



SAW Components

SAW duplexer

LTE band XXVIII Block B

Series/type:	B8532
Ordering code:	B39771B8532P810
Date:	May 22, 2014
Version:	2.3

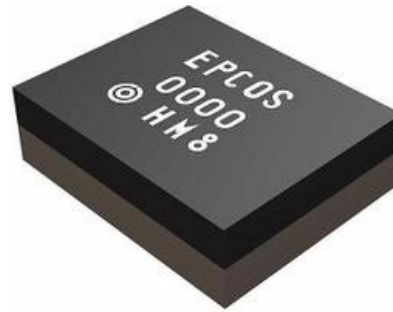


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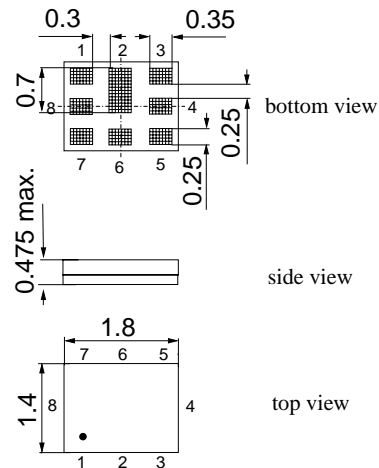
Application

- Low-loss SAW duplexer for mobile telephone LTE Band XXVIII systems
- Low insertion attenuation
- Usable passband 30 MHz
- Duplexer for higher part of Band XXVIII (Block B)
- Companion type is B8531 for lower Band XXVIII (Block A)
- Single ended to balanced transformation in Antenna - Rx path
- Impedance transformation 50Ω to 100Ω in Antenna - Rx path



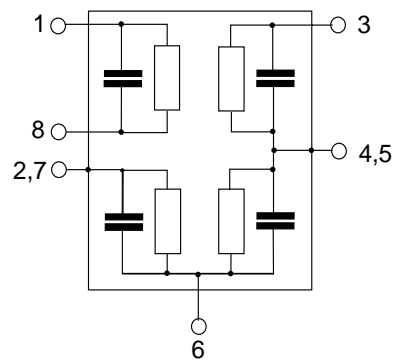
Features

- Package size 1.8 x 1.4mm², package height 0.475mm max.
- RoHS compatible
- Approximate weight 0.0042 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- **Moisture Sensitive Level 3**



Pin configuration

- 1,8 RX output
- 3 TX input
- 6 Antenna
- 2,4,5,7 Ground





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Characteristics

Temperature range for specification: T = -20 °C to +90 °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} = 100 Ω

Characteristics Tx - Ant		min.	typ. @ 25 °C	max.	
Center frequency	f _C	—	733.0	—	MHz
Maximum insertion attenuation	α				
	718.240... 747.760MHz		1.9	3.4	dB
Amplitude ripple	α				
	718.240... 747.760MHz		1.1	2.6	dB
VSWR					
TX port	718.0 ... 748.0 MHz		1.7	2.0	
ANT port	718.0 ... 748.0 MHz		1.5	2.0	
Attenuation	α				
	0.1 ... 680.0 MHz	30	40		dB
	773.0 ... 803.0 MHz	43	47		dB
	1436.0 ... 1496.0 MHz	35	38		dB
	1565.42 ... 1573.374MHz	34	37		dB
	1573.374... 1577.466MHz	34	37		dB
	1577.466... 1585.42 MHz	34	37		dB
	1597.55 ... 1605.89 MHz	34	37		dB
	1830.0 ... 1880.0 MHz	27	35		dB
	2154.0 ... 2244.0 MHz	30	34		dB
	2400.0 ... 2500.0 MHz	28	33		dB
	2872.0 ... 2992.0 MHz	20	32		dB
	3590.0 ... 3740.0 MHz	20	33		dB
	4308.0 ... 4488.0 MHz	20	33		dB
	5026.0 ... 5850.0 MHz	15	24		dB



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 TX terminating impedance: Z_{TX} = 50 Ω + 4.0 nH (series)
 RX terminating impedance: Z_{RX} = 100 Ω

