SAW Components

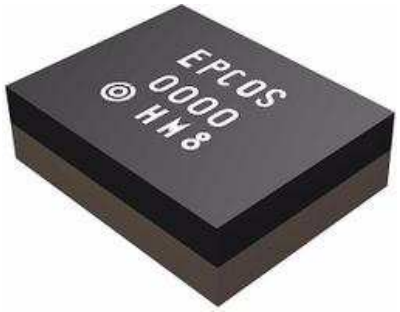
SAW duplexer

LTE band XXVIII Block A

Series/type:	**B8528**
Ordering code:	**B39771B8528P810**
Date:	February 07, 2014
Version:	2.0

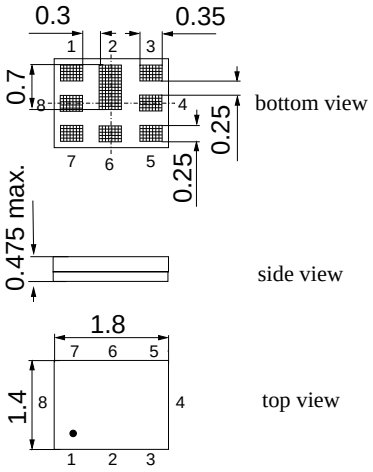
Application

- Low-loss SAW duplexer for mobile telephone LTE Band XXVIII systems
- Low insertion attenuation
- Usable passband 30 MHz
- Duplexer for lower part of Band XXVIII (Block A)
- Companion type is B8530 for upper Band XXVIII (Block B)



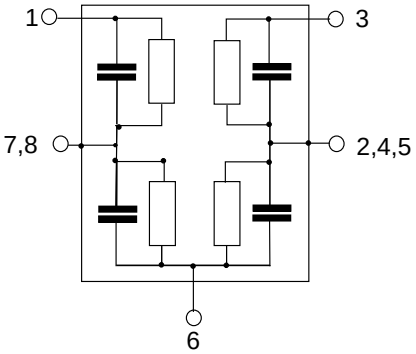
Features

- Package size 1.8 x 1.4mm^2, package height 0.475mm max.
- RoHS compatible
- Approximate weight 0.0042 g
- 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	RX output
3	TX input
6	Antenna
2,4,5,7,8	Ground



Characteristics

Temperature range for specification: T = -30 ˚C to +85 ˚C
ANT terminating impedance: Z_{ANT}= 50 Ω || 7.5 nH
TX terminating impedance: Z_{TX} = 50 Ω + 4.0 nH (series)
RX terminating impedance: Z_{RX} = 50 Ω

Characteristics Tx - Ant		min.	typ. @ 25 ˚C	max.	
Center frequency	f_C	—	718.0	—	MHz
Maximum insertion attenuation	α				
703.240... 732.760MHz			1.8	3.1	dB
Amplitude ripple	α				
703.240... 732.760MHz			1.0	2.3	dB
VSWR					
TX port 703.0 ... 733.0 MHz			1.7	2.1	
ANT port 703.0 ... 733.0 MHz			1.7	2.0	
Attenuation	α				
10.0 ... 670.0 MHz		30	36		dB
670.0 ... 694.0 MHz		30	36		dB
694.0 ... 695.0 MHz		20	38		dB
695.0 ... 698.0 MHz		3	26		dB
695.0 ... 698.0 MHz		5[1)]	26		dB
758.240... 787.760MHz		43	48		dB
788.0 ... 803.0 MHz		30	38		dB
859.0 ... 894.0 MHz		30	36		dB
1225.0 ... 1250.0 MHz		35	42		dB
1406.0 ... 1466.0 MHz		34	38		dB
1559.0 ... 1563.0 MHz		32	36		dB
1565.42 ... 1573.374MHz		31	36		dB
1573.374... 1577.466MHz		30	35		dB
1577.466... 1585.42 MHz		30	35		dB
1597.55 ... 1605.89 MHz		30	35		dB
1805.0 ... 1880.0 MHz		30	34		dB
1930.0 ... 1995.0 MHz		30	34		dB
2010.0 ... 2025.0 MHz		30	34		dB
2109.0 ... 2199.0 MHz		30	34		dB
2400.0 ... 2484.0 MHz		28	33		dB
2570.0 ... 2620.0 MHz		28	33		dB
2812.0 ... 2932.0 MHz		15	32		dB
4900.0 ... 5950.0 MHz		15	22		dB

