

RF360 Europe GmbH

A Qualcomm – TDK Joint Venture

SAW Components

SAW Duplexer

Cellular / LTE Band 11

Series/type:	B8632
Ordering code:	B39142B8632P810
Date:	July 17, 2014
Version:	2.2

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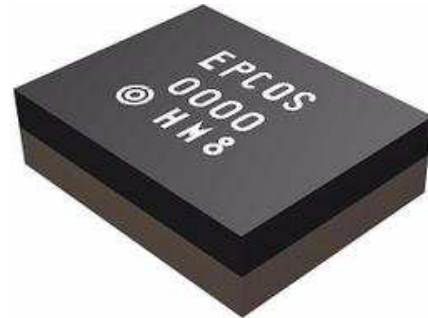
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Data sheet



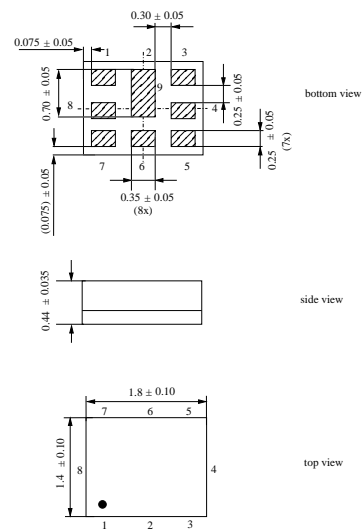
Application

- Multimode SAW duplexer for mobile telephone Cellular / LTE Band 11 systems
- Low insertion attenuation
- Low amplitude ripple



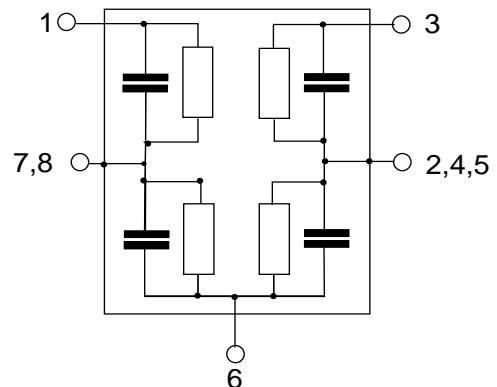
Features

- Package size 1.8 x 1.4 mm³
- Max. package height 0.475 mm
- RoHS compatible
- Approx. weight 0.0042g
- Package for **Surface Mount Technology (SMT)**
- Ni, Au-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- **Moisture Sensitivity Level 3**



Pin configuration

- 3 TX Input
- 1 RX Output
- 6 Antenna
- 2, 4, 5, 7,8 To be grounded



Data sheet

Characteristics

Temperature range for specification:	T = -30 °C to + 90 °C
Antenna terminating impedance:	Z _{ANT} = 50 Ω 6.2 nH
RX terminating impedance:	Z _{RX} = 50 Ω
TX terminating impedance:	Z _{TX} = 50 Ω

Characterisitcs TX - ANT				min.	typ. @ 25 °C	max.	
Center frequency	f _C			—	1437.9	—	MHz
Maximum insertion attenuation	α _{max}			—	1.4	1.9	dB
1427.9 ... 1447.9	MHz						
Amplitude ripple (p-p)	Δα			—	0.3	1.0	dB
1427.9 ... 1447.9	MHz						
Input VSWR (TX port)				—	1.5	2.0	
1427.9 ... 1447.9	MHz						
Output VSWR (ANT port)				—	1.4	2.0	
1427.9 ... 1447.9	MHz						
Attenuation	α						
10.0 ... 1390.0	MHz			29	32	—	dB
1390.0 ... 1409.0	MHz			5	9	—	dB
1475.9 ... 1495.9	MHz			45	54	—	dB
1559.0 ... 1563.0	MHz			40	47	—	dB
1565.420 ... 1573.374	MHz			35	47	—	dB
1573.374 ... 1577.466	MHz			40	47	—	dB
1577.466 ... 1585.420	MHz			35	47	—	dB
1597.5515 ... 1605.887	MHz			40	48	—	dB
1607.0 ... 1680.0	MHz			25	48	—	dB
1844.9 ... 1879.9	MHz			30	43	—	dB
1884.5 ... 1919.6	MHz			15	42	—	dB
2010.0 ... 2025.0	MHz			30	42	—	dB
2110.0 ... 2170.0	MHz			30	39	—	dB
2400.0 ... 2483.5	MHz			29	34	—	dB
2855.8 ... 2905.8	MHz			25	29	—	dB
4283.7 ... 4358.7	MHz			18	23	—	dB
4900.0 ... 5850.0	MHz			15	22	—	dB

