



SAW Components

SAW IF filter

TD-SCDMA

Series/type:	B5227
Ordering code:	B39141B5227H310
Date:	January 12, 2010
Version:	2.0



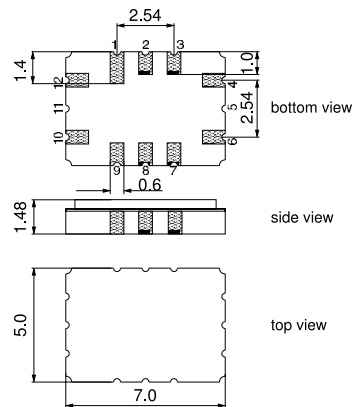
Application

- Low-loss IF filter for TD-SCDMA base station
- Usable passband 15.0 MHz



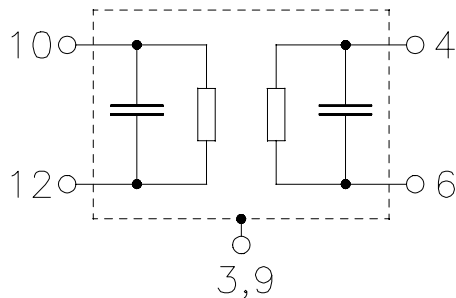
Features

- Package size 7.0 x 5.0 x 1.48 mm³
- Package code QCC12C
- RoHS compatible
- Approximate weight 0.25 g
- Ceramic package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- Filter surface passivated



Pin configuration

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




SAW Components
B5227
SAW IF filter
138.24 MHz

Data sheet


Characteristics

Temperature range for specification:

$T = -40\text{ °C to }+85\text{ °C}$

Terminating source impedance:

$Z_S = 50\ \Omega \text{ and matching network}$

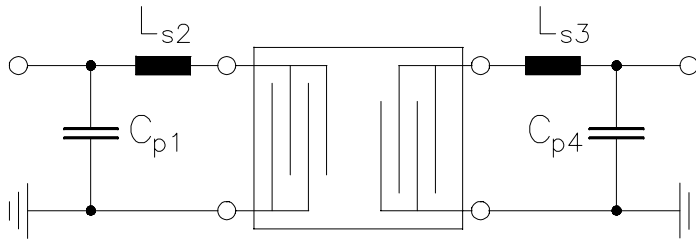
Terminating load impedance:

$Z_L = 50\ \Omega \text{ and matching network}$

		min.	typ. @ 25 °C	max.	
Nominal frequency	f_N	—	138.24	—	MHz
Minimum insertion attenuation (including matching network)	α_{\min}	—	7.8	10	dB
Passband width					
	$\alpha_{\text{rel}} \leq 1.0\ \text{dB}$	$B_{1.0\text{dB}}$	15	17.3	— MHz
	$\alpha_{\text{rel}} \leq 3.0\ \text{dB}$	$B_{3.0\text{dB}}$	16	18.5	— MHz
Amplitude ripple (p-p)		$\Delta\alpha$			
	$f_N \pm 7.5\ \text{MHz}$		—	0.5	1.0 dB
	$f_N \pm 8.0\ \text{MHz}$		—	0.5	3.0 dB
Phase ripple (p-p)		$\Delta\phi$			
	$f_N \pm 7.5\ \text{MHz}$		—	4	— °
Group delay ripple (p-p)		$\Delta\tau$			
	$f_N \pm 7.5\ \text{MHz}$		—	50	140 ns
Absolute group delay (mean)		τ			
	$f_N \pm 7.5\ \text{MHz}$		—	0.7	1.3 μs
Relative attenuation (relative to α_{\min})		α_{rel}			
	10.00 MHz ... 50.00 MHz		50	60	— dB
	50.00 MHz ... 125.74 MHz		40	50	— dB
	150.74 MHz ... 160.00 MHz		37	45	— dB
	160.00 MHz ... 300.00 MHz		40	55	— dB
	300.00 MHz ... 500.00 MHz		45	65	— dB
Return loss (input and output)					
	$f_N \pm 7.5\ \text{MHz}$		8	10	— dB
Input IP3			35	—	— dBm
Temperature coefficient of frequency	TC_f	—	—87	—	ppm/K



Matching network to 50 Ω



- $C_{p1} = 22 \text{ pF}$
- $L_{s2} = 82 \text{ nH}$
- $L_{s3} = 43 \text{ nH}$
- $C_{p4} = 47 \text{ pF}$