1) T= +15˚C to +70˚C

Characteristics

Temperature range for specification: T = –30 ˚C to +85 ˚C
ANT terminating impedance: Z_{ANT} = 50 Ω || 7.5 nH
TX terminating impedance: Z_{TX} = 50 Ω + 4.0 nH (series)
RX terminating impedance: Z_{RX} = 50 Ω

Characteristics Rx - Ant		min.	typ. @ 25 ˚C	max.	
Center frequency	f_C	—	773.0	—	MHz
Maximum insertion attenuation	α				
758.240... 787.760MHz			1.8	3.0	dB
Amplitude ripple	α				
758.240... 787.760MHz			0.5	1.8	dB
VSWR					
RX port 758.0 ... 788.0 MHz			1.7	2.1	
ANT port 758.0 ... 788.0 MHz			1.6	2.0	
Attenuation	α				
1.0 ... 699.0 MHz		40	62		dB
45.0 ... 65.0 MHz		50	70		dB
703.0 ... 733.0 MHz		50	59		dB
733.0 ... 748.0 MHz		30	34		dB
814.0 ... 3000.0 MHz		40	44		dB
3000.0 ... 6000.0 MHz		26	32		dB

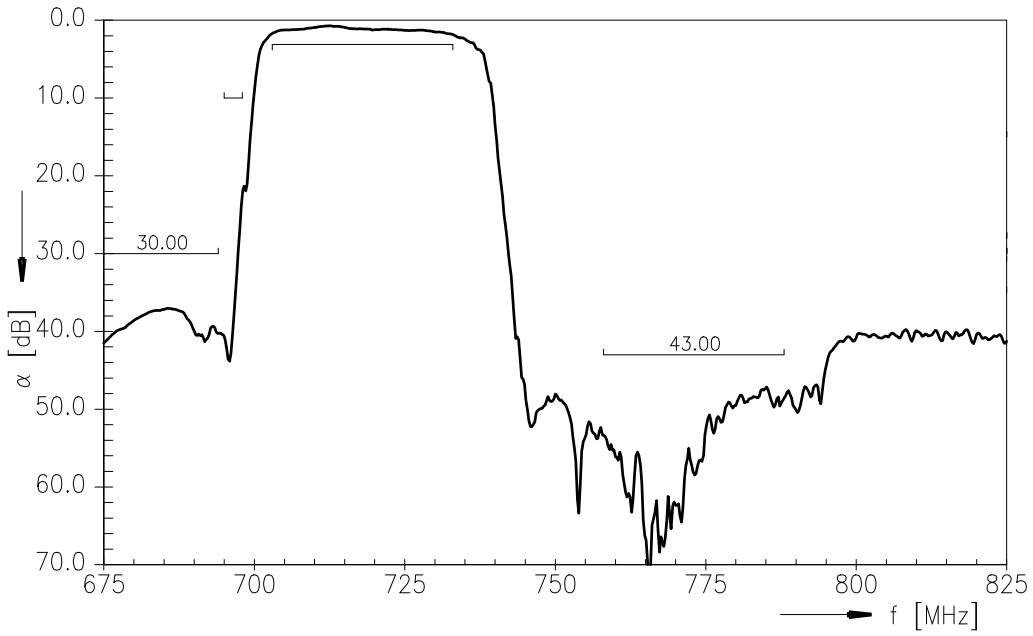
Characteristics TX - RX		min.	typ. @ 25 ˚C	max.	
Isolation	α				
703.240... 732.760MHz		55	59		dB
758.240... 787.760MHz		50	54		dB