Data sheet

Characteristics

Temperature range for specification:	T = -30 °C to +90 °C
Antenna terminating impedance:	Z _{ANT} = 50 Ω 6.2 nH
RX terminating impedance:	Z _{RX} = 50 Ω
TX terminating impedance:	Z _{TX} = 50 Ω

Characterisitcs ANT - RX				min.	typ. @ 25 °C	max.	
Center frequency	f _C			—	1485.9	—	MHz
Maximum insertion attenuation	α _{max}						
1475.9 ... 1495.9	MHz			—	1.7	2.3 ¹⁾	dB
1475.9 ... 1495.9	MHz			—	1.7	2.4	dB
Amplitude ripple(p-p)	Δα						
1475.9 ... 1495.9	MHz			—	0.7	1.1	dB
Input VSWR (ANT port)							
1475.9 ... 1495.9	MHz			—	1.5	2.0	
Output VSWR (RX port)							
1475.9 ... 1495.9	MHz			—	1.5	2.0	
Attenuation	α						
10.0 ... 1427.9	MHz			40	48	—	dB
	48.0	MHz		60	97	—	dB
814.0 ... 849.0	MHz			40	49	—	dB
1427.9 ... 1447.9	MHz			45	51	—	dB
1452.0 ... 1460.0	MHz			5	11	—	dB
1581.0 ... 6000.0	MHz			25	30	—	dB
2400.0 ... 2500.0	MHz			40	46	—	dB
4427.7 ... 4487.7	MHz			34	42	—	dB
4900.0 ... 5950.0	MHz			25	29	—	dB
IMD product level limits²⁾							
at f_{TX}=1437.9MHz, f_{RX}=1485.9MHz							
Blocker 1	48.0	MHz		—	-135	-109	dBm
Blocker 3	1389.9	MHz		—	-99	-86	dBm
Blocker 3	2923.8	MHz		—	-109	-95	dBm
Blocker 4	4361.7	MHz		—	-111	-91	dBm

1) For temperature range -30 °C to +85 °C

2) IMD product level limits for power levels P_{TX}=21.5 dBm (antenna port output power) and P_{Blocker}=-15dBm (antenna port input power).

Data sheet

Characteristics

Temperature range for specification:	T = -30 °C to +90 °C
Antenna terminating impedance:	Z _{ANT} = 50 Ω 6.2 nH
RX terminating impedance:	Z _{RX} = 50 Ω
TX terminating impedance:	Z _{TX} = 50 Ω

Characterisitcs TX - RX			min.	typ. @ 25 °C	max.	
Isolation		α				
	1427.9 ... 1447.9	MHz	55	60	—	dB
	1475.9 ... 1495.9	MHz	50	57	—	dB
	1574.0 ... 1577.0	MHz	30	61	—	dB
	2855.8 ... 2905.8	MHz	30	50	—	dB
	4283.7 ... 4358.7	MHz	25	45	—	dB

Maximum ratings

Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	5 ¹⁾	V	
ESD voltage	V _{ESD}	50 ²⁾	V	Machine Model
		150 ³⁾	V	Human Body Model
		600 ⁴⁾	V	Charged Device Model
Input power	P _{IN}			source and load impedance 50 Ω
1427.9 ... 1447.9 MHz		29	dBm	} continuous wave T = 50°C, 5000 h
elsewhere		10	dBm	

1) 168h Damp Heat Steady State acc. to IEC60068-2-67 Cy

2) acc. to JESD22-A115B (MM - Machine Model), 10 negative & 10 positive pulses.

