SAW Components

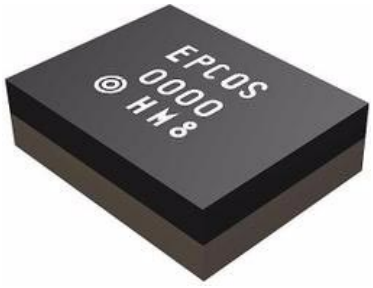
Rx SAW Filter

LTE Band 13

Series/type:	**B9476** **B39751B9476M410**
Date:	March 23, 2011
Version:	2.1

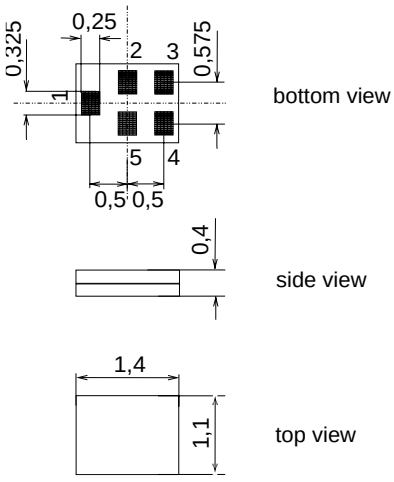
Application

- Rx SAW filter for mobile telephone LTE Band 13 systems
- Rx Path
- Unbalanced / balanced operation
- Low insertion attenuation
- High Tx frequencies attenuation
- Usable passband 10 MHz



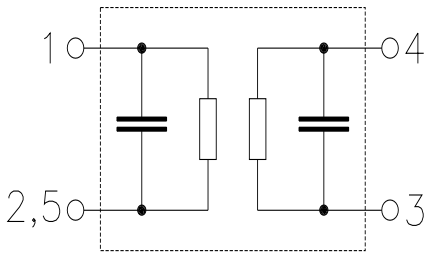
Features

- Package size 1.4 x 1.1 mm², package height 0.4 mm
- RoHS compatible
- Approx. weight 0.003 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 **3**



Pin configuration

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



DataSheet SMD

Characteristics

Temperature range for specification: T = –20 ˚C to +85 ˚C

Terminating source impedance: Z_S = 50 Ω (unbalanced)

Terminating load impedance: Z_L = 100 Ω (balanced)

		min.	typ. @ 25 ˚C	max.		
Center frequency	f_C	—	751.0	—	MHz	
Maximum insertion attenuation						
746.0 ... 756.0 MHz	α_{max}	—	2.0	3.0	dB	CTQ
Amplitude ripple (p-p)						
746.0 ... 756.0 MHz	$\Delta\alpha$	—	0.7	1.8	dB	
Input VSWR						
746.0 ... 756.0 MHz		—	1.5	2.0		
Output VSWR						
746.0 ... 756.0 MHz		—	1.6	2.0		
Common mode rejection ratio						
746.0 ... 756.0 MHz		25	35	—		
Attenuation	α					
10.0 ... 722.0 MHz		50	55	—	dB	
777.0 ... 780.0 MHz		44	48	—	dB	
780.0 ... 787.0 MHz		46	50	—	dB	
787.0 ... 3000.0 MHz		50	55	—	dB	
3001.0 ... 6000.0 MHz		40	48	—	dB	

DataSheet SMD

Characteristics

Temperature range for specification: T = –30 ˚C to +85 ˚C

Terminating source impedance: Z_S = 50 Ω (unbalanced)

Terminating load impedance: Z_L = 100 Ω (balanced)