Maximum ratings

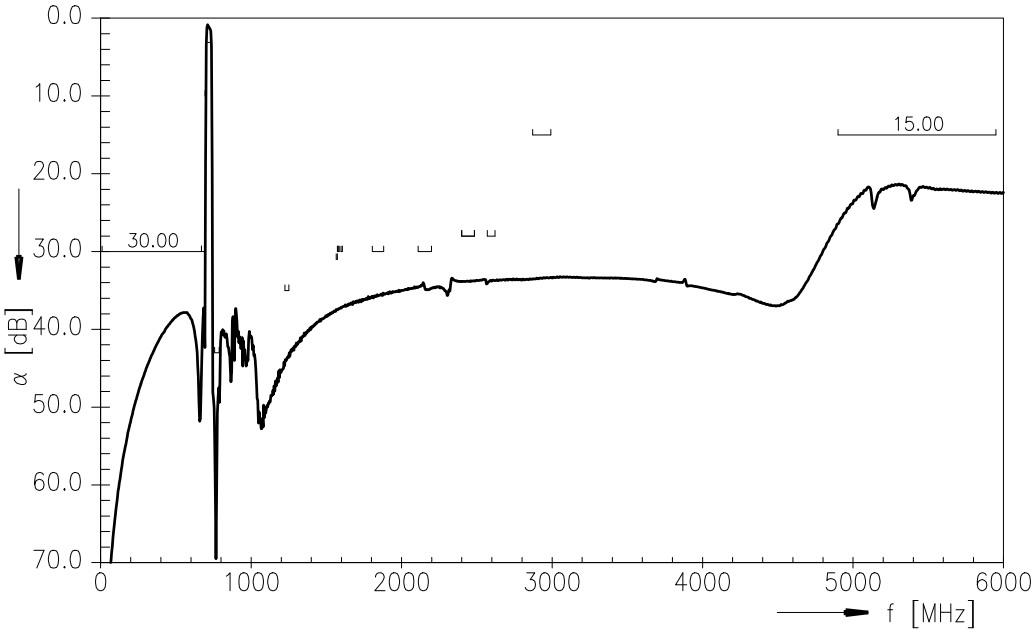
Storage temperature range	T_{stg}	–40/+85[1)]	°C	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	100[2)]	V	machine model, 10 pulses
ESD voltage	V_{ESD}	300[3)]	V	HBM,+/- 1 pulses
ESD voltage	V_{ESD}	600[4)]	V	CDM,+/- 3 pulses
Input power at	P_{IN}			
703.240 ... 732.760 MHz		27	dBm	} continuous wave 50 °C, 5000 h
elsewhere		10	dBm	

1) Extended upperlimit: 168@125°C acc. to IEC 60068-2-2 Bb.
2) acc. to JESD22-A115B (machine model), 10 negative & 10 positive pulses.
3) acc. to JESD22-A114F (human body model), 1 negative & 1 positive pulses.
4) acc. to JESD22-A101C (charge device model), 3 negative & 3 positive pulse