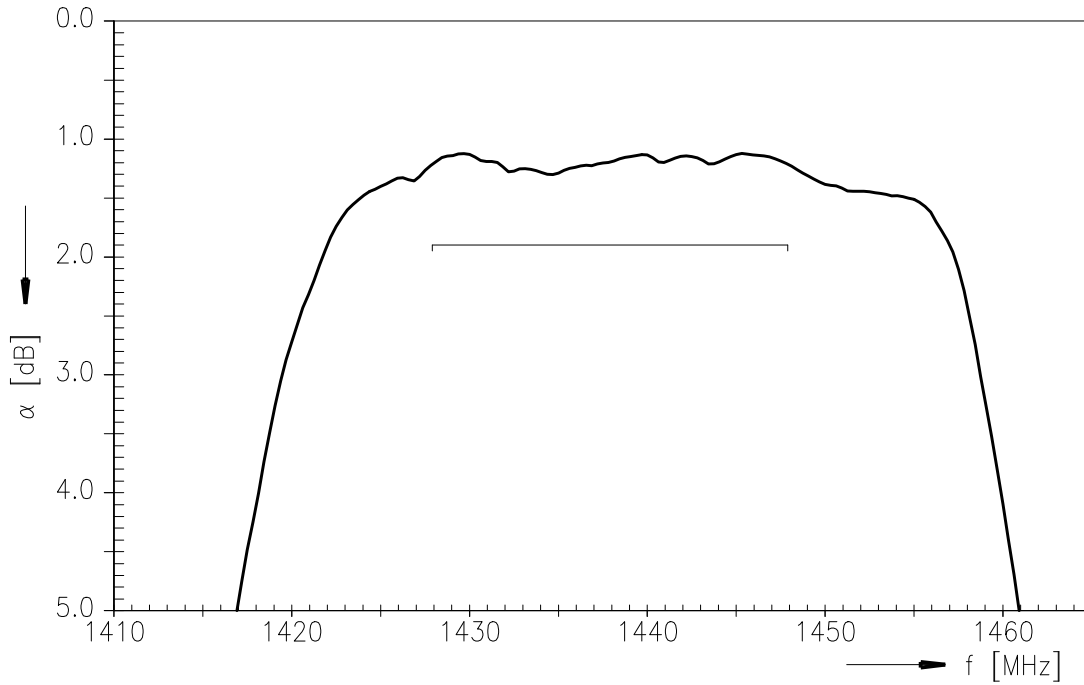
3) acc. to JESD22-A114F (HBM - Human Body Model), 1 negative & 1 positive pulses.

4) acc. to JESD22-C101C (CDM - Filed Induced Charged Device Model), 3 negative & 3 positive pulses.

