SAW Components

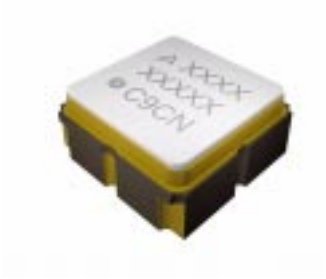
SAW RF filter for base stations

Band 25 uplink

Series/type:	**B5177**
Ordering code:	**B39192B5177U410**
Date:	Sep 23, 2015
Version:	2.4

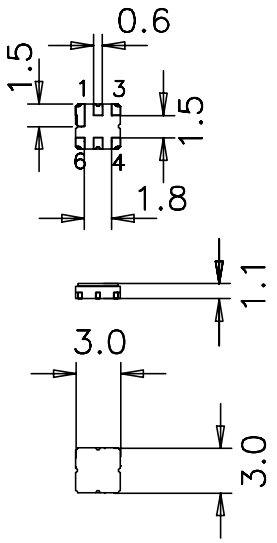
Application

- RF filter for LTE base stations
- Unbalanced to unbalanced operation
- High rejection in upper stopband
- Usable passband 65 MHz
- No matching required for operation at 50 Ω



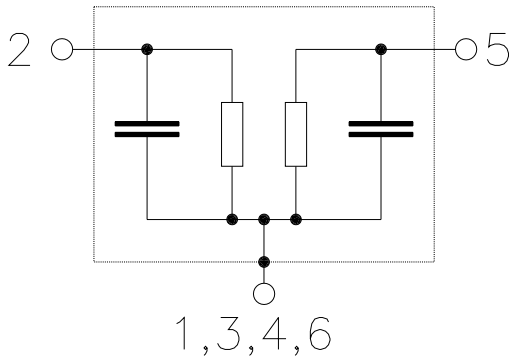
Features

- Package size 3.0 x 3.0 x 1.1 mm³
- Package code DCC6C
- 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**)
- **M**oisture **S**ensitivity **L**evel 1
- Filter surface passivated



Pin configuration

2	Input
5	Output
1, 3, 4, 6	To be grounded



Characteristics

Temperature range for specification: T = –33 ˚C to +105 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		min.	typ. @ 25 ˚C	max.	
Center frequency	f_C	—	1882.5	—	MHz
Maximum insertion attenuation	α_{max}				
1850.0 ... 1915.0 MHz		—	2.0	3.2	dB
Minimum insertion attenuation	α_{min}	—	1.0	1.5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1850.0 ... 1915.0 MHz		—	0.9	1.7	dB
Input VSWR					
1850.0 ... 1915.0 MHz		—	1.9:1	2.5:1	
Output VSWR					
1850.0 ... 1915.0 MHz		—	1.9:1	2.5:1	
Relative attenuation (relative to α_{min})	α_{rel}				
450.0 ... 1815.0 MHz		15	20	—	dB
1815.0 ... 1830.0 MHz		6	15	—	dB
1930.0 ... 1970.0 MHz		10[1)]	15	—	dB
1970.0 ... 2300.0 MHz		20	25	—	dB

1) min. 9.0 dB for temperature of -40 ˚C to 85 ˚C .

