



SAW Components

Data Sheet B4812

Data Sheet

A large, stylized, 3D graphic of the EPCOS logo. The letters "EPCOS" are rendered in a bold, sans-serif font, appearing to be part of a larger, curved structure that resembles a globe or a stylized wave. The graphic is in grayscale and has a metallic, reflective appearance.



SAW Components

B4812

Low-Loss Filter

246,01 MHz

Data Sheet



Characteristics

Reference temperature:

$$T = 25\text{ °C}$$

Terminating source impedance:

$$Z_S = 700\text{ Ohm} \parallel -2,6\text{ pF}$$

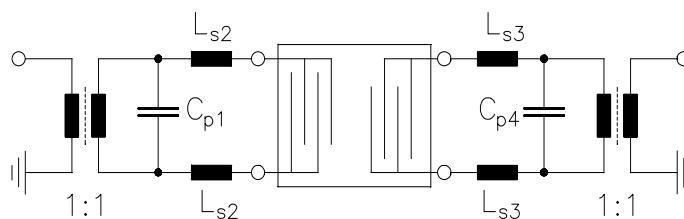
Terminating load impedance:

$$Z_L = 700\text{ Ohm} \parallel -2,6\text{ pF}$$

		min.	typ.	max.	
Nominal frequency	f_N	—	246,01	—	MHz
Minimum insertion attenuation (including loss in matching coils)	α_{\min}	2,0	3,2	5,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
$f_N - 67,5\text{ kHz} \dots f_N + 67,5\text{ kHz}$		—	0,6	2,0	dB
$f_N - 80,0\text{ kHz} \dots f_N + 80,0\text{ kHz}$		—	0,7	3,0	dB
Group delay ripple (p-p)	$\Delta\tau$				
$f_N - 50,0\text{ kHz} \dots f_N + 50,0\text{ kHz}$		—	0,5	1,5	μs
$f_N - 80,0\text{ kHz} \dots f_N + 80,0\text{ kHz}$		—	1,2	3,0	μs
Relative attenuation (relative to α_{\min})	α_{rel}				
$f_N - 25,00\text{ MHz} \dots f_N - 3,00\text{ MHz}$		50	60	—	dB
$f_N - 3,00\text{ MHz} \dots f_N - 1,60\text{ MHz}$		48	60	—	dB
$f_N - 1,60\text{ MHz} \dots f_N - 0,60\text{ MHz}$		38	50	—	dB
$f_N - 0,60\text{ MHz} \dots f_N - 0,40\text{ MHz}$		28	40	—	dB
$f_N - 0,40\text{ MHz} \dots f_N - 0,20\text{ MHz}$		8	14	—	dB
$f_N + 0,20\text{ MHz} \dots f_N + 0,40\text{ MHz}$		8	14	—	dB
$f_N + 0,40\text{ MHz} \dots f_N + 0,60\text{ MHz}$		28	40	—	dB
$f_N + 0,60\text{ MHz} \dots f_N + 1,60\text{ MHz}$		38	50	—	dB
$f_N + 1,60\text{ MHz} \dots f_N + 3,00\text{ MHz}$		48	60	—	dB
$f_N + 3,00\text{ MHz} \dots f_N + 25,00\text{ MHz}$		50	60	—	dB
Impedance at f_N					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	700 \parallel 2,6	—	$\Omega \parallel \text{pF}$
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	700 \parallel 2,6	—	$\Omega \parallel \text{pF}$
Temperature coefficient of frequency ¹⁾	TC_f	—	- 0,036	—	ppm/K ²
Frequency inversion point	T_0	—	25	—	°C

¹⁾ Temperature dependence of f_c : $f_c(T) = f_c(T_0)(1 + TC_f(T - T_0)^2)$

Test matching network to 50 Ω (element values depend on PCB layout):



$$\begin{aligned} C_{p1} &= 1,8\text{ pF} \\ L_{s2} &= 56\text{ nH} \\ L_{s3} &= 56\text{ nH} \\ C_{p4} &= 1,8\text{ pF} \end{aligned}$$