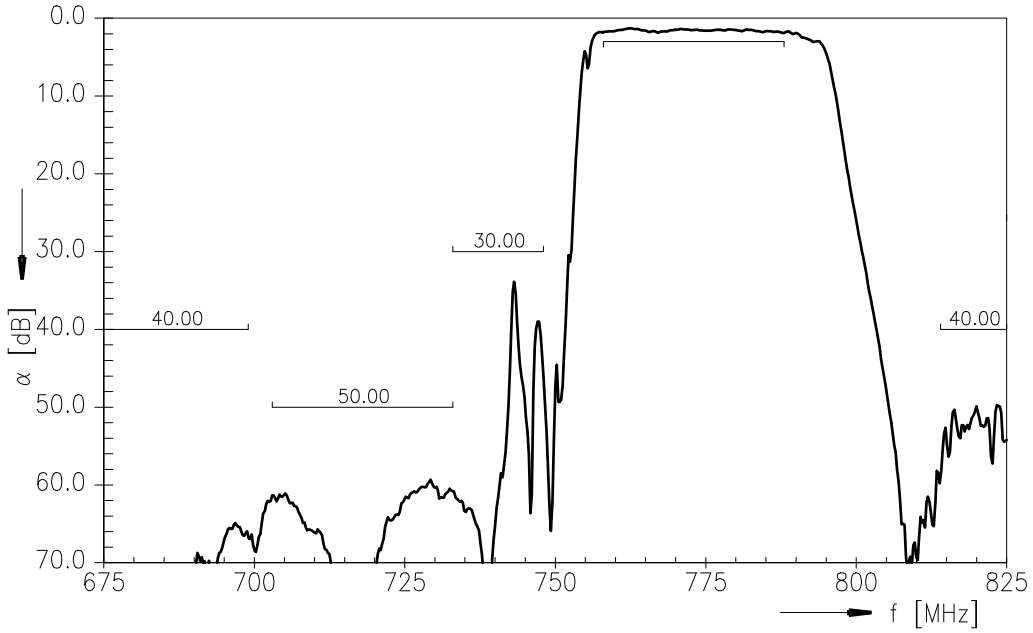
Frequency response Tx-Antenna



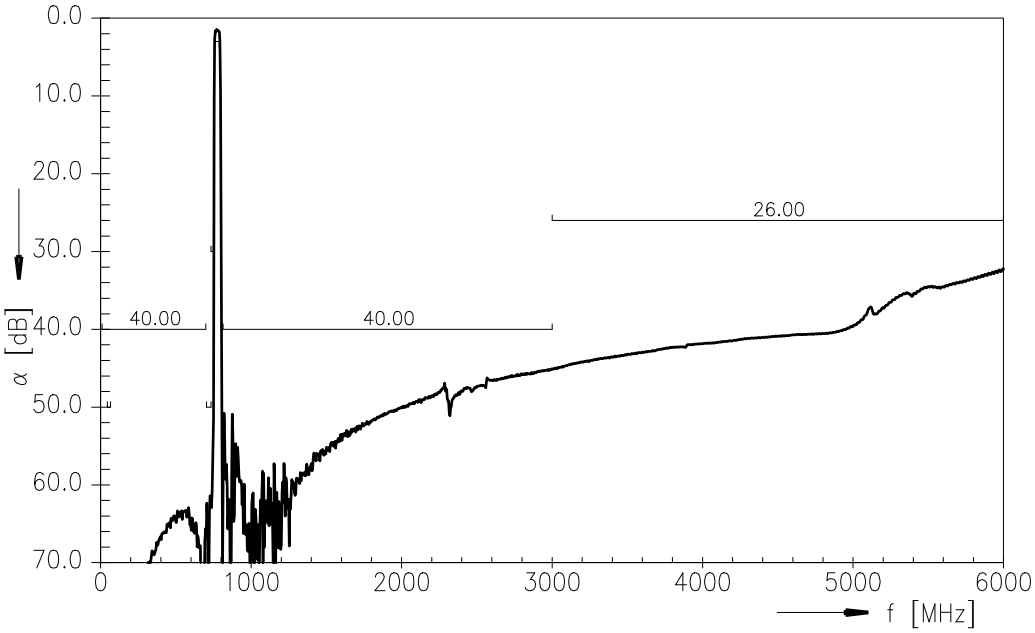
Frequency response Tx-Antenna (wideband)