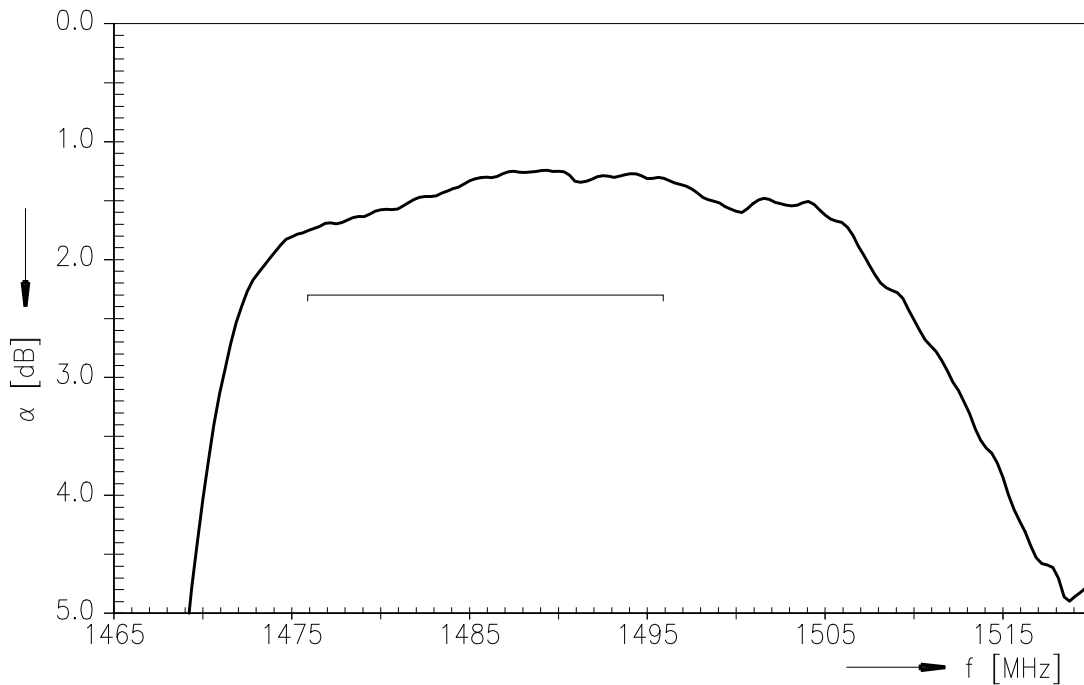
Data sheet



Frequency Response Tx-Ant



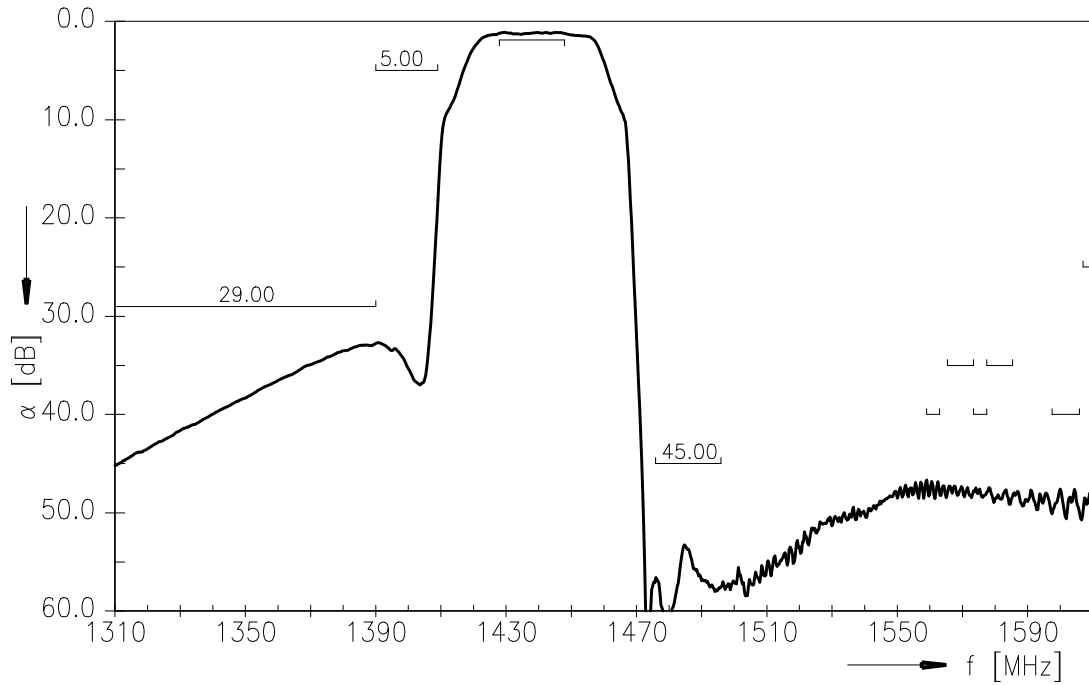
Frequency Response Ant-Rx



