SAW Components

SAW RF low loss filter

Satellite CSS

Series/type: **B1626**
Ordering code: **B39182B1626U810**

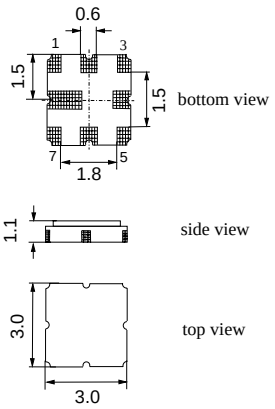
Date: April 30, 2007
Version: 2.2

Application

- Low-loss RF filter for satellite CSS
- Balanced to balanced operation
- Low insertion attenuation
- Low amplitude ripple
- Low group delay ripple
- Usable passband 40.0 MHz

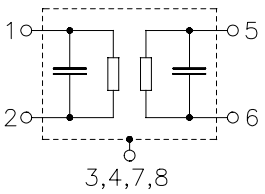
Features

- Package size 3.0 x 3.0 x 1.1 mm³
- Maximum height of 1.225 mm
- Package code QCC8D
- RoHS compatible
- Approximate weight 0.037 g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)



Pin configuration

■	1	Input
■	2	Input
■	5	Output
■	6	Output
■	3,7	To be grounded
■	4,8	Case ground, to be grounded



Characteristics

Temperature range for specification: T = –40 ˚C to +85 ˚C

Terminating source impedance: Z_S = 150 Ω

Terminating load impedance: Z_L = 150 Ω

		min.	typ. @ 25 ˚C	max.	
Nominal frequency	f_N	—	1790.48	—	MHz
Maximum insertion attenuation	α_{max}				
1770.48 ... 1810.48 MHz		—	4.9	5.5	dB
Pass bandwidth	$B_{1.5dB}$				
$\alpha_{rel} \leq$ 1.5dB		—	57.0	—	MHz
Amplitude ripple (p-p)	$\Delta\alpha$				
1770.48 ... 1810.48 MHz		—	2.1	2.7	dB
Group delay ripple (p-p)	$\Delta\tau$				
1770.48 ... 1810.48 MHz		—	5.0	20.0	ns
Deviation from linear phase (rms) in any 30MHz band	$\Delta\tau$				
1770.48 ... 1810.48 MHz		—	1.5	3.5	
Relative attenuation (relative to α_{max})	α				
50.0 ... 1708.42 MHz		46.0	51.0	—	dB
1872.54 ... 1900.00 MHz		39.0	50.0	—	dB
1900.00 ... 2000.00 MHz		45.0	58.0	—	
2000.00 ... 6000.00 MHz		20.0	—	—	

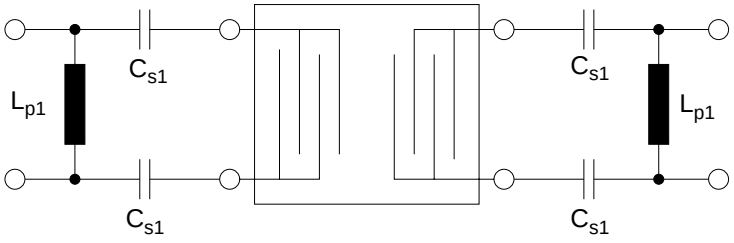
Characteristics

Temperature range for specification: T = –40 ˚C to +85 ˚C

Terminating source impedance: Z_S = 150 Ω and matching network
Terminating load impedance: Z_L = 150 Ω and matching network

		min.	typ. @ 25 ˚C	max.	
Nominal frequency	f_N	—	1790.48	—	MHz
Maximum insertion attenuation	α_{max}				
1770.48 ... 1810.48 MHz		—	4.2	5.5	dB
Pass bandwidth	$B_{1.5dB}$				
$\alpha_{rel} \leq$ 1.5dB		—	57.0	—	MHz
Amplitude ripple (p-p)	$\Delta\alpha$				
1770.48 ... 1810.48 MHz		—	0.8	1.5	dB
Group delay ripple (p-p)	$\Delta\tau$				
1770.48 ... 1810.48 MHz		—	8.0	20.0	ns
Deviation from linear phase (rms) in any 30MHz band	$\Delta\tau$				
1770.48 ... 1810.48 MHz		—	1.5	3.5	
Relative attenuation (relative to α_{max})	α				
50.0 ... 1708.42 MHz		45.0	50.0	—	dB
1872.54 ... 1900.00 MHz		37.0	46.0	—	dB
1900.00 ... 2000.00 MHz		45.0	56.0	—	
2000.00 ... 6000.00 MHz		20.0	—	—	

Matching network (element values depend on PCB layout)



