SAW Components

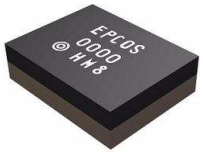
SAW Tx filter

TD-SCDMA 1900

Series/type:	**B9458**
Ordering code:	**B39192B9458P810**
Date:	January 20, 2011
Version:	2.1

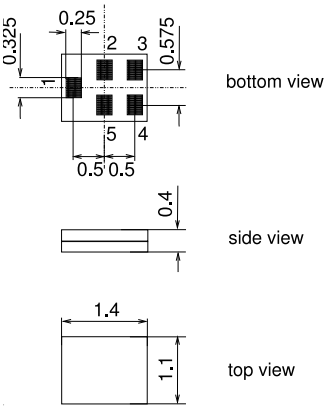
Application

- Low-loss RF filter for mobile telephone TD-SCDMA systems
- Unbalanced to unbalanced operation
- Low amplitude ripple
- Usable passband 40 MHz
- No matching network requied for operation at 50 Ω



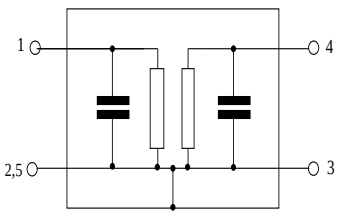
Features

- Package size 1.4 x 1.1 x 0.4 mm^3
- RoHS compatible
- Approx. weight 0.003g
- 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 3



Pin configuration

- 1 Input, unbalanced
- 4 Output, unbalanced
- 2,3,5 Case-ground



Data sheet SMD

Characteristics

Temperature range for specification: T = -30 ˚C to +85 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

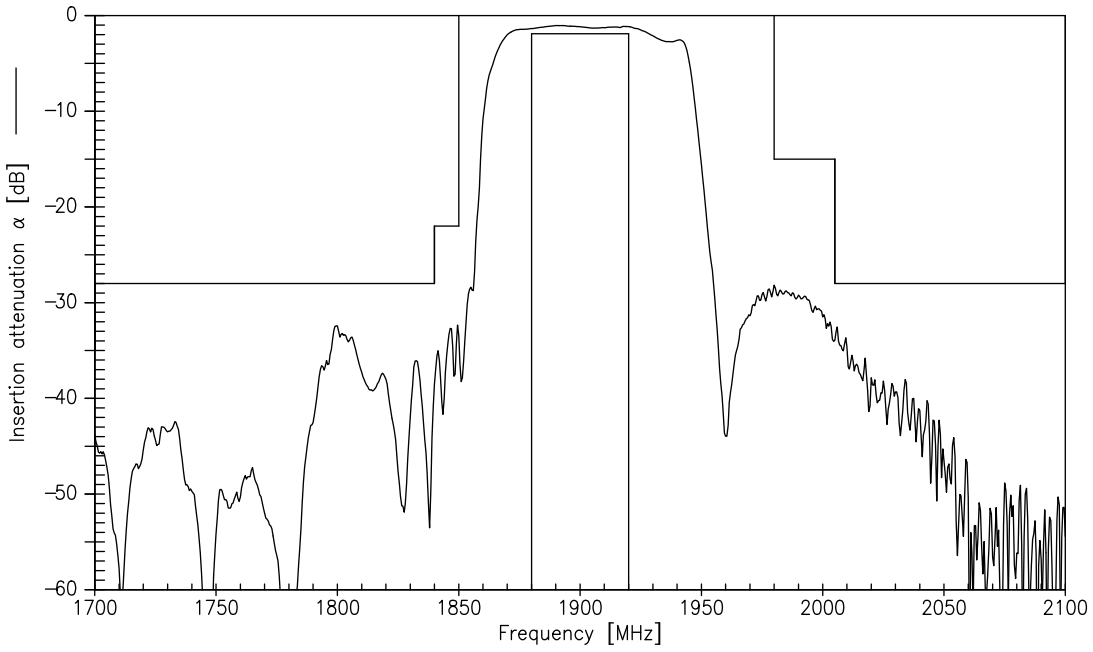
		min.	typ. @25˚C	max.	
Center frequency	f_C	—	1900.0	—	MHz
Maximum insertion attenuation	α_{max}				
1880.0 ... 1920.0 MHz		—	1.4	1.9	dB CTQ
Amplitude ripple (p-p)	$\Delta\alpha$				
1880.0 ... 1920.0 MHz		—	0.4	0.8	dB
Input VSWR					
1880.0 ... 1920.0 MHz		—	1.7	2.0	
Output VSWR					
1880.0 ... 1920.0 MHz		—	1.7	2.0	
Group delay ripple (p-p)					
1880.0 ... 1920.0 MHz		—	5	14	ns
Attenuation	α				
0.0 ... 925.0 MHz		28	43	—	dB
925.0 ... 960.0 MHz		35	43	—	dB
960.0 ... 1805.0 MHz		28	32	—	dB
1805.0 ... 1840.0 MHz		28	34	—	dB
1840.0 ... 1850.0 MHz		22	31	—	dB
1980.0 ... 2005.0 MHz		15	28	—	dB
2005.0 ... 6000.0 MHz		28	33	—	dB