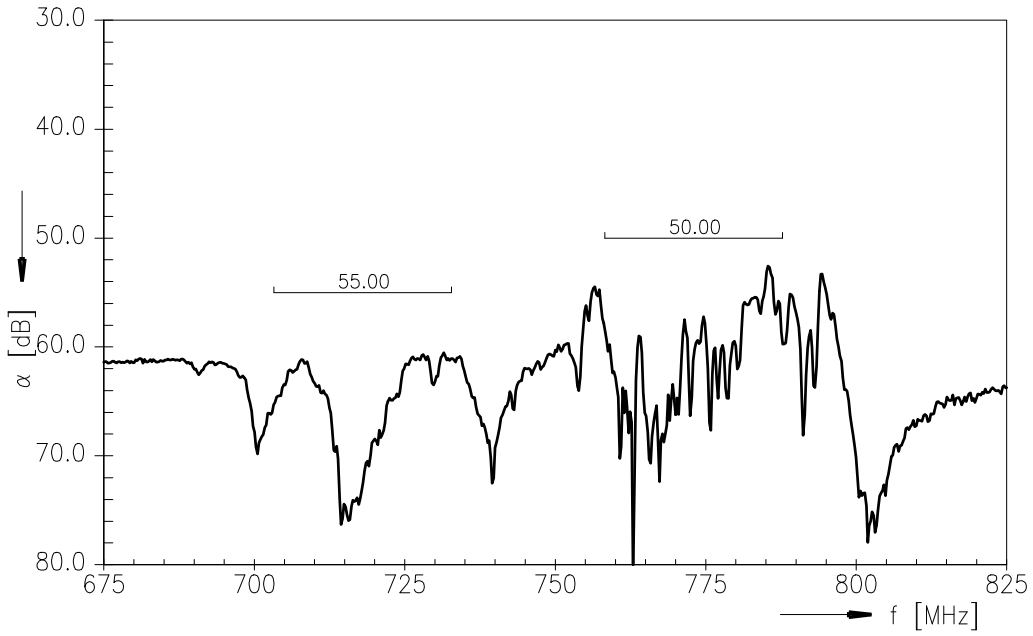
Frequency response Antenna-Rx



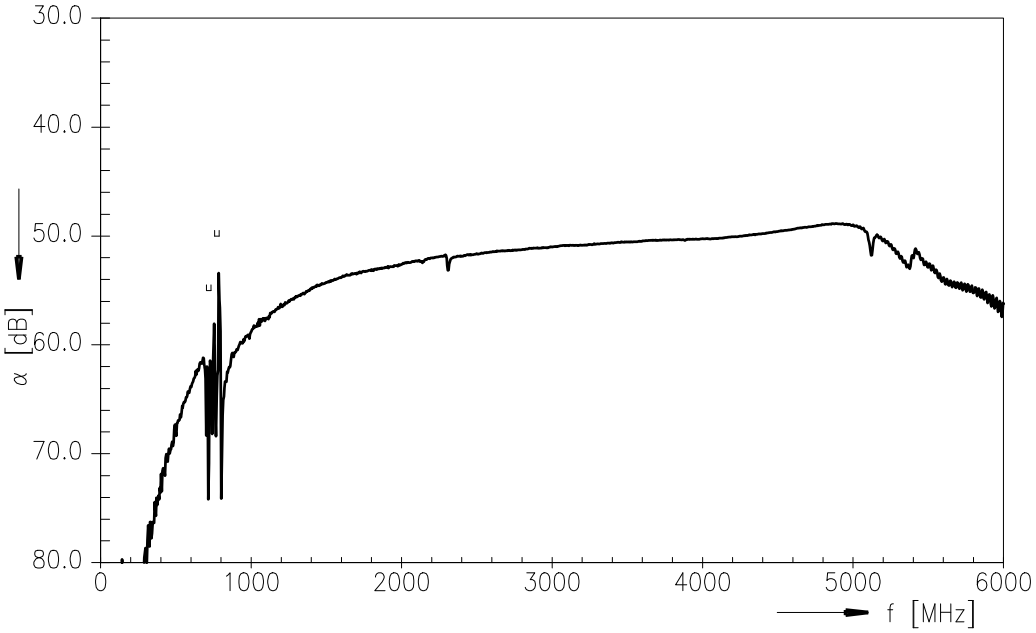
Frequency response Antenna-Rx (wideband)