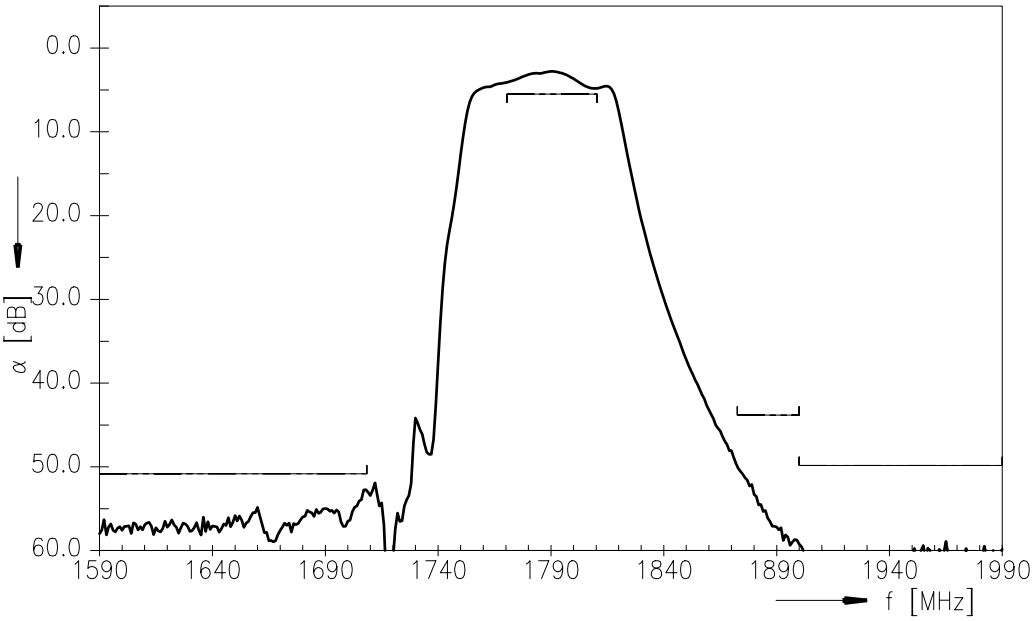
L_{p1} = 22 nH
C_{s1} = 5.6 pF

Characteristics

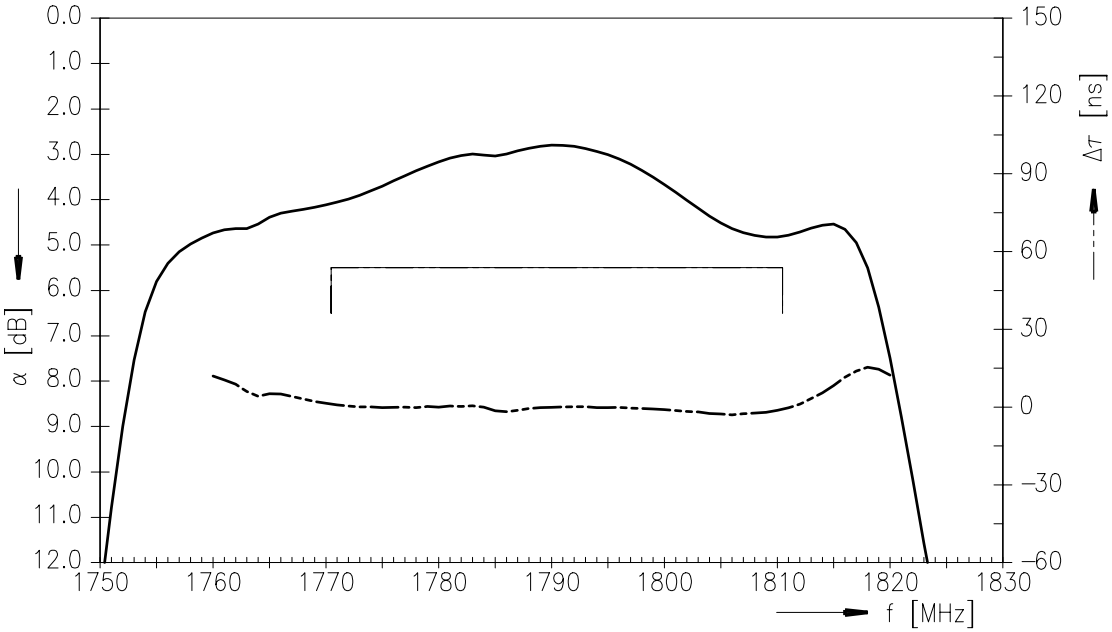
Maximum ratings

Operable temperature range	T	–40/+85	˚C	
Storage temperature range	Tstg	–40/+85	˚C	
DC voltage	V_{DC}	0	V	
Source power	P_S	0	dBm	source impedance 150 Ω

