SAW Components

SAW RF filter for base station

TD-LTE

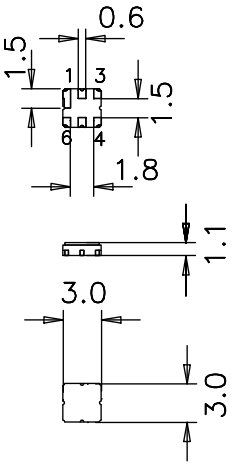
Series/type:	**B5193**
Ordering code:	**B39262B5193U410**
Date:	June 18, 2013
Version:	2.0

Application

- Low-loss RF filter for TD-LTE
- Usable passband 100 MHz
- Unbalanced to Unbalanced operation

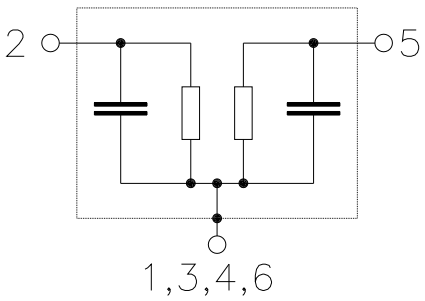
Features

- Package size 3.0 x 3.0 x 1.1 mm^3
- Package code DCC6C
- RoHS compatible
- Approximate weight 0.037 g
- Ceranic Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)
- **M**oisture **S**ensitive **L**evel 1
- Filter surface passivated



Pin configuration

- 2 Input
- 5 Output
- 1,3,4,6 Case grounded



Data sheet SMD

Characteristics

Temperature range for specification: T = –40 ˚C to +85 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

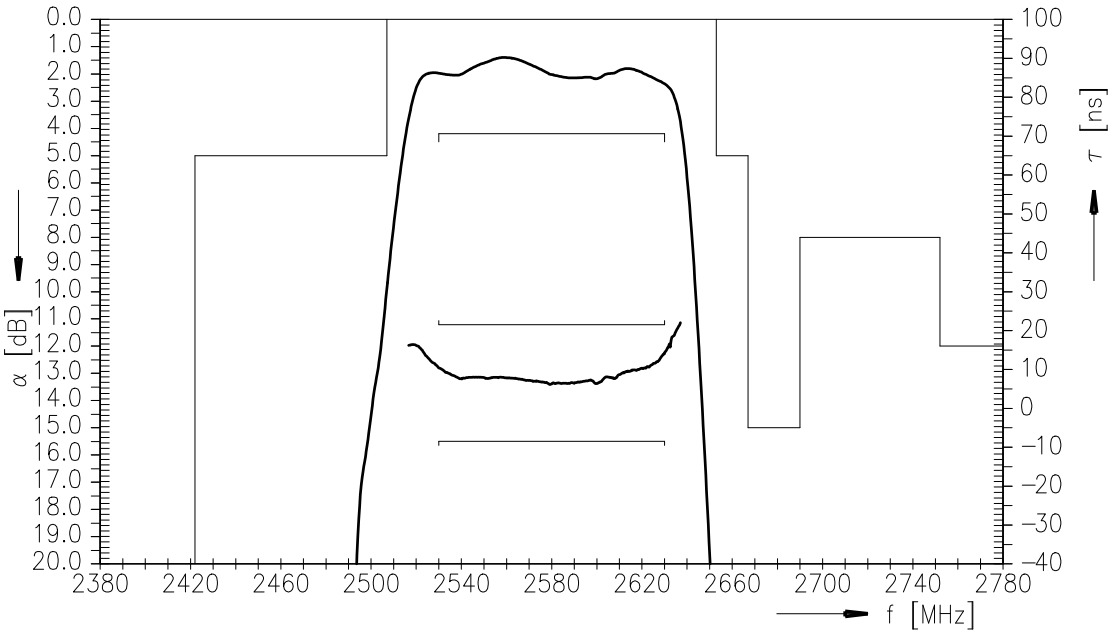
		min.	typ. @ 25 ˚C	max.	
Center frequency	f_C	—	2580.00	—	MHz
Maximum insertion attenuation	α_{max}				
2530.0 ... 2630.0 MHz		—	2.5	4.2	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
2530.0 ... 2630.0 MHz		—	1.1	2.8	dB
Group Delay ripple (p-p)	$\Delta\tau$				
2530.0 ... 2630.0 MHz		—	10	30	ns
Input VSWR					
2530.0 ... 2630.0 MHz		—	2.1	2.5	
Output VSWR					
2530.0 ... 2630.0 MHz		—	2.1	2.7	
Absolute Attenuation	α_{abs}				
50.00 ... 2025.00 MHz		25	40	—	dB
2110.00 ... 2170.00 MHz		30	38	—	dB
2170.00 ... 2422.00 MHz		24	32	—	dB
2422.00 ... 2507.00 MHz		5	9	—	dB
2652.88 ... 2667.00 MHz		5	20	—	dB
2667.00 ... 2690.00 MHz		15	23	—	dB
2690.00 ... 2752.00 MHz		8	22	—	dB
2800.00 ... 3400.00 MHz		12	25	—	dB
3400.00 ... 3800.00 MHz		20	25	—	dB
3800.00 ... 5000.00 MHz		13	24	—	dB
5000.00 ... 6000.00 MHz		8	15	—	dB