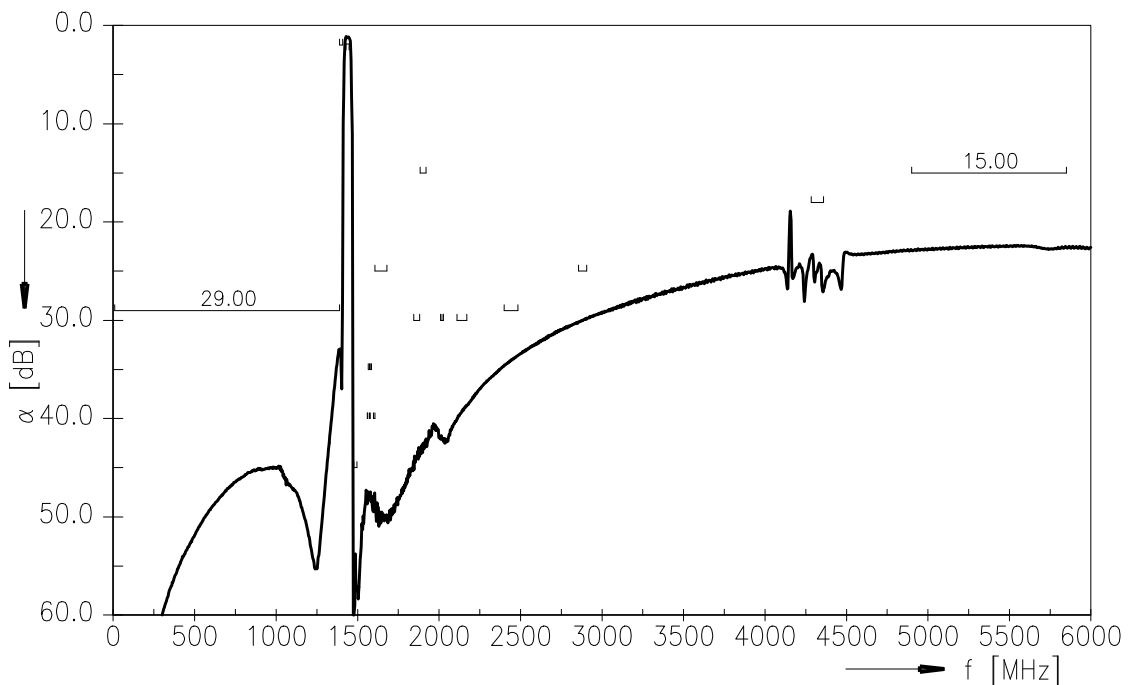
Data sheet



Frequency Response Tx-Ant



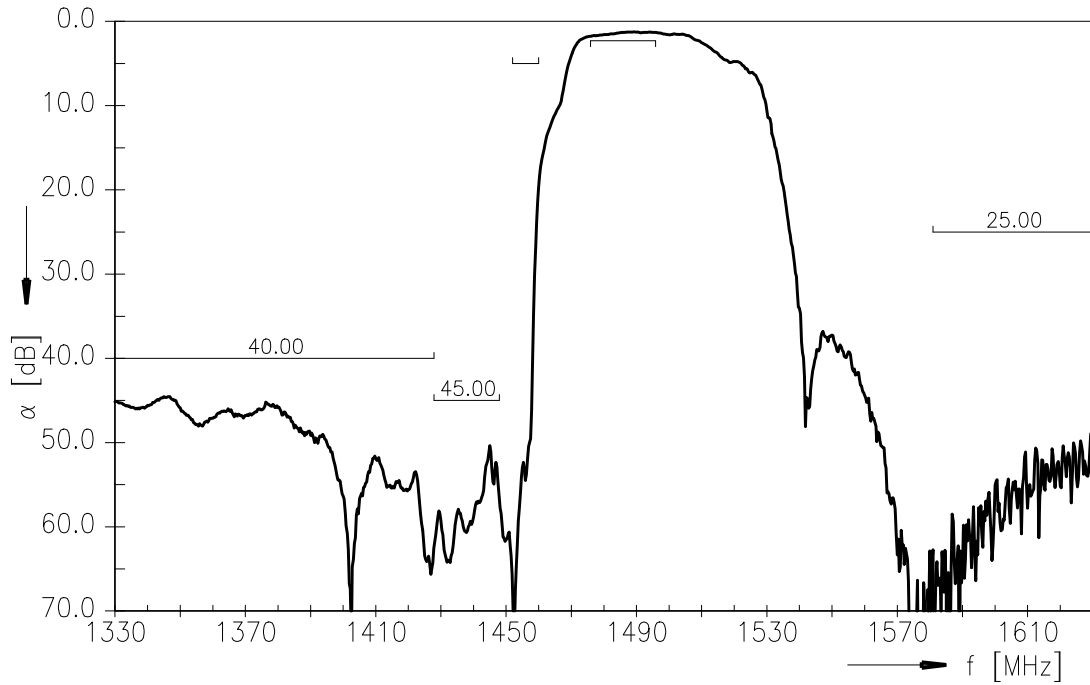
Frequency Response Tx-Ant (wideband)