Characteristics Rx - Ant					min.	typ. @ 25 °C	max.	
Center frequency	f _C				—	788.0	—	MHz
Maximum insertion attenuation	α	773.240... 802.760MHz				2.0	2.8	dB
Amplitude ripple	α	773.240... 802.760MHz				0.7	2.1	dB
VSWR								
RX port		773.0 ... 803.0 MHz				1.7	2.2	
ANT port		773.0 ... 803.0 MHz				1.7	2.0	
Attenuation	α							
		1.0 ... 718.0 MHz			40	62		dB
		718.0 ... 748.0 MHz			45	64		dB
		1710.0 ... 1785.0 MHz			40	58		dB
		1850.0 ... 1920.0 MHz			40	54		dB
		1920.0 ... 2400.0 MHz			40	54		dB
		2400.0 ... 2500.0 MHz			45	52		dB
		2484.0 ... 2775.0 MHz			40	51		dB
		2775.0 ... 2880.0 MHz			45	50		dB
		2880.0 ... 6000.0 MHz			40	52		dB
Characteristics TX - RX					min.	typ. @ 25 °C	max.	
Differential Mode Isolation	α							
		718.240... 747.760MHz			55	59		dB
		773.240... 802.760MHz			50	55		dB
Common Mode Isolation	α							
		718.240... 747.760MHz			55	61		dB



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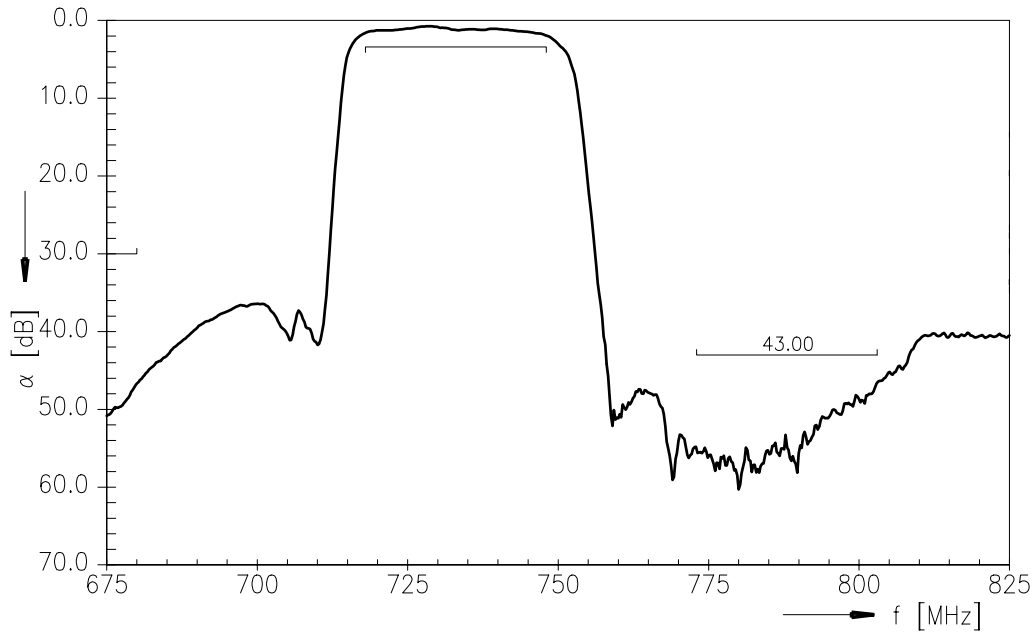
Maximum ratings

Storage temperature range	T_{stg}	-40/+85 ¹⁾	°C	
DC voltage	V_{DC}	3	V	
ESD voltage	V_{ESD}	300 ²⁾	V	Human body model, 1 pulses Charge device model, 3 pulses
		600 ³⁾	V	
Input power at 718.0 ... 748.0 MHz elsewhere	P_{IN}	29	dBm	} 5 MHz LTE uplink 50 °C, 3000 h
		10	dBm	