Maximum ratings

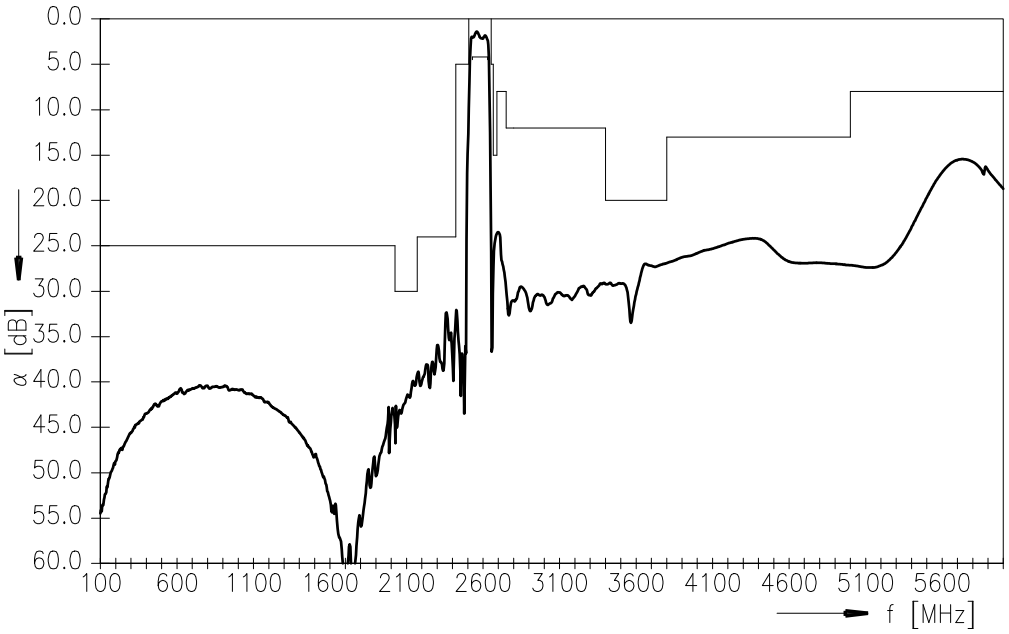
Operable temperature range	T	–45/+125	°C	
Storage temperature range	T_{stg}	–45/+125	°C	
DC voltage	V_{DC}	6	V	
ESD voltage	V_{ESD}	50[1)]	V	machine model, 10 pulses
Input power at 2530.0 ... 2630.0MHz	P_{IN}	15	dBm	1000hrs@85°C , CW

1) acc. to JESD22-A115B (machine model), +/- 10 pulse.