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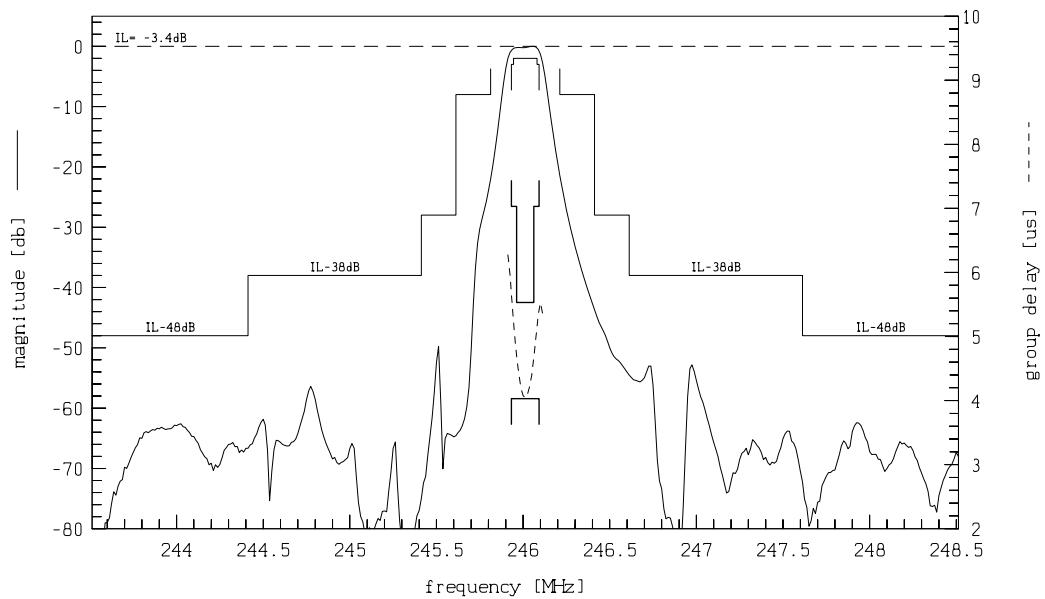
Low-Loss Filter

246,01 MHz

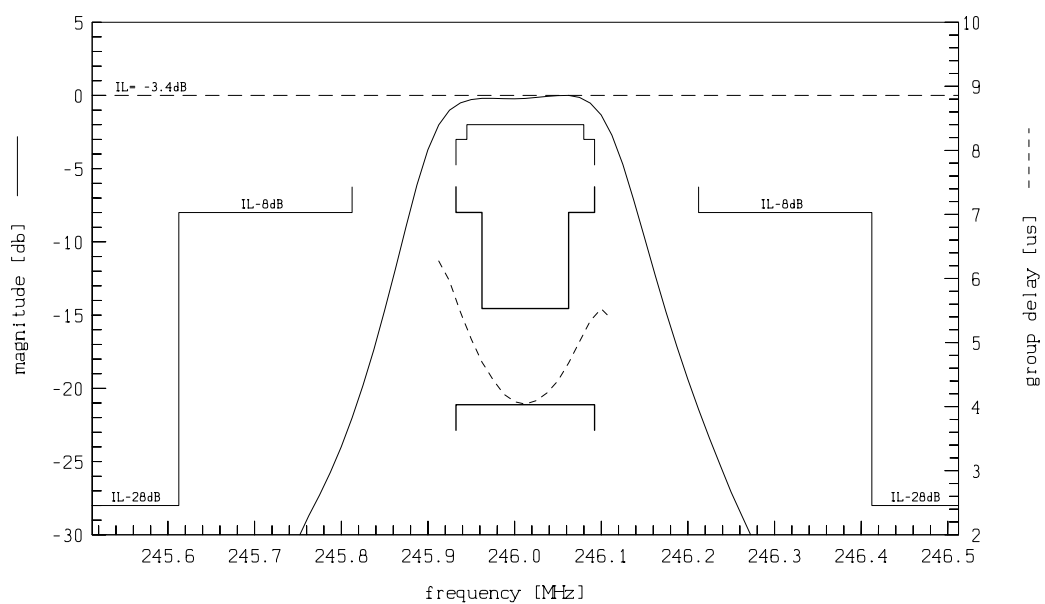
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Transfer function:



Transfer function (pass band):





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Low-Loss Filter	246,01 MHz
Data Sheet	SMD

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