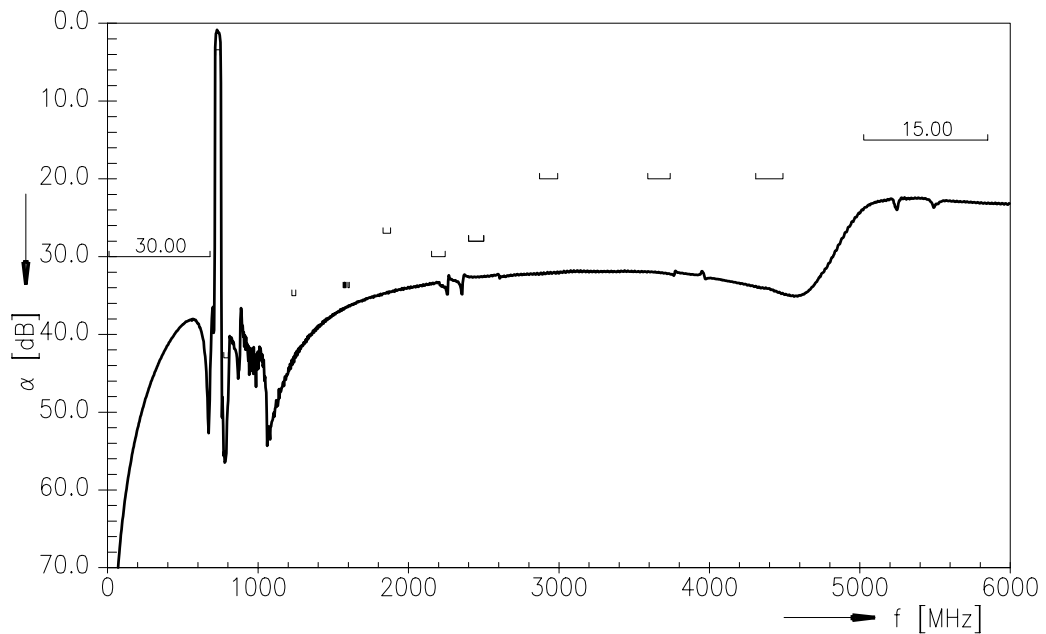
- 1) Extended upperlimit: 168@125°C acc. to IEC 60068-2-2 Bb.
- 2) acc. to JESD22-A114F(HBM-Human Body Model), 1 negative & 1 positive pulses.
- 3) acc. to JESD22-C101C (CDM-Field induced Charge Device Model), 3 negative & 3 positive pulses.



Frequency response Tx-Antenna

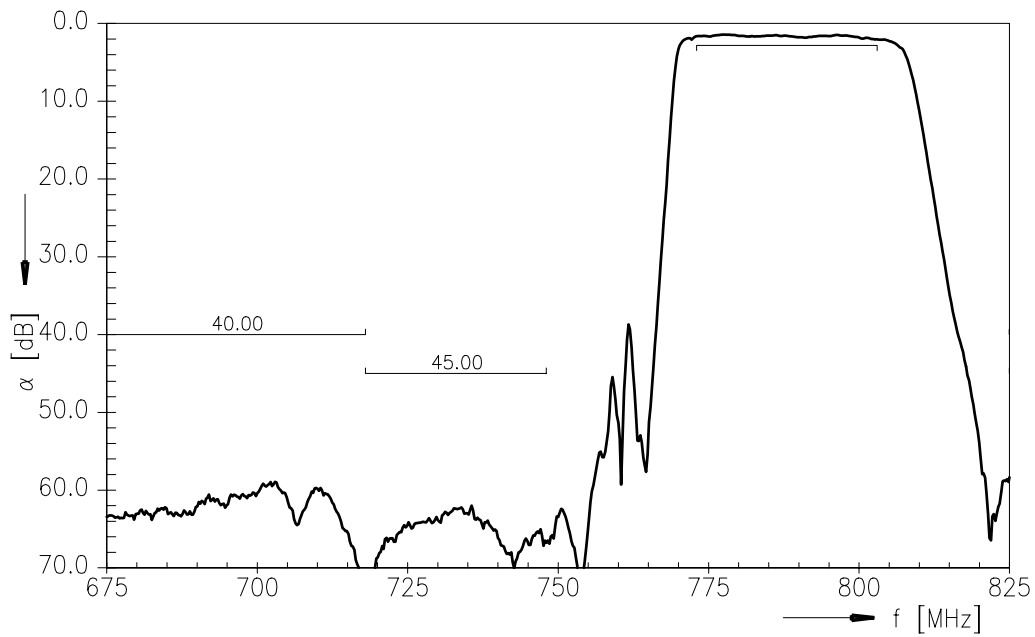


Frequency response Tx-Antenna (wideband)