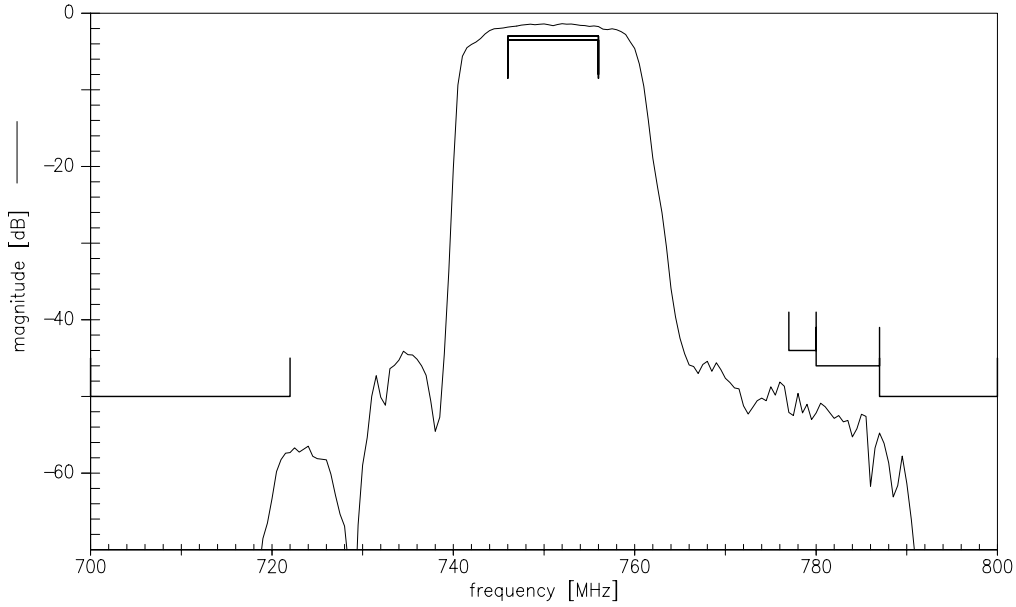
		min.	typ. @ 25 ˚C	max.		
Center frequency	f_C	—	751.0	—	MHz	
Maximum insertion attenuation						
746.0 ... 756.0 MHz	α_{max}	—	2.0	3.5	dB	CTQ
Amplitude ripple (p-p)						
746.0 ... 756.0 MHz	$\Delta\alpha$	—	0.7	2.0	dB	
Input VSWR						
746.0 ... 756.0 MHz		—	1.5	2.0		
Output VSWR						
746.0 ... 756.0 MHz		—	1.6	2.0		
Common mode rejection ratio						
746.0 ... 756.0 MHz		25	35	—		
Attenuation	α					
10.0 ... 722.0 MHz		50	55	—	dB	
777.0 ... 780.0 MHz		44	48	—	dB	
780.0 ... 787.0 MHz		46	50	—	dB	
787.0 ... 3000.0 MHz		50	55	—	dB	
3001.0 ... 6000.0 MHz		40	48	—	dB	

Maximum ratings

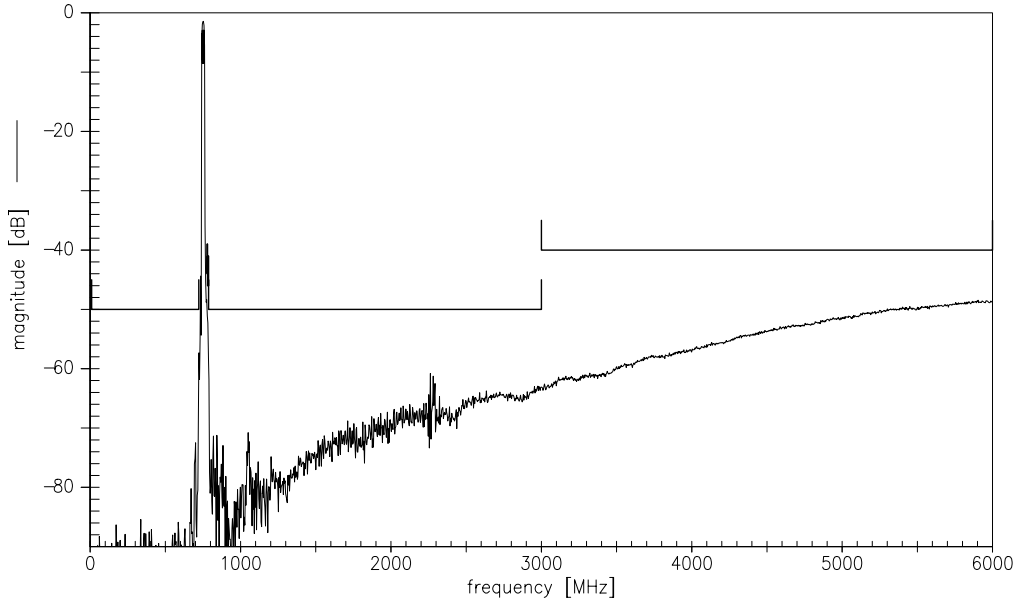
Operable temperature range	T	–30/+85	˚C	
Storage temperature range	T_{stg}	–40/+85	˚C	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	100[1)]	V	machine model, 1 pulse
Input power	P_{IN}	10	dBm	

1) acc. to JESD22-A115A (machine model), 1 negative & 1 positive pulse.

