SAW Components

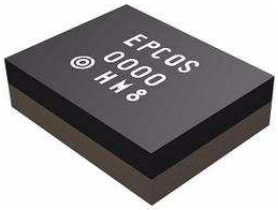
SAW Diversity Filter

LTE Band 13

Series/type:	**B9899**
Ordering code:	**B39751B9899P810**
Date:	November 18, 2013
Version:	2.0

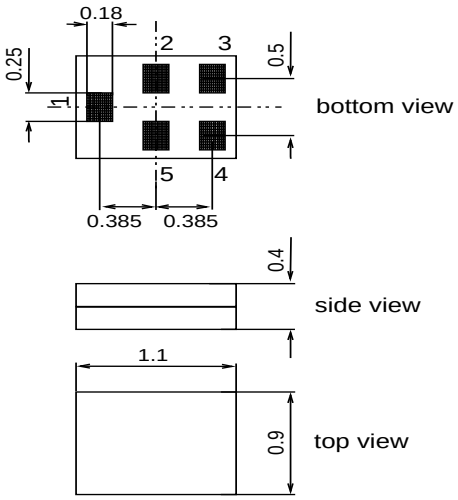
Application

- Low-loss RF filter for LTE systems (Rx diversity)
- Impedance 50Ω input and output
- Unbalanced / unbalanced operation
- Usable passband 10MHz



Features

- Package size 1.1 x0.9 x 0.4 mm³
- RoHS compatible
- Approximate 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
4	Output
2,3,5	To be grounded

Characteristics

Temperature range for specification: T = –20 ˚C to +90 ˚C
Terminating source impedance: Z_S = 50 Ω (unbalanced)
Terminating load impedance: Z_L = 50 Ω (unbalanced)

		min.	typ. @ 25 ˚C	max.	
Center frequency	f_C	—	751	—	MHz
Average insertion attenuation	α				
746.0 ... 756.0MHz		—	1.7[1)]	—	dB
Maximum insertion attenuation	α_{max}				
746.0 ... 756.0MHz		—	2.0	2.5	dB
Amplitude ripple (p-p)					
746.0 ... 756.0MHz		—	0.5	1.0	dB
Input VSWR					
746.0 ... 756.0MHz		—	1.5	2.0	
Output VSWR					
746.0 ... 756.0MHz		—	1.5	2.0	
Absolute attenuation	α				
10 ... 686.0MHz		40	56	—	dB
686.0 ... 728.0MHz		40	45	—	dB
771.0 ... 772.0MHz		15	30	—	dB
777.0 ... 787.0MHz		43	50	—	dB
777.0 ... 787.0MHz[2)]		45	50	—	dB
1710.0 ... 1755.0MHz		40	55	—	dB
1850.0 ... 1910.0MHz		40	52	—	dB
2400.0 ... 2500.0MHz		40	50	—	dB
4900.0 ... 5950.0MHz		30	37	—	dB

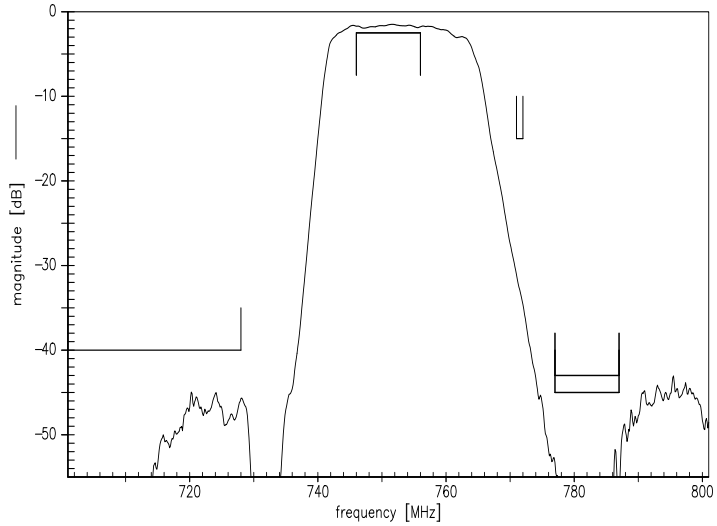
1) Average value of parameter over the indicated band. The average value may vary over the time.
2) At 25˚C