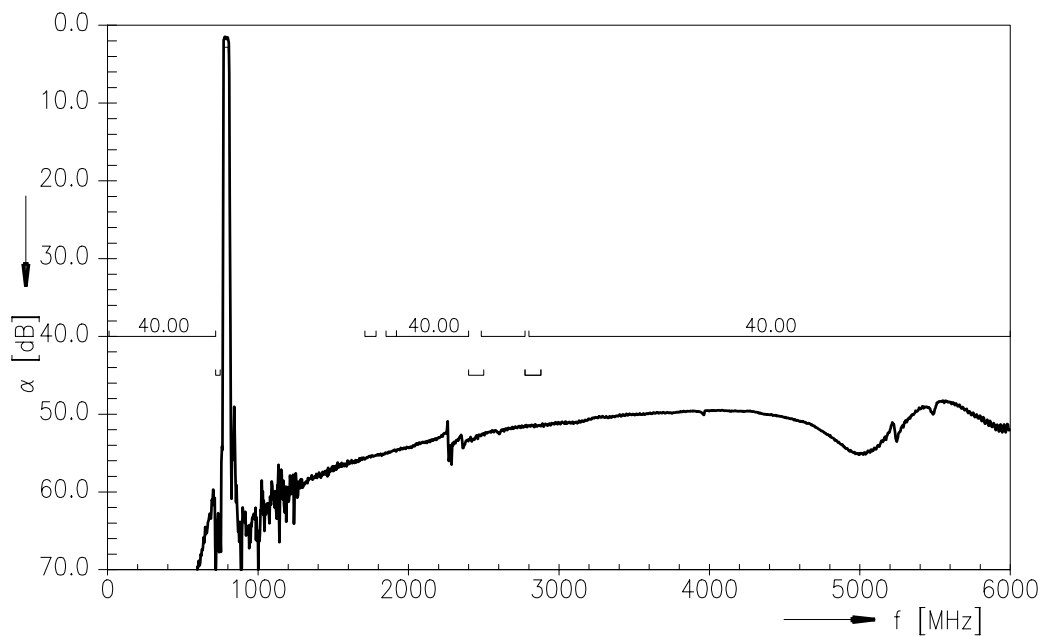




Frequency response Antenna-Rx

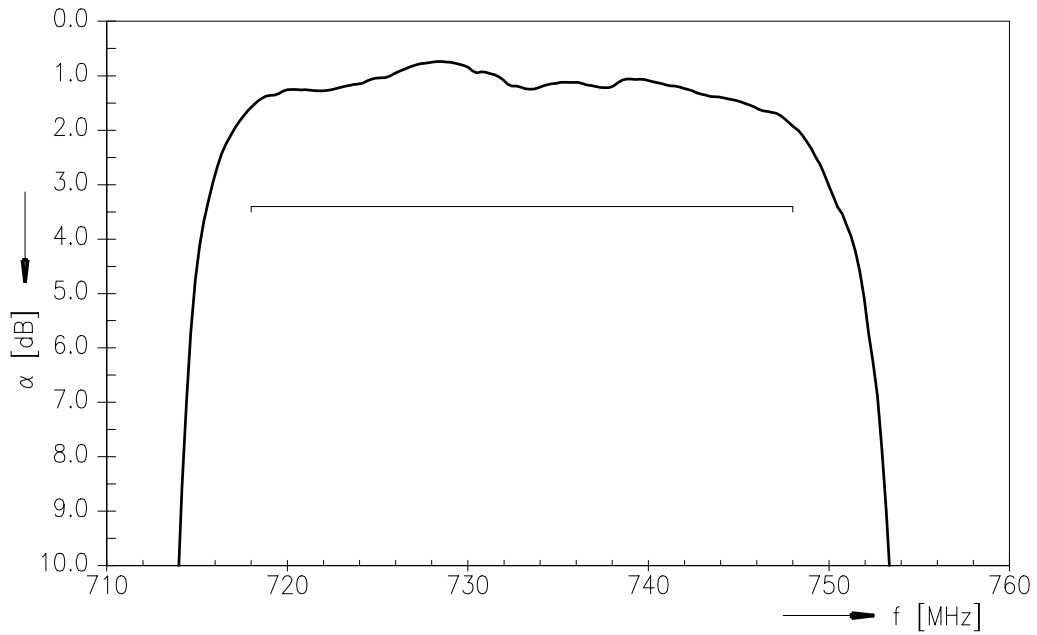