Transfer function (narrow band)

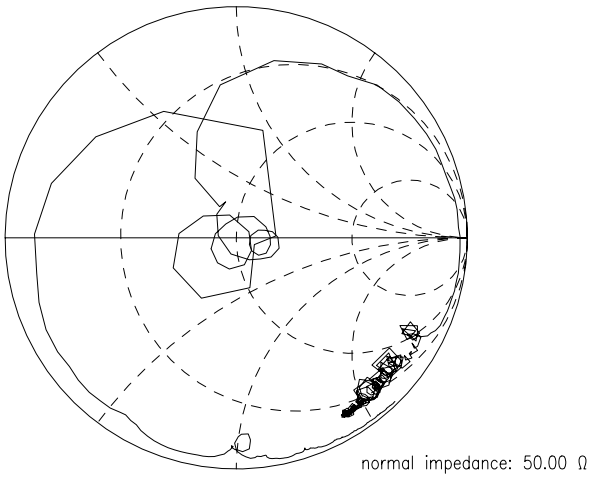


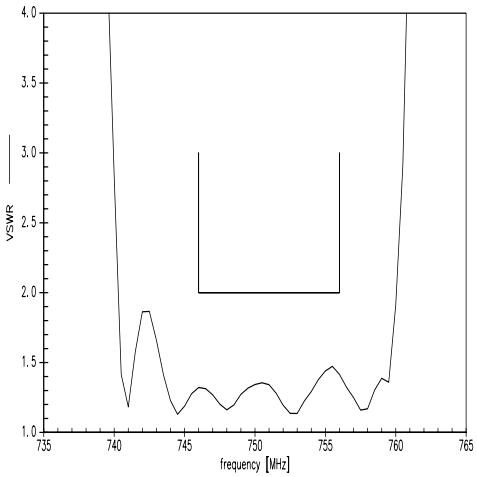
Transfer function (wide band)



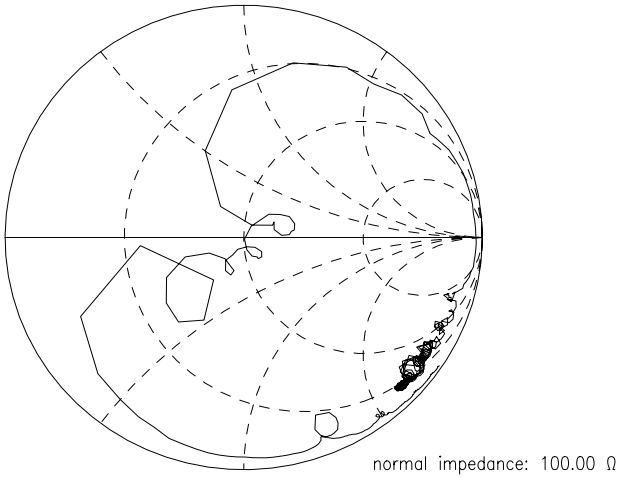
Smith Chart

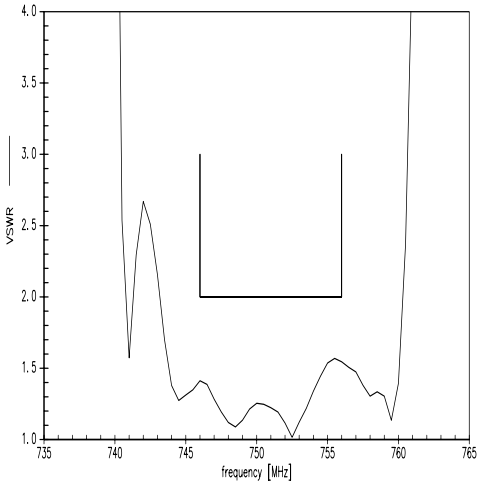
S11 VSWR





S22 VSWR





References

Type	B9476
Ordering code	B39751B9476M410
Marking and package	C61157-A8-A3
Packaging	F61074-V8237-Z000
Date codes	I_1126
S-parameters	B9476_NB.s3p B9476_WB.s3p See file header for port/pin assignment table
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."
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

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