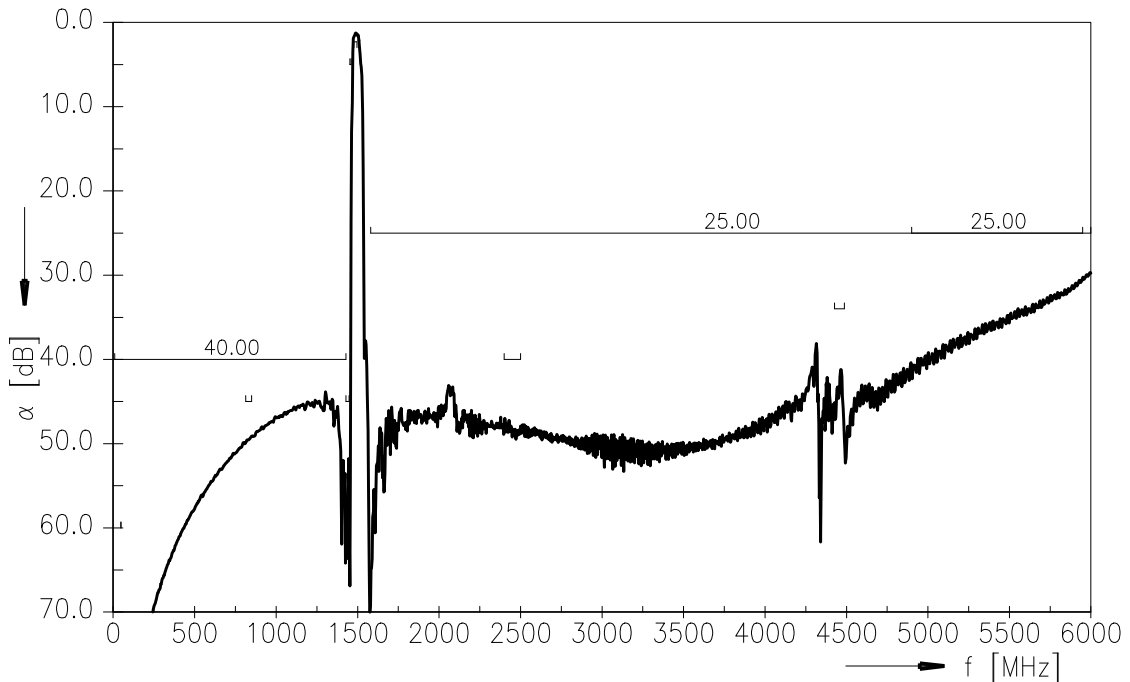
Data sheet



Frequency Response Rx-Ant



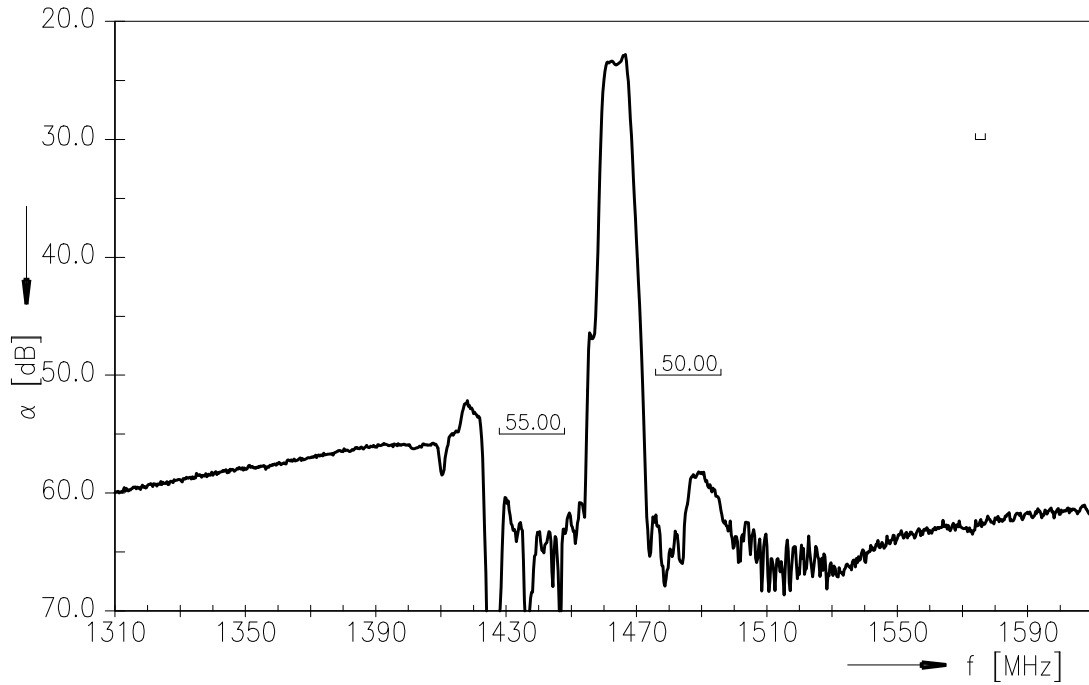
Frequency Response RX-ANT (wideband)