Transfer function (narrowband)

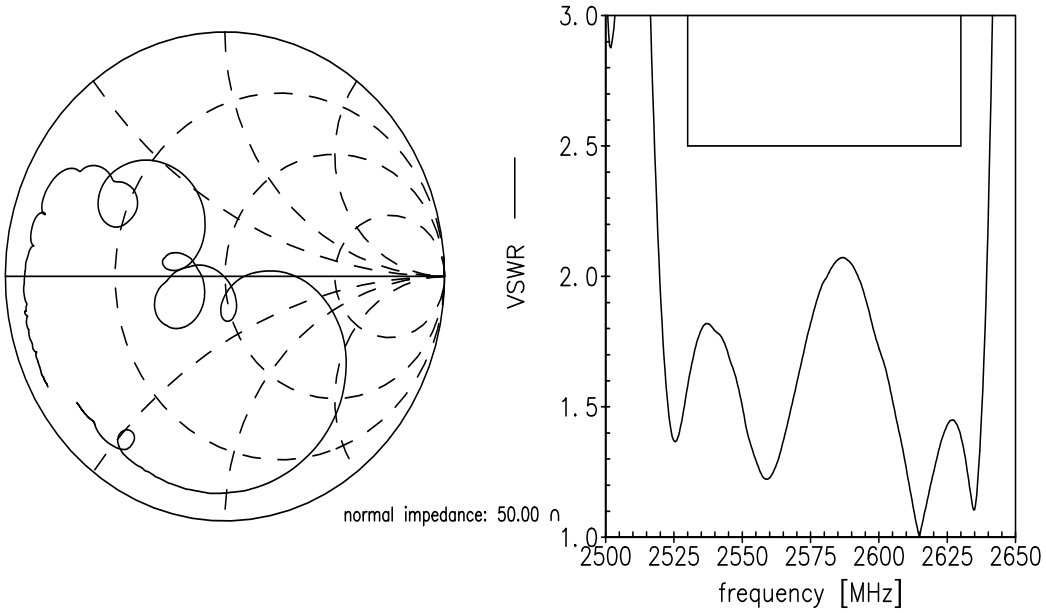


Transfer function (wideband)

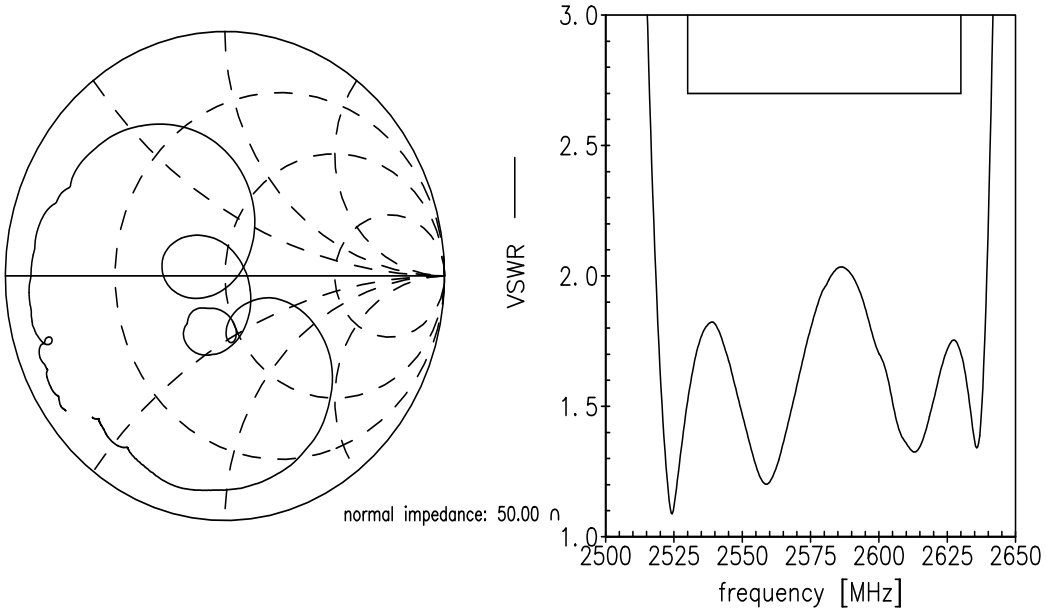


Smith charts

S_{11} function



S_{22} function



References

Type	B5193
Ordering code	B39262B5193U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8228-Z000
Date codes	L_1126
S-parameters	B5193_NB.s2p, B5193_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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