



SAW Components

SAW IF filter for base stations

Series/type:	B5258
Ordering code:	B39181B5258H810
Date:	January 22, 2013
Version:	2.0



SAW Components	B5258
SAW IF filter	184.3 MHz

Data sheet



Characteristics

Temperature range for specification: $T = -40\text{ °C to }+80\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$ unbalanced and matching network
 Terminating load impedance: $Z_L = 50\ \Omega$ unbalanced and matching network

		min.	typ. @ 25 °C	max.		
Nominal frequency	f_N	—	184.3	—	MHz	
Minimum insertion attenuation (including matching network)	α_{\min}	—	9.0	10.3	dB	
Passband width						
	$\alpha_{\text{rel}} \leq 1.0\text{ dB}$	$B_{1.0\text{dB}}$	47	49	50	MHz
Amplitude ripple (p-p)						
	$f_N \pm 23.5\text{ MHz}$	$\Delta\alpha$	—	0.5	1.0	dB
Phase ripple (p-p)						
	$f_N \pm 23.5\text{ MHz}$	$\Delta\phi$	—	5	10	°
Group delay ripple (p-p)						
	$f_N \pm 23.5\text{ MHz}$	$\Delta\tau$	—	25	60	ns
Absolute group delay (mean)						
	$f_N \pm 23.5\text{ MHz}$	$\bar{\tau}$	—	0.42	—	μs
Relative attenuation (relative to α_{\min})						
	α_{rel}					
	10.0 MHz ... 100.0 MHz	55	60	—	dB	
	100.0 MHz ... 127.0 MHz	45	49	—	dB	
	127.0 MHz ... 130.0 MHz	42	44	—	dB	
	130.0 MHz ... 150.0 MHz	31	32	—	dB	
	150.0 MHz ... 155.0 MHz	17	24	—	dB	
	213.0 MHz ... 218.0 MHz	5	8	—	dB	
	218.0 MHz ... 223.0 MHz	20	34	—	dB	
	223.0 MHz ... 268.0 MHz	33 ¹⁾	39	—	dB	
	268.0 MHz ... 450.0 MHz	40	51	—	dB	
	450.0 MHz ... 565.0 MHz	30	35	—	dB	
	565.0 MHz ... 1000.0 MHz	40	45	—	dB	
VSWR						
	input $f_N \pm 23.5\text{ MHz}$	—	1.7:1	2.1:1		
	output $f_N \pm 23.5\text{ MHz}$	—	1.7:1	2.1:1		

¹⁾ some spikes may reach up to 30 dB



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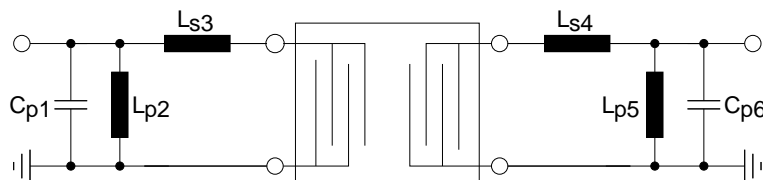
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SMD

Matching network to 50 Ω unbalanced input and output



- $C_{p1} = 33 \text{ pF}$
- $L_{p2} = 15 \text{ nH}$
- $L_{s3} = 3.6 \text{ nH}$
- $L_{s4} = 3.6 \text{ nH}$
- $L_{p5} = 15 \text{ nH}$
- $C_{p6} = 33 \text{ pF}$