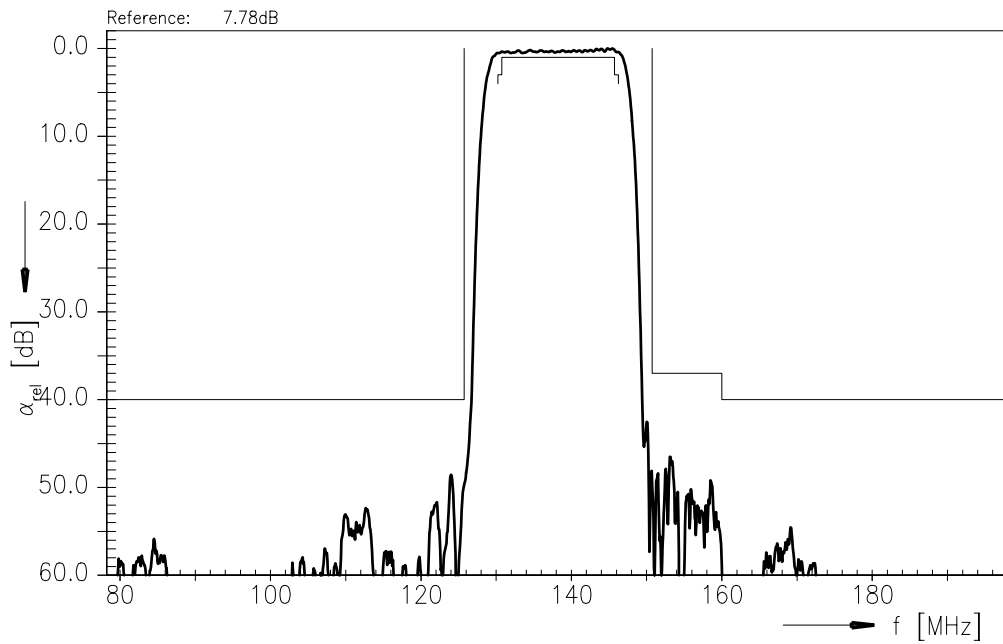
Element values depend upon board layout and properties.

Maximum ratings

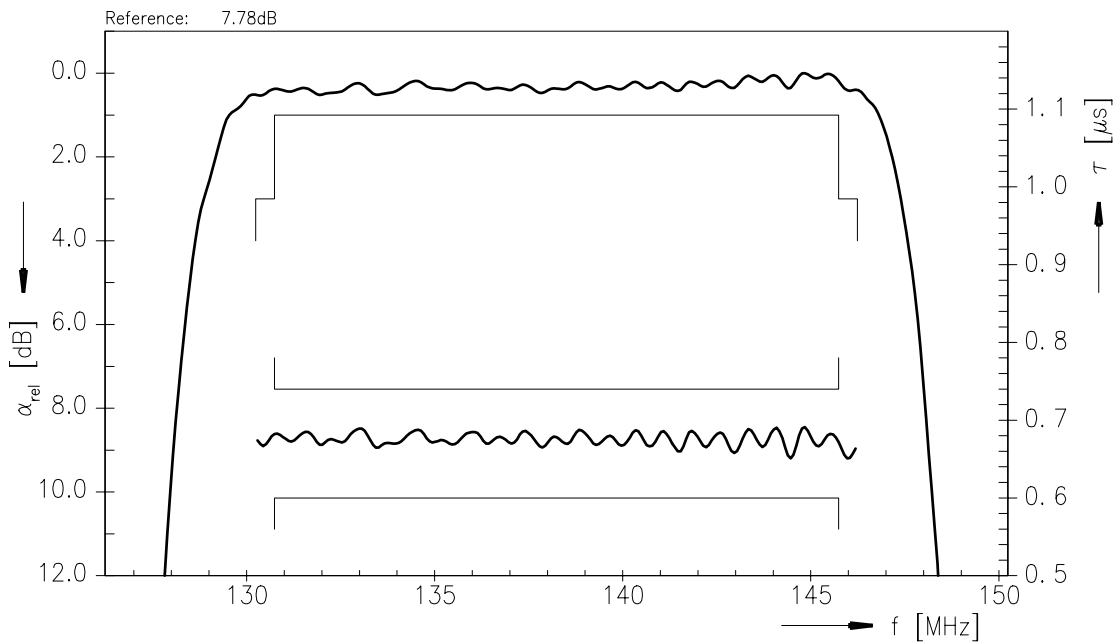
Operable temperature range	T	-40/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	0	V	
Input Power	P _{IN}	10	dBm	



Transfer function



Transfer function (passband)





SAW Components	B5227
SAW IF filter	138.24 MHz
Data sheet	

References

Type	B5227
Ordering code	B39141B5227H310
Marking and package	C61157-A7-A95
Packaging	F61074-V8170-Z000
Date codes	L_1126
S-parameters	B5227_NB.s2p
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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