Maximum ratings

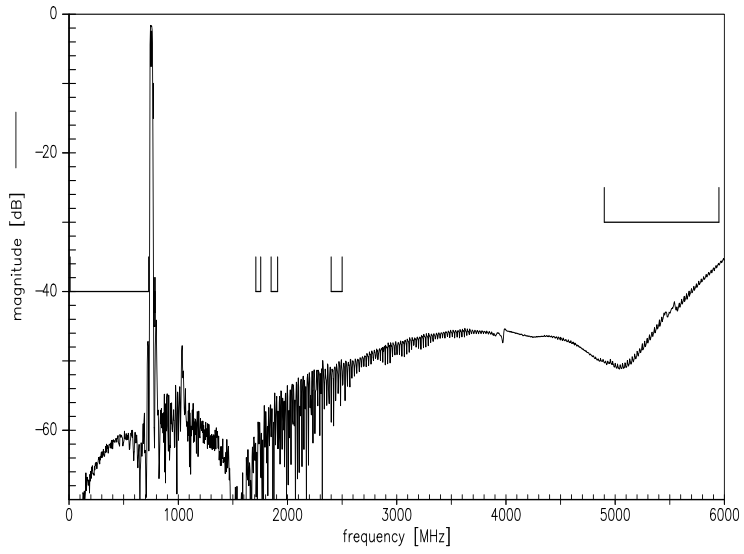
Operable temperature range	T	–40/+85	˚C	
Storage temperature range	T_{stg}	–40/+85	˚C	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	100[1)]	V	machine model, 1 pulse
Input power	P_{IN}	15	dBm	2000h at 50˚C in 777.0...787.0MHz

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

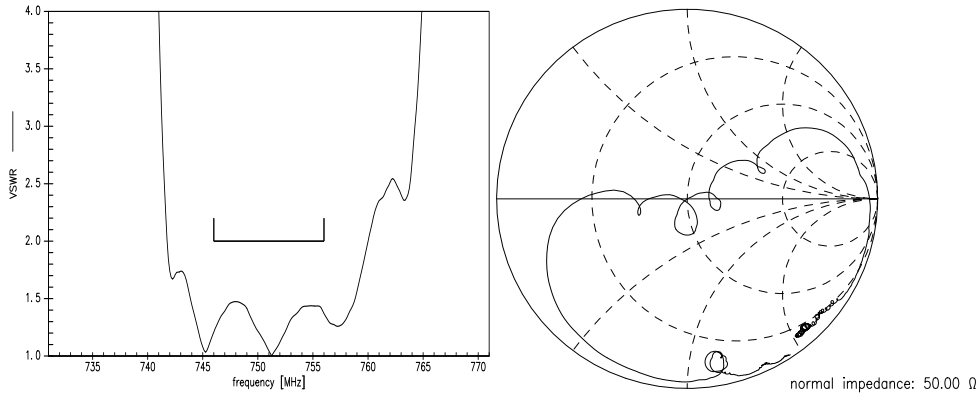
Transfer function (Narrow band)



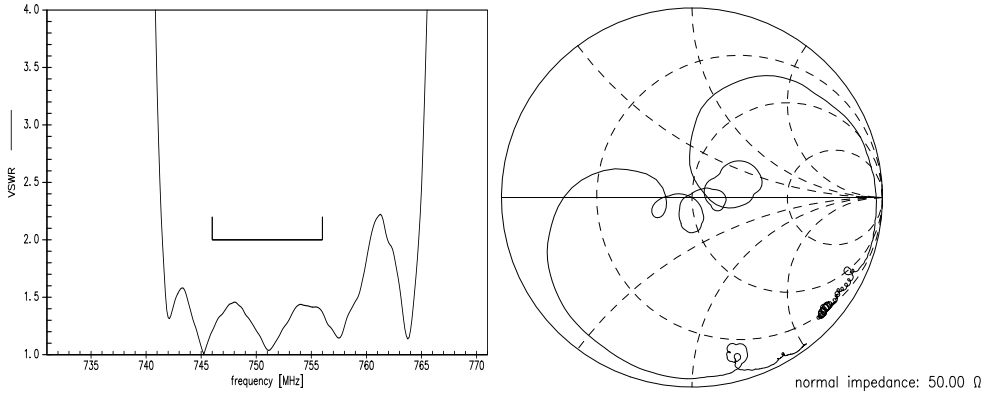
Transfer function (Wide band)



VSWR11



VSWR22



References

Type	B9899
Ordering code	B39751B9899P810
Marking and package	C61157-A8-A56
Packaging	F61074-V8255-Z000
Date codes	L_1126
S-parameters	B9899_NB.s2p, B9899_WB.s2p see file header for port/in 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.
Moldability	Before using in overmolding environment, please contact your EPCOS sales office.
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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