Frequency response Antenna-Rx (wideband)

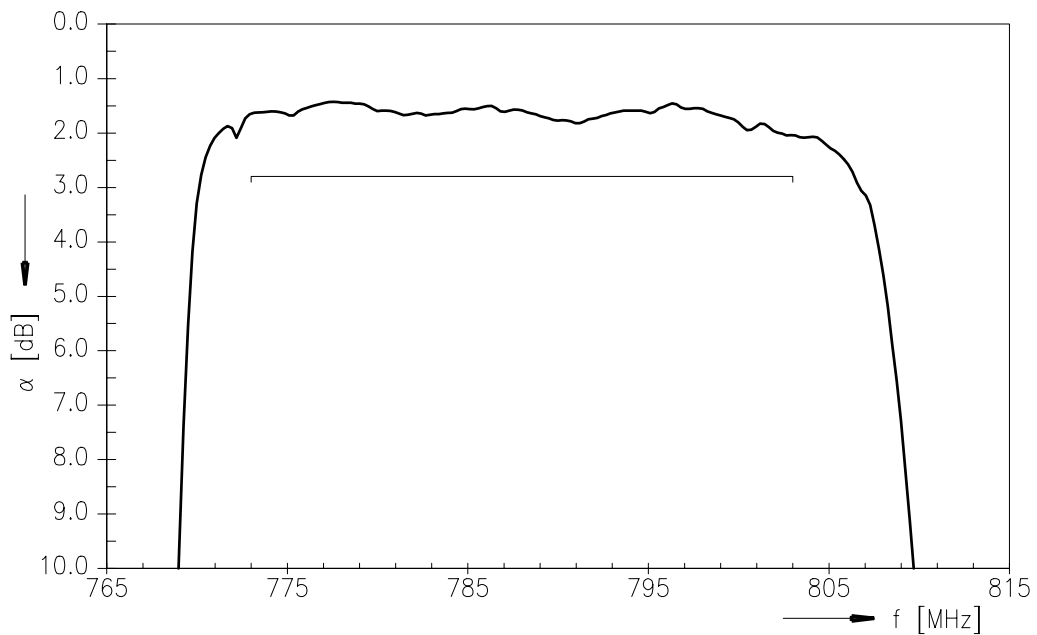




Frequency Response TX - Ant (passband, CW test signal)