Maximum ratings

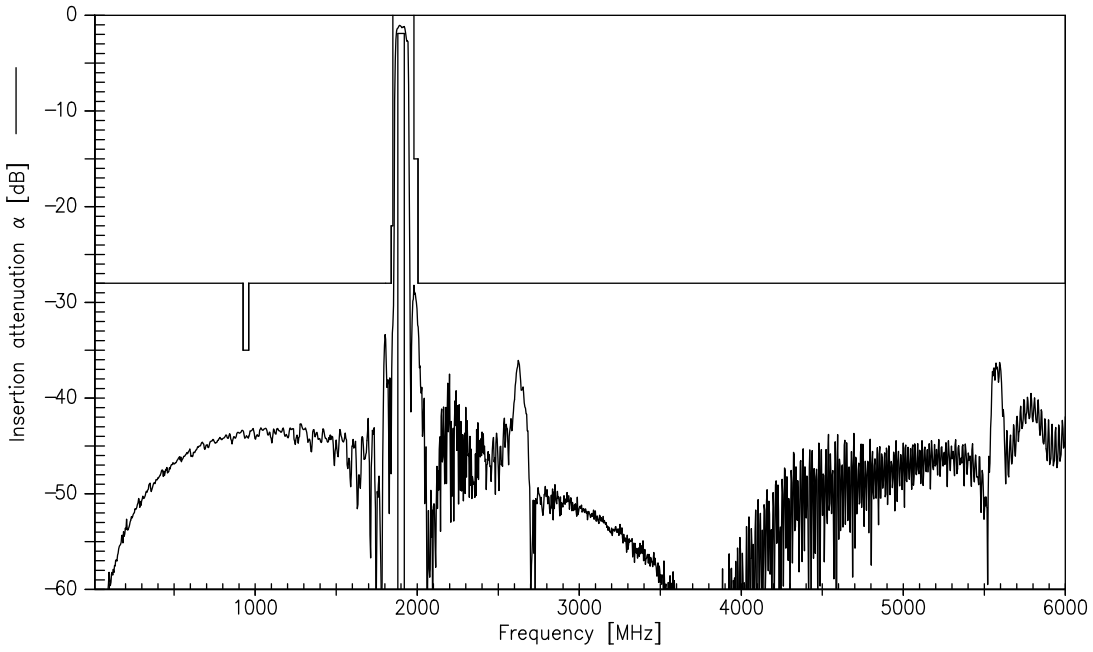
Operable temperature range	T	–40/+85	˚C	
Storage temperature range	T_{stg}	–40/+85	˚C	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	50[1)]	V	machine model, 1 pulses
Input Power at 1880.0 ... 1920.0 MHz	P_{IN}	6	dBm	continuous wave