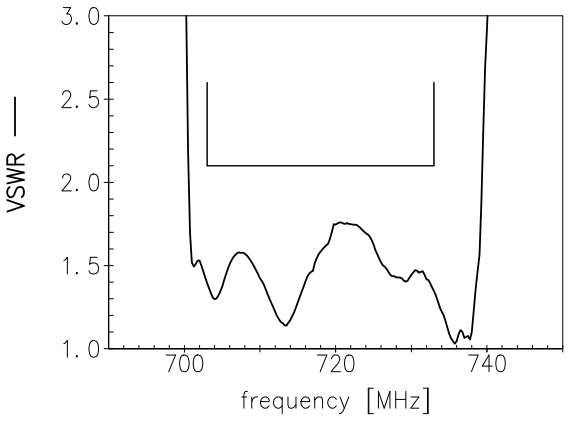
Frequency response Tx-Rx

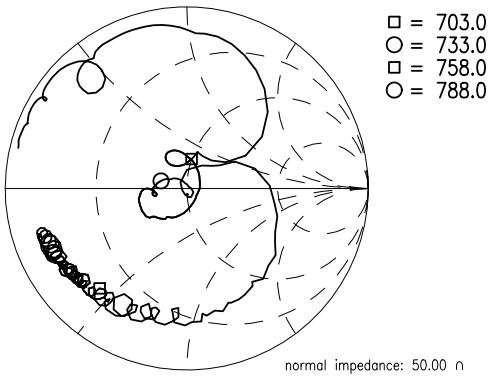


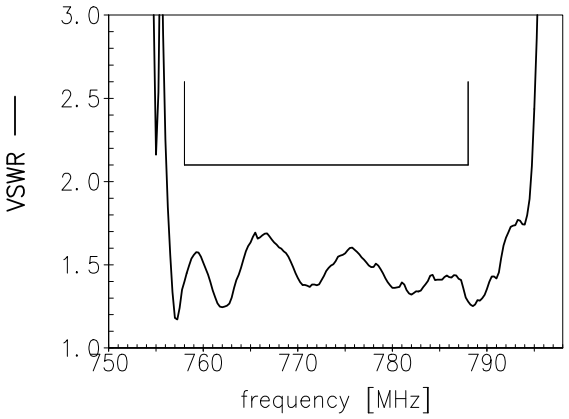
Frequency response Tx-Rx (wideband)

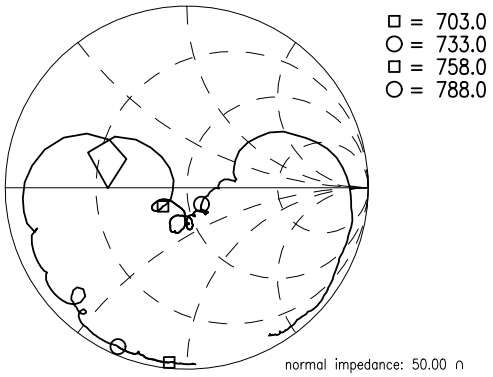


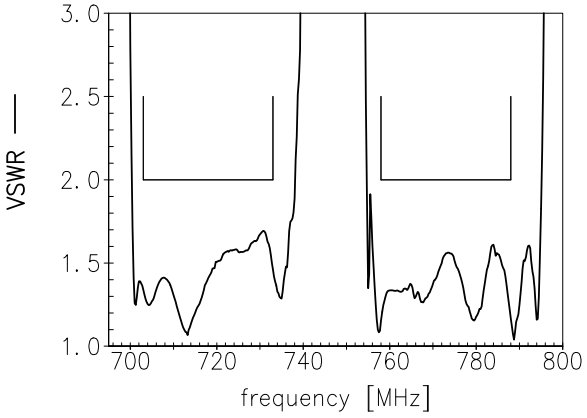
Return loss **S_{11} Tx-port** **S_{22} Antenna-port** **S_{33} Rx-portReferences**

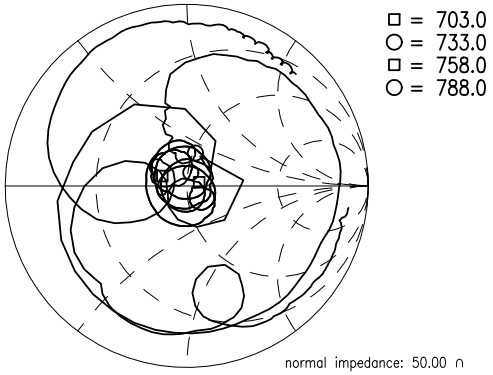












References

Type	B8528
Ordering code	B39771B8528P810
Marking and package	C61157-A8-A79
Packaging	F61074-V8259-Z000
Date codes	L_1126
S-parameters	B8528_NB_UN.s3p, B8528_WB_UN.s3p See file header for pin/port assignment.
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.
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