



SAW Components

SAW IF filter

GSM

Series/type:	B3893
Ordering code:	B39251B3893H310
Date:	February 28, 2008
Version:	2.0



SAW Components

B3893

SAW IF filter

248.6 MHz

Data sheet



Revision History: Changes compared to previous iteration issue

ISSUE	ORIGINATOR	DETAIL SPEC CHANGES	DATE
B3893			
2.0	T. Gaertner	pass band width changed from 240 kHz to 704 kHz	28.02.2008



Data sheet



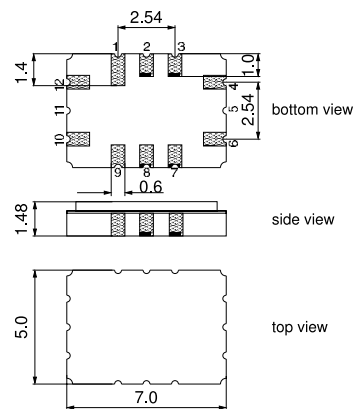
Application

- Low-loss IF filter for GSM base station
- Clean-up filter
- Ceramic SMD package



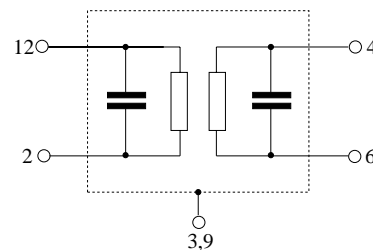
Features

- Package size 7.0 x 5.0 x 1.33 mm³
- Package code QCC12C
- RoHS compatible
- Approximate weight 0.25 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- Filter surface passivated



Pin configuration

- 12 Input
- 2 Input ground
- 4, 6 Balanced output
- 1, 7, 8, 10 To be grounded
- 3, 9 Case ground



Please read *cautions and warnings and important notes* at the end of this document.



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Characteristics

Temperature range for specification: $T = -20\text{ °C to }+85\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 200\ \Omega$

		min.	typ.	max.	
Nominal frequency	f_N	—	248.6	—	MHz
Minimum insertion attenuation	α_{\min}	—	1.3	3.5	dB
Passband width					
	$\alpha_{\text{rel}} \leq 3.0\text{ dB}$	$B_{3.0\text{dB}}$	5.0	7.2	— MHz
Amplitude ripple (p-p)					
	$\Delta\alpha$				
	$f_N \pm 352.0\text{ kHz}$	—	0.2	0.5	dB
Group delay ripple (p-p)					
	$\Delta\tau$				
	$f_N \pm 352.0\text{ kHz}$	—	30	100	ns
Relative attenuation (relative to α_{\min})					
	α_{rel}				
	10.0 MHz ... $f_N - 29.2\text{ MHz}$	45	70	—	dB
	@ $f_N + 22.80\text{ MHz}$	45	60	—	dB
	@ $f_N + 52.00\text{ MHz}$	45	70	—	dB
	@ $f_N + 74.80\text{ MHz}$	45	70	—	dB
	@ $f_N + 104.0\text{ MHz}$	45	55	—	dB
	@ $f_N + 126.8\text{ MHz}$	45	70	—	dB
Temperature coefficient of frequency	TC_f	—	-36	—	ppm/K