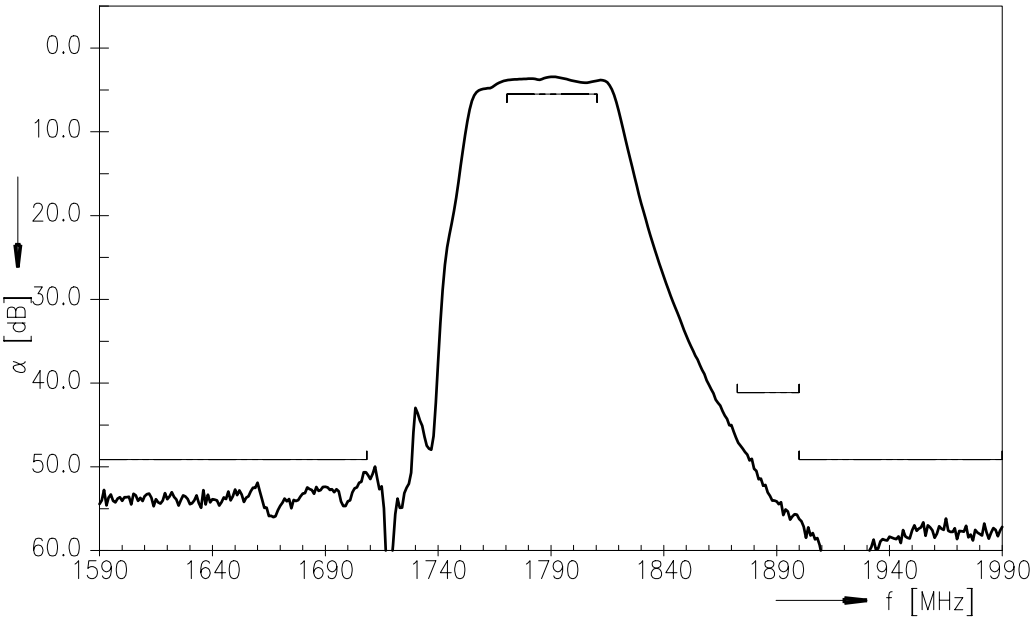
Transfer function S_{21} without matching network



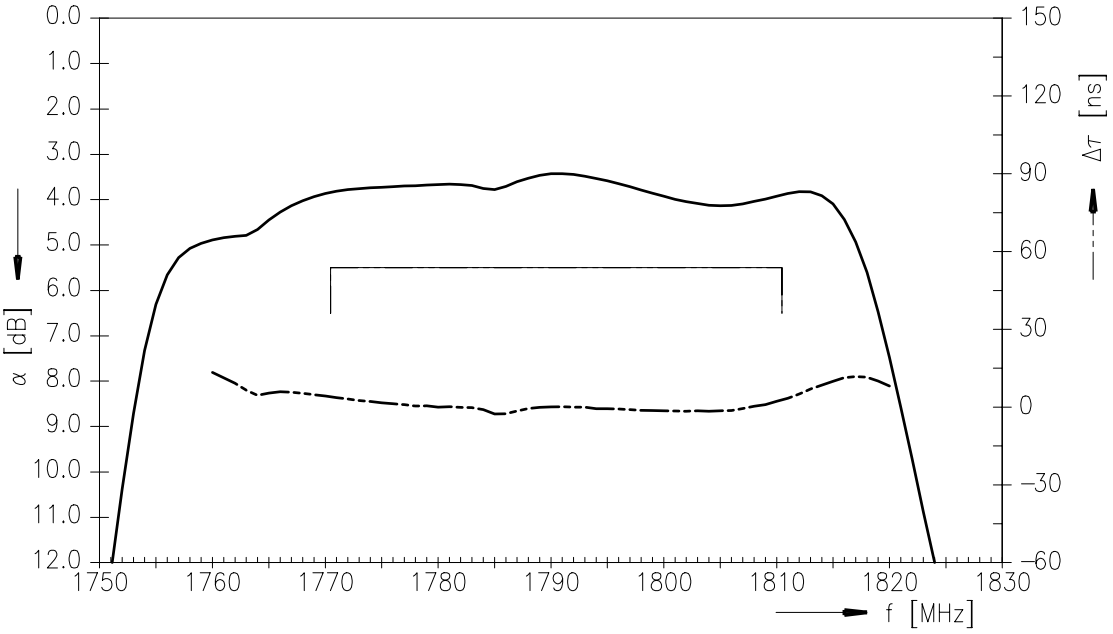
Transfer function S_{21} (passband) without matching network



Transfer function S_{21} (passband) **with matching network**



Transfer function S_{21} (passband) **with matching network**



References

Type	B1626
Ordering code	B39182B1626U810
Marking and package	C61157-A7-A72
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B1626_NB.s4p
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."

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