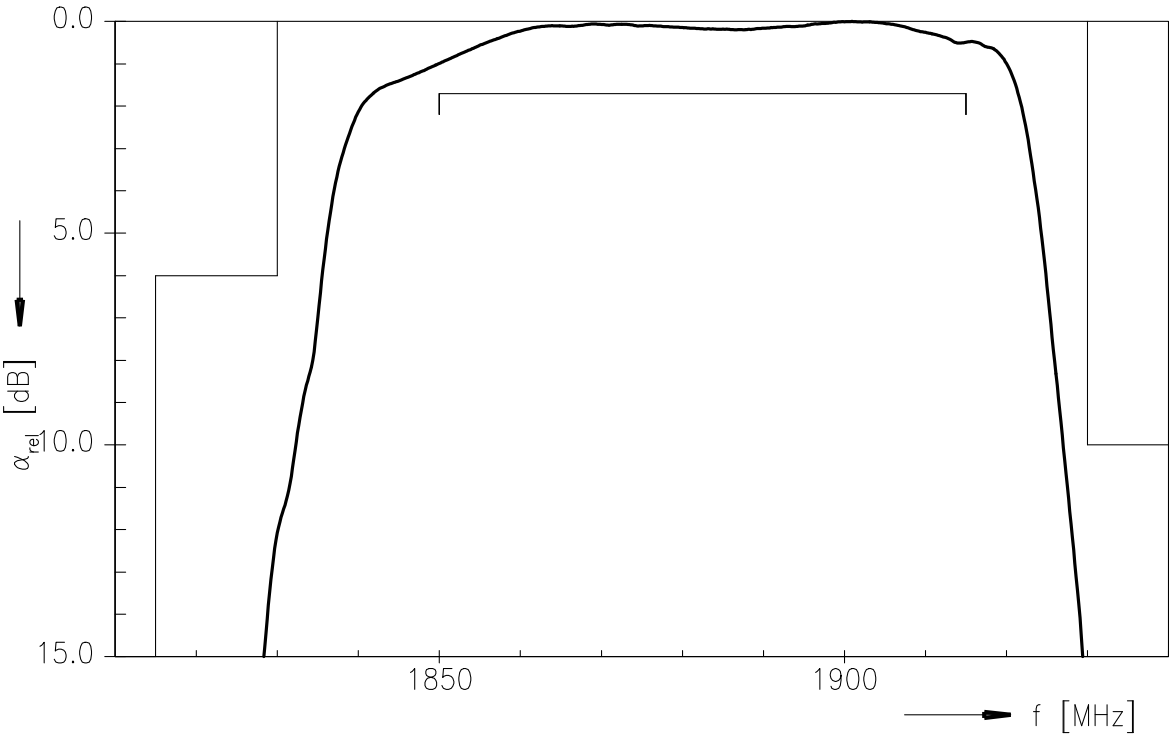
Maximum ratings

Operable temperature range	T	–40/+105	˚C	
Storage temperature range	T_{stg}	–40/+105	˚C	
DC voltage	V_{DC}	0	V	
ESD voltage	V_{ESD}	50[1)]	V	Machine Model
		250[2)]	V	Human Body Model
Input power	P_{IN}			
1850.0 ... 1915.0 MHz		22	dBm	cw, 24 h, 55 ˚C

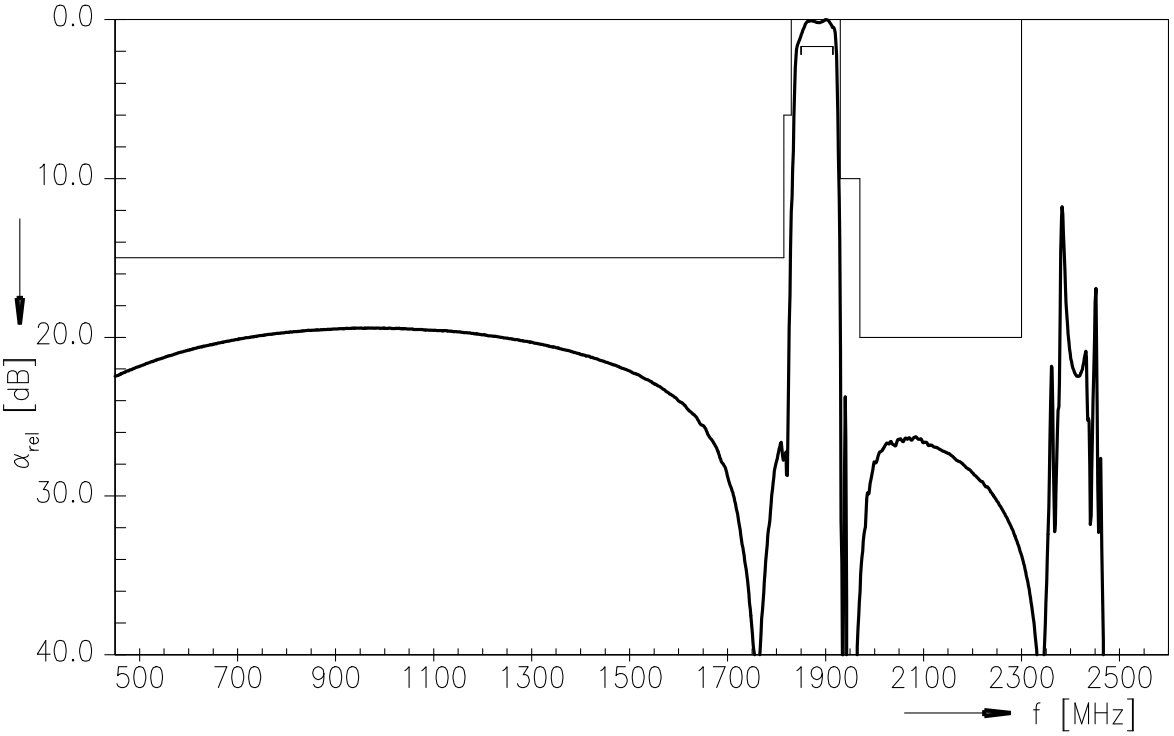
1) acc. to JESD22-A115B (MM - Machine Model), 10 negative & 10 positive pulses

2) acc. to JESD22-A114F (HBM - Human Body Model), 1 negative & 1 positive pulse

Transfer function (S21, narrowband, normalized)



Transfer function (S21, wideband, normalized)



References

Type	B5177
Ordering code	B39192B5177U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8228-Z000
Date codes	L_1126
S-parameters	B5177_NB.s2p B5177_WB.s2p 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 8th, 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.
Matching coils	See Inductor pdf-catalog http://www.tdk.co.jp/tefe02/coil.htm#aname1 and Data Library for circuit simulation http://www.tdk.co.jp/etvcl/index.htm for a large variety of matching coils.

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