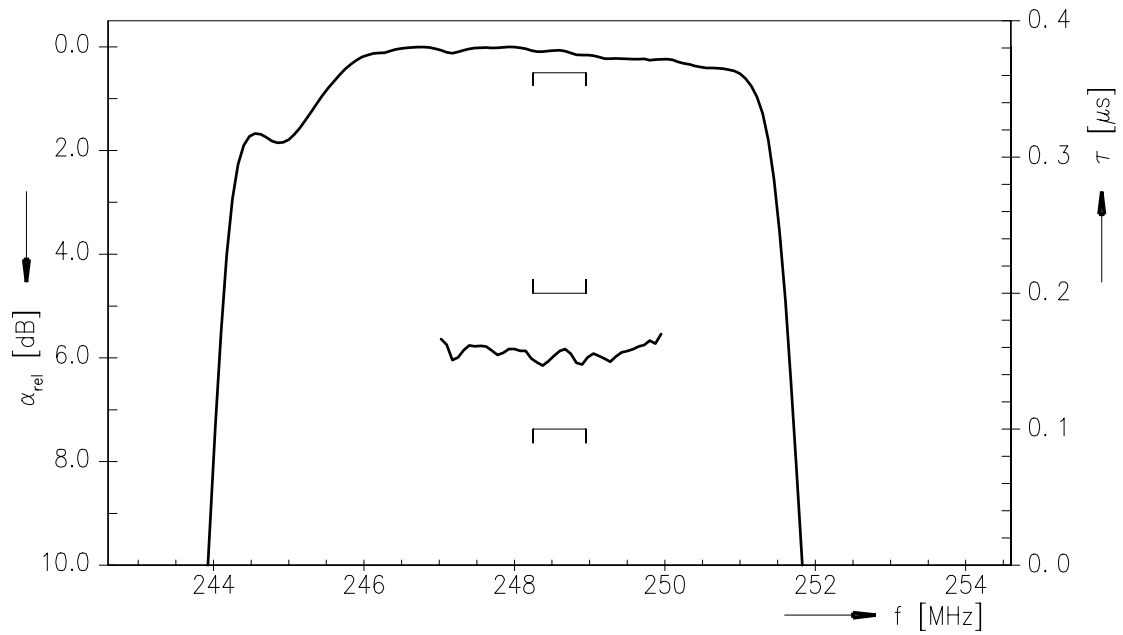
Maximum ratings

Operable temperature range	T	-40/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	0	V	
Input Power	P _{IN}	10	dBm	
Input Power	P _{IN}	20	dBm	t <= 100 hours

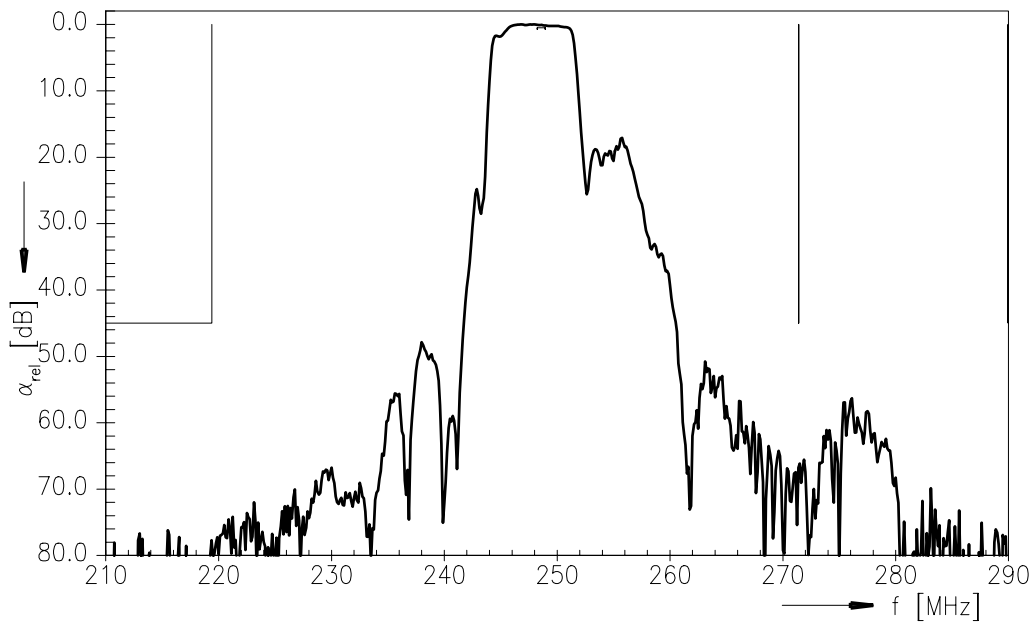
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Normalized transfer function (S21, Narrowband)



Normalized transfer function (S21, Wideband)





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References

Type	B3893
Ordering code	B39251B3893H310
Marking and package	C61157-A7-A95
Packaging	F61074-V8170-Z000
Date codes	L_1126
S-parameters	
Soldering profile	S_6001
RoHS compatible	defined as compatible with the following documents: "DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment. 2005/618/EC from April 18th, 2005, amending Directive 2002/95/EC of the European Parliament and of the Council for the purposes of establishing the maximum concentration values for certain hazardous substances in electrical and electronic equipment."

For further information please contact your local EPCOS sales office or visit our webpage at www.epcos.com .

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