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 (passband)	P _{IN}	10	dBm	



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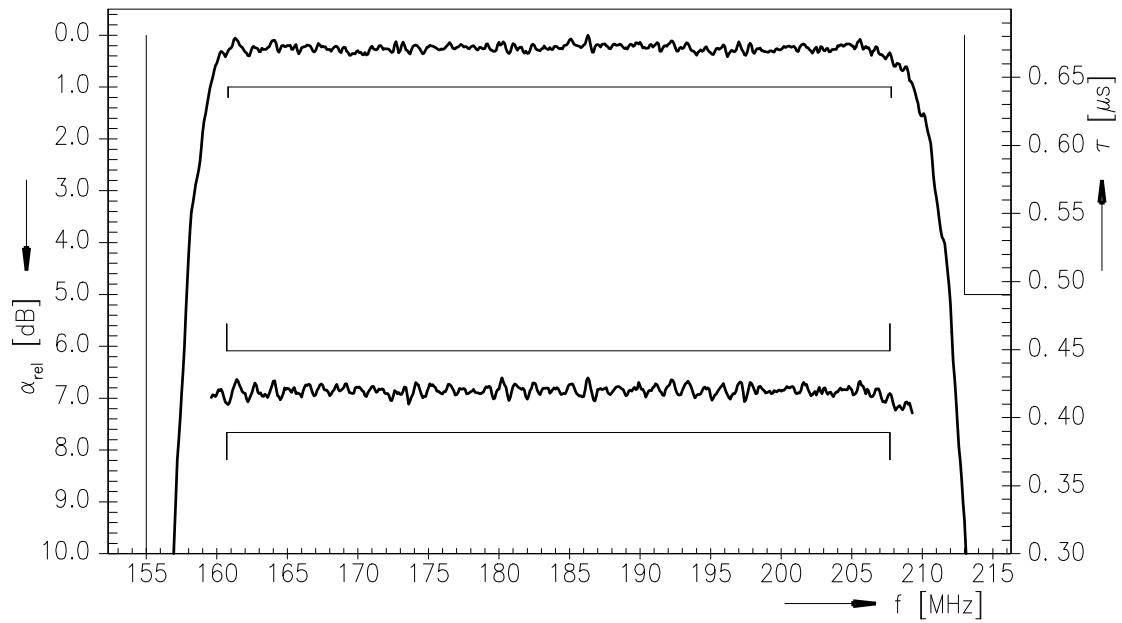
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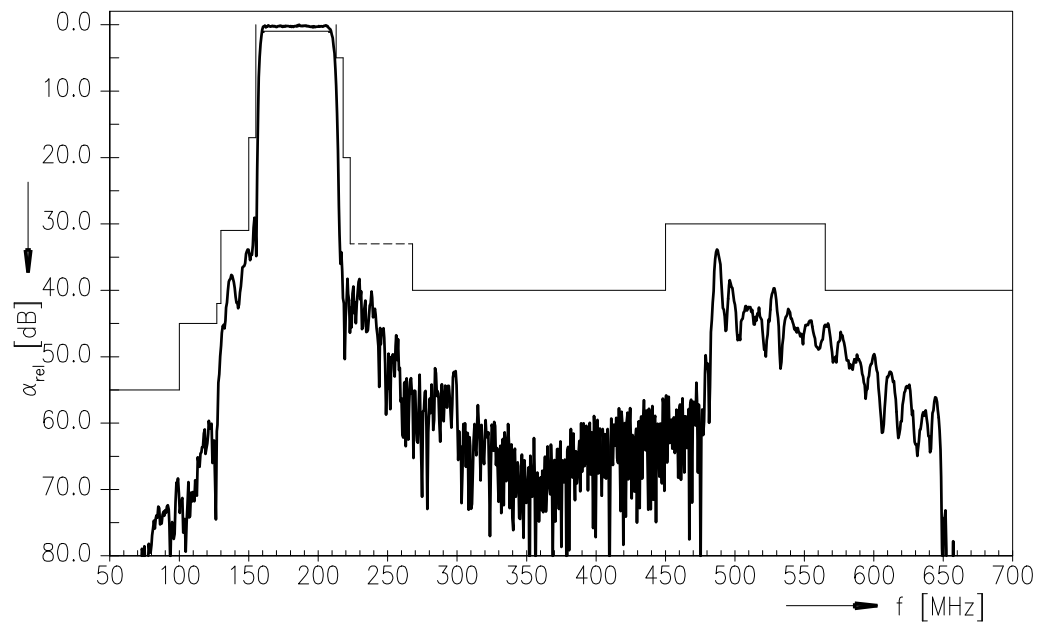
Data sheet



Transfer function (S21, narrowband, normalized)



Transfer function (S21, wideband, normalized)



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



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References

Type	B5258
Ordering code	B39181B5258H810
Marking and package	C61157-A7-A103
Packaging	F61074-V8170-Z000
Date codes	L_1126
S-parameters	B5258_NB.s2p, B5258_WB.s2p B5258_NB_UN.s4p, B5258_WB_UN.s4p see file header for port/pin assignment table
Soldering profile	S_6001
RoHS compatible	RoHS-compatible means that products are compatible with the requirements according to Art. 4 (substance restrictions) of Directive 2011/65/EU of the European Parliament and of the Council of June 8 th , 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment ("Directive") with due regard to the application of exemptions as per Annex III of the Directive in certain cases.
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