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

Transfer function - narrowband

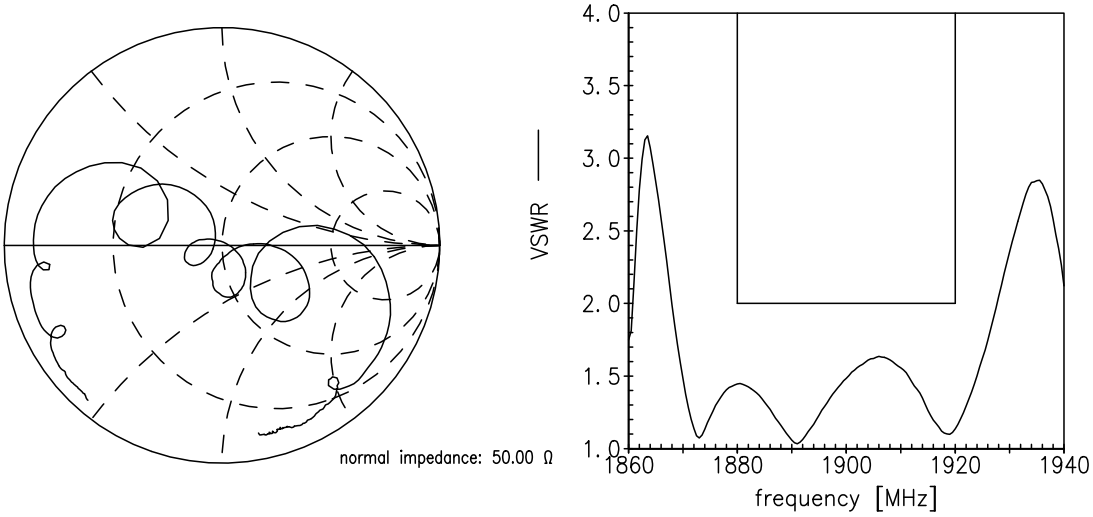


Transfer function - wideband

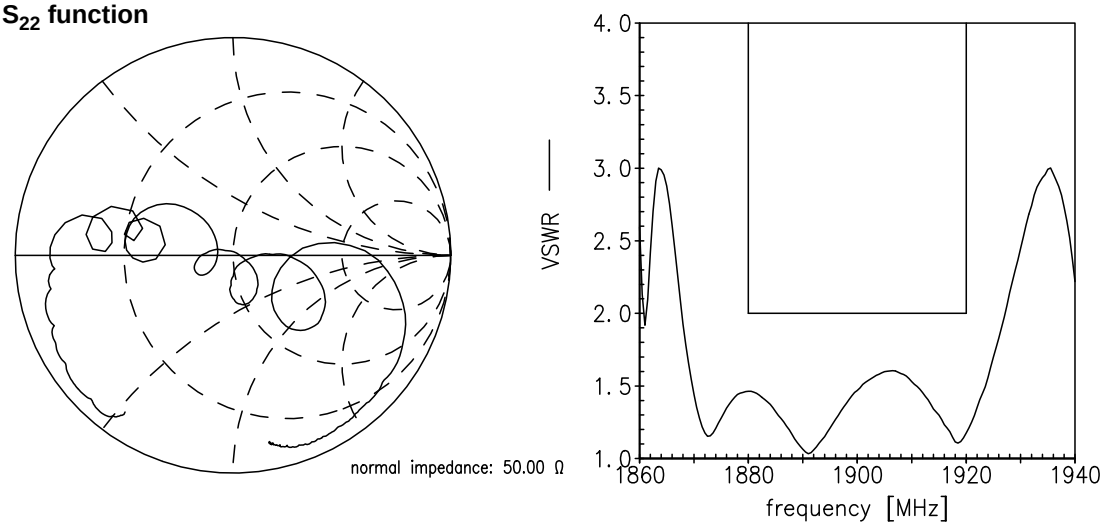


Smith Charts

S_{11} function



S_{22} function



References

Type	B9458
Ordering code	B39192B9458P810
Marking and package	C61157-A8-A14
Packaging	F61074-V8237-Z000
Date codes	L_1126
S-parameters	B9458_NB.s2p B9458_WB.s2p 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."
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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