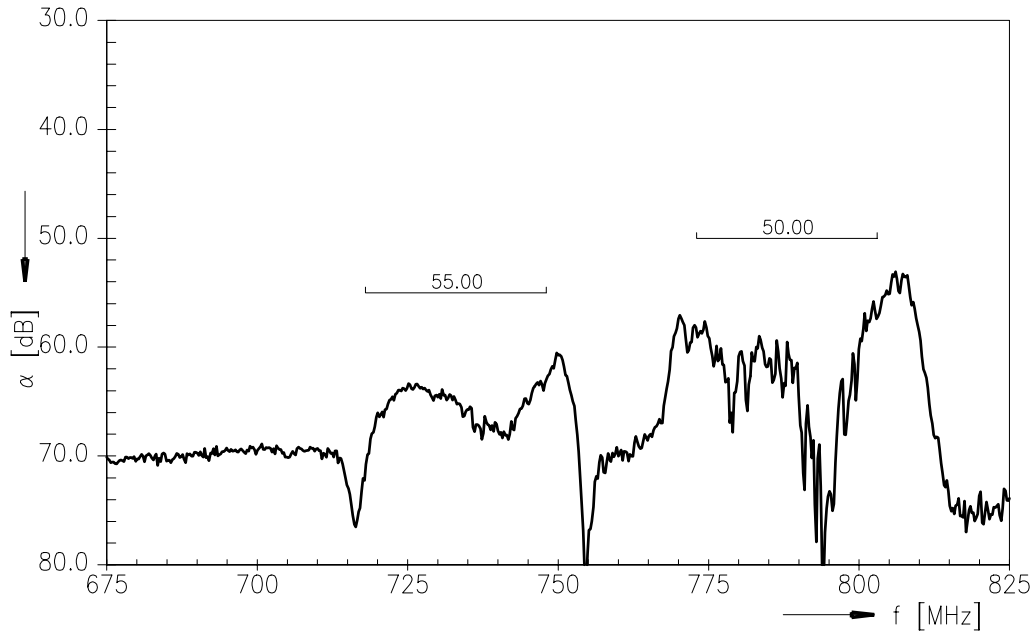


Frequency Response Ant-RX (passband, CW test signal)

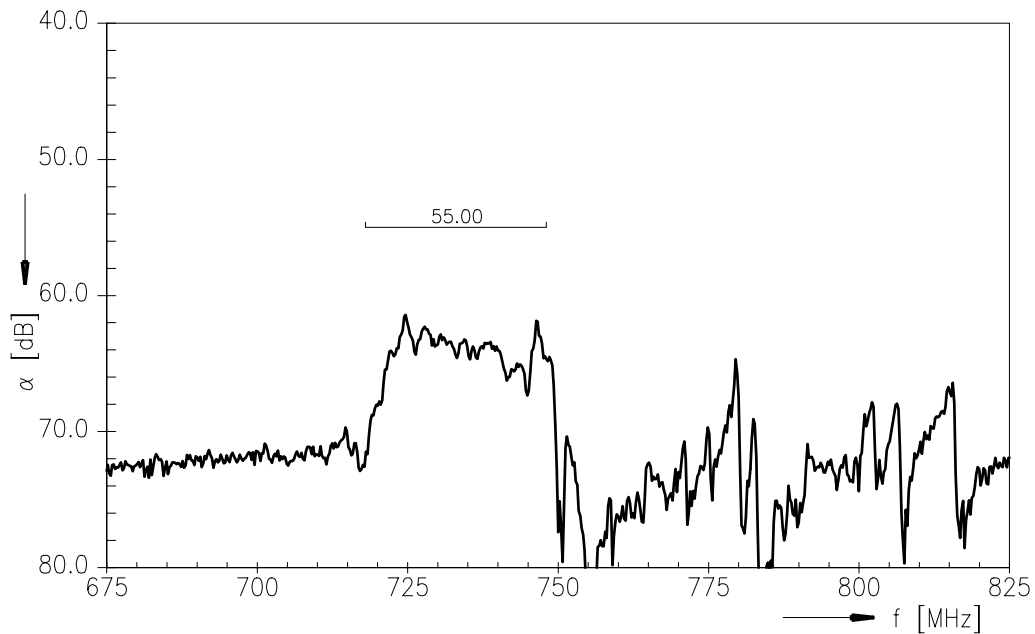




Frequency response Tx-Rx (differential mode, CW signal)



Frequency response Tx-Rx (common mode, CW signal)