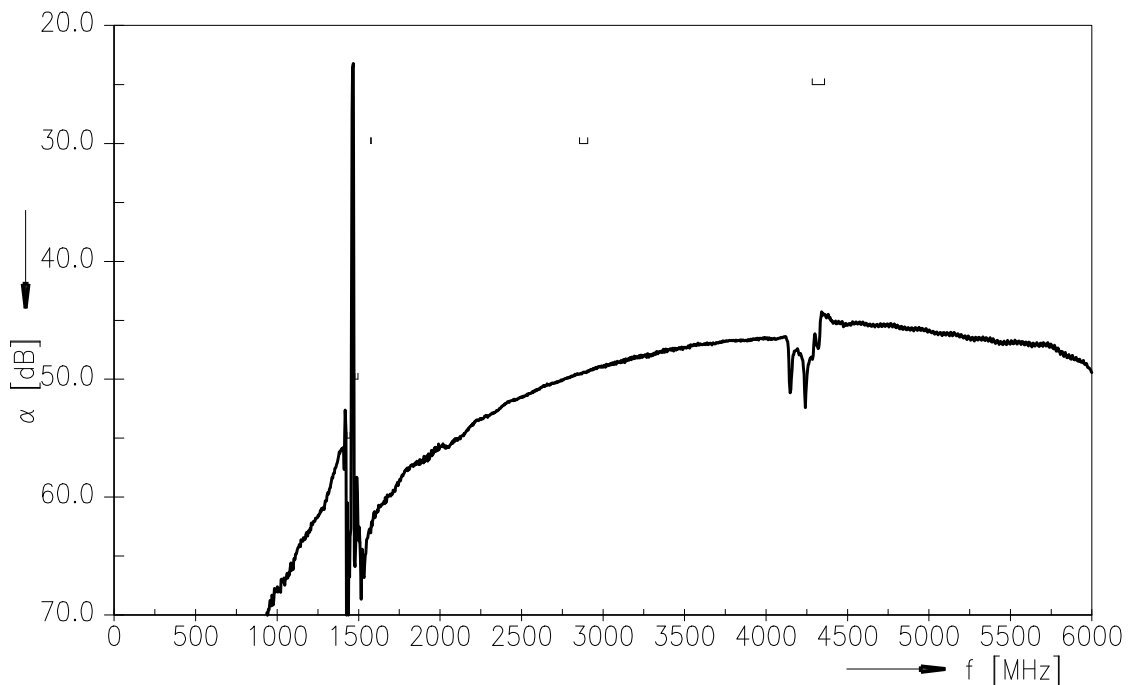
Data sheet



Frequency Response Tx-Rx



Frequency Response Tx-Rx (wideband)

