz}$		5,0	50,0	—	dB
	$f_N - 14,0 \text{ MHz}$ ... $f_N - 0,15 \text{ MHz}$		0,0	—	—	dB
	$f_N + 0,15 \text{ MHz}$ ... $f_N + 14,0 \text{ MHz}$		0,0	—	—	dB
	$f_N + 14,0 \text{ MHz}$ ... $f_N + 23,0 \text{ MHz}$		30,0	50,0	—	dB
	$f_N + 23,0 \text{ MHz}$ ... $f_N + 33,0 \text{ MHz}$		44,0	48,0	—	dB
	$f_N + 33,0 \text{ MHz}$ ... $f_N + 325,0 \text{ MHz}$		38,0	46,0	—	dB
<b>Input IP3 (Third order intercept point)<sup>1)</sup></b>			45	—	—	dBm
<b>VSWR</b>	$f_N \pm 150 \text{ kHz}$		—	1,4:1	2,0:1	
<b>Temperature coefficient of frequency</b>		$TC_f$	—	-70	—	ppm/K

1) With two 10 dBm fundamental signals at 125 MHz and 139 MHz applied the third order intermodulation product at the output at 111 MHz will have less than -64 dBm.

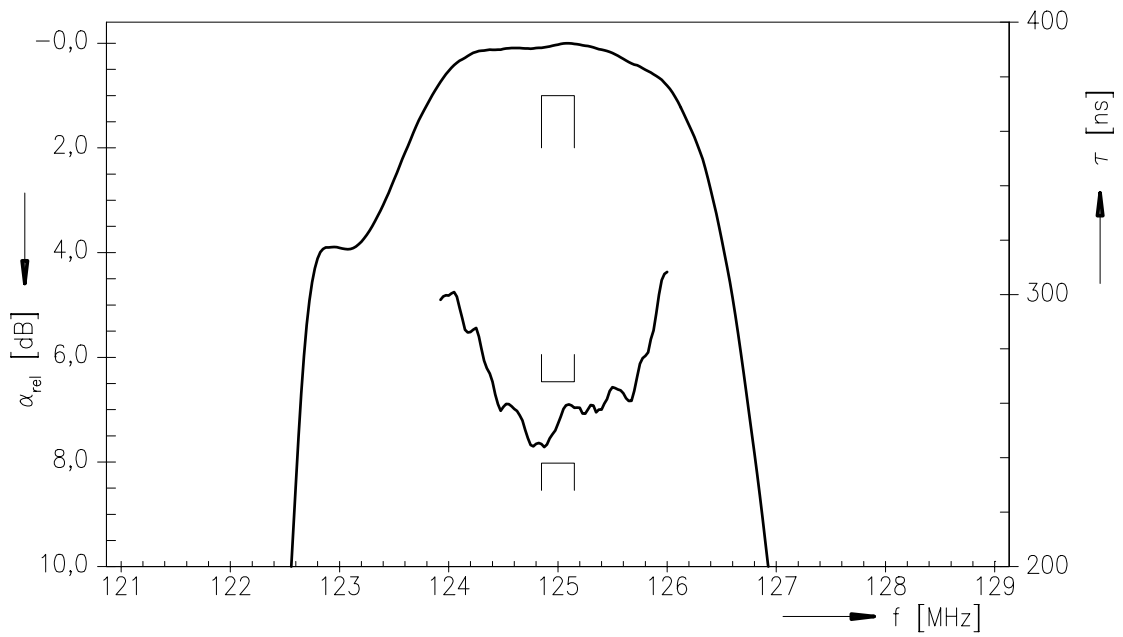


Data Sheet

Transfer function



Transfer function (pass band)





**SAW Components**

**B3647**

**Low-Loss Filter**

**125,0 MHz**

Data Sheet

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