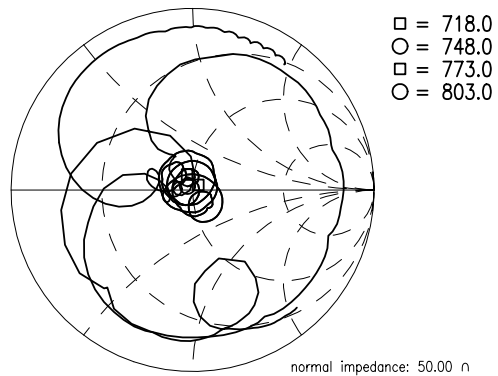
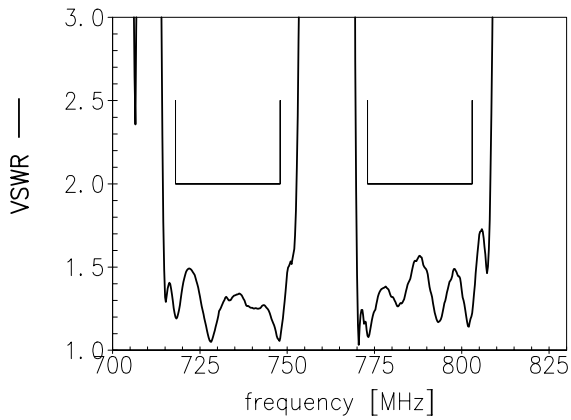
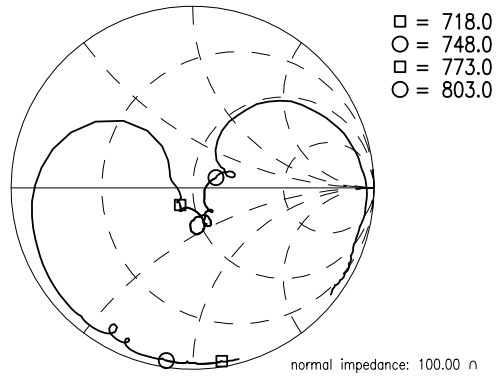
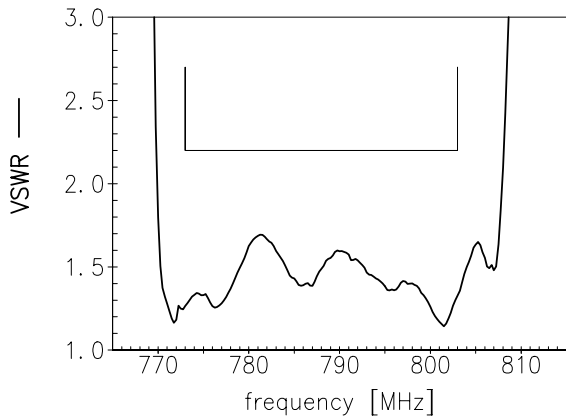
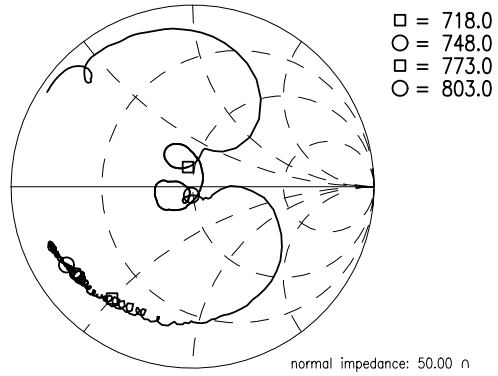
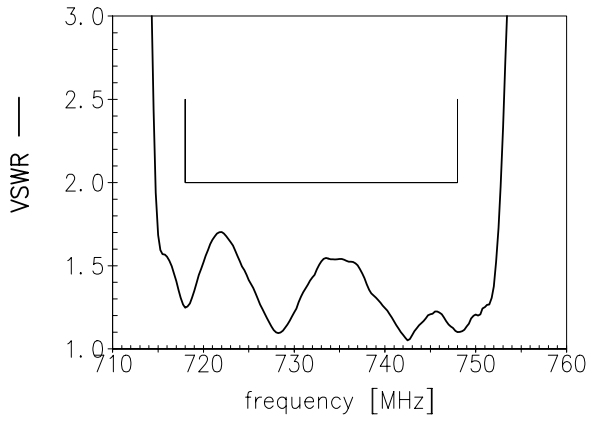


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SAW duplexer **733.0 / 788.0 MHz**

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Return loss **S₁₁ Tx-port** **S₂₂ Antenna-port** **S₃₃ Rx-port** **References**



Please read *cautions and warnings* and *important notes* at the end of this document.

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**References**

Type	B8532
Ordering code	B39771B8532P810
Marking and package	C61157-A8-A79
Packaging	F61047-V8247-Z000
Date codes	L_1126
S-parameters	B8532_NB_UN.s4p, B8532_WB_UN.s4p 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 8 th , 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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