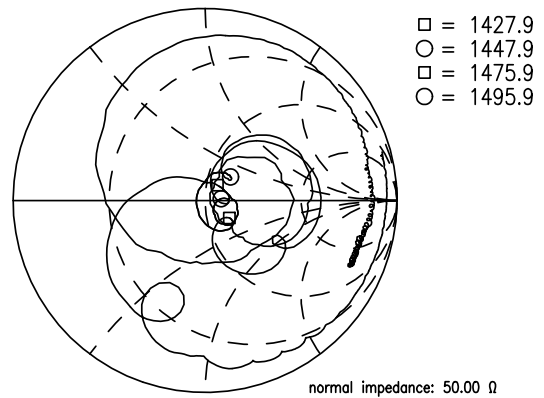
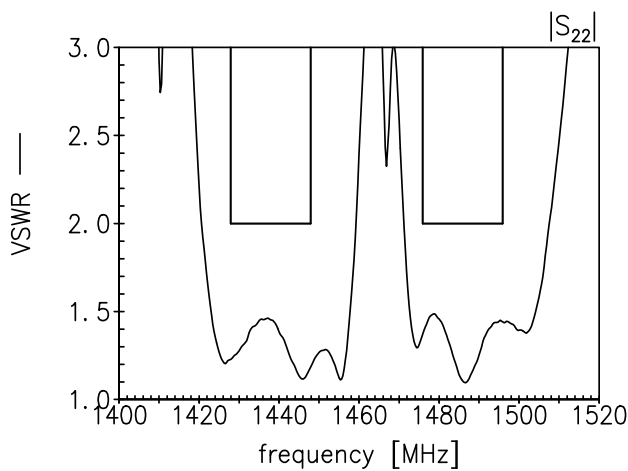
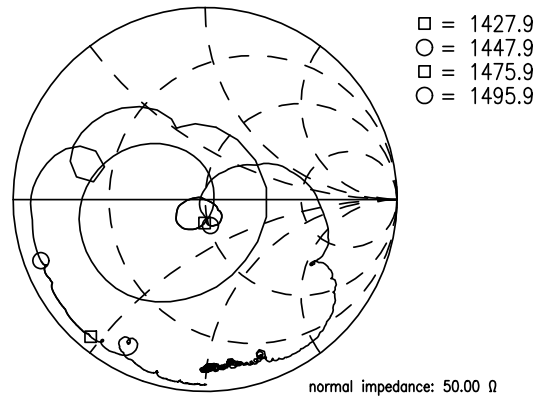
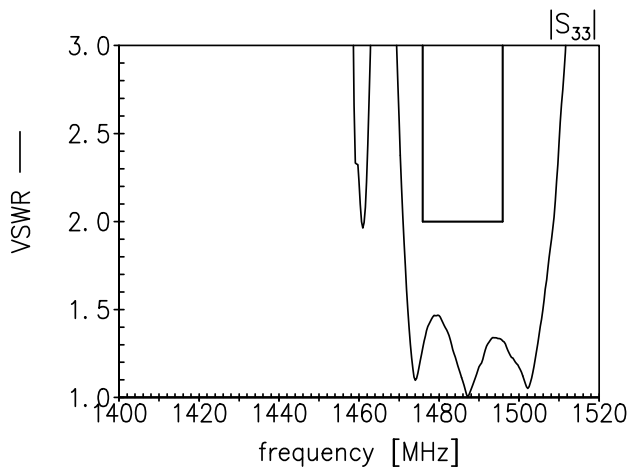
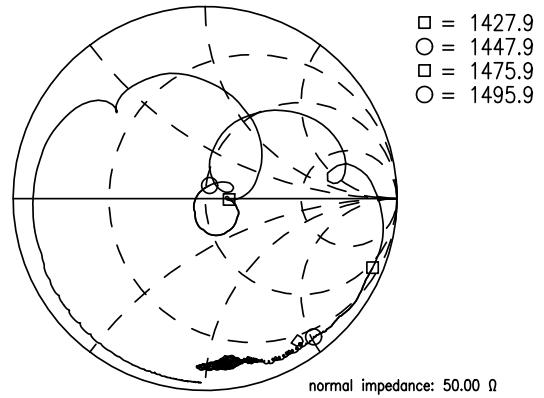
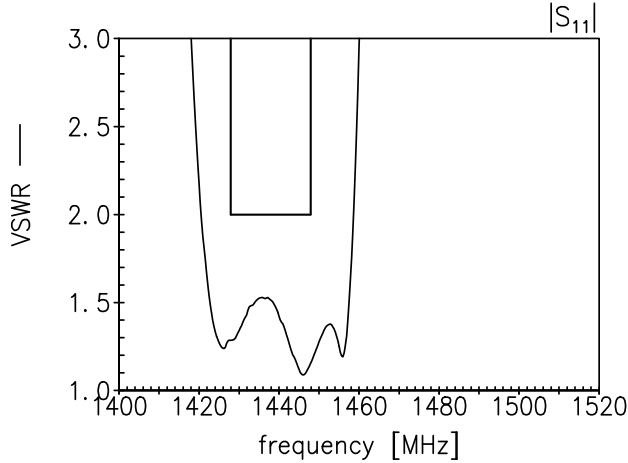


SAW Components **B8632**
SAW Duplexer **1437.9 / 1485.9 MHz**

Data sheet



VSWR **S₁₁ TX-port** **S₂₂ ANT-port** **S₃₃ RX-port**



SAW Components	B8632
SAW Duplexer	1437.9 / 1485.9 MHz

Data sheet



References

Type	B8632
Ordering code	B39142B8632P810
Marking and package	C61157-A8-A68
Packaging	F61074-V8259-Z000
Date codes	L_1126
S-parameters	B8632_NB_UN.s3p, B8632_WB_UN.s3p see file header for port/pin 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 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.
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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