



SAW Components

SAW Duplexer

LTE Band 20

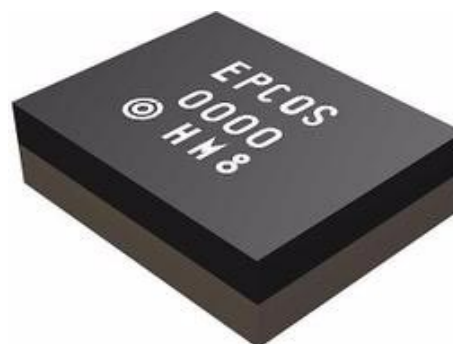
Series/type:	B8622
Ordering code:	B39851B8622P810
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Version:	2.4

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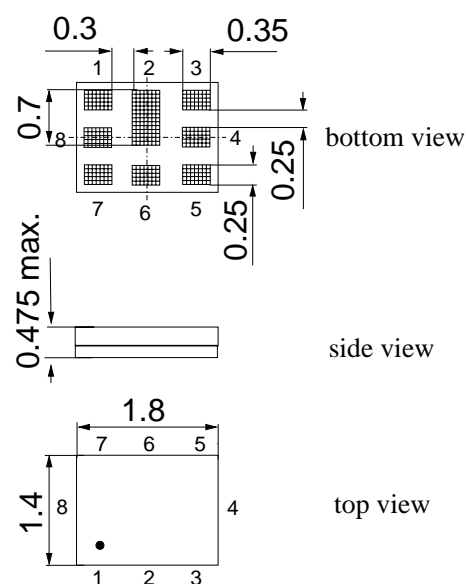
EPCOS AG is a TDK Group Company.


Application

- Low-loss SAW duplexer for LTE Band 20 systems
- Very high isolation
- Usable passband 30 MHz
- Single-ended duplexer
- Very small size and low height


Features

- Package size 1.8 * 1.4 mm²
- Maximum height : 0.475 mm
- RoHS compatible
- Approx. weight 0.0035g
- 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

DataSheet

Characteristics

Temperature range for specification:	T =	-20 °C to +90 °C
TX terminating impedance:	Z _{Tx} =	50 Ω + 3.9nH
ANT terminating impedance:	Z _{Ant} =	50 Ω 11 nH
RX terminating impedance:	Z _{Rx} =	50 Ω

Characteristics Tx-Antenna				min.	typ. @ 25 °C	max.	
Center frequency	f _c				847.0		MHz
Maximum insertion attenuation	α						
	832.0 ... 862.0 MHz			-	1.7	2.5	dB
	832.0 ... 862.0 MHz			-	1.7	2.0 ¹⁾	dB
Amplitude ripple (p-p)	Δα						
	832.0 ... 862.0 MHz			-	0.7	1.7	dB
Error Vector Magnitude							
@ f _{Carrier}	834.4 ... 859.6 MHz	EVM ²⁾		—	2.1	4.0	
@ f _{Carrier}	834.4 ... 859.6 MHz	EVM		—	2.1	3.0 ²⁾	
Input VSWR (Tx port)							
	832.0 ... 862.0 MHz			-	1.5	2.0	
Output VSWR (Ant Port)							
	832.0 ... 862.0 MHz			-	1.6	2.0	
Absolute attenuation	α						
	10.0 ... 771.0 MHz			35	43	-	dB
	771.0 ... 791.0 MHz			40	48	-	dB
	791.0 ... 821.0 MHz			50	60	-	dB
	821.0 ... 827.0 MHz			1.5	7	-	dB
	873.0 ... 903.0 MHz			5	25	-	dB
	925.0 ... 960.0 MHz			35	45	-	dB
	1565.0 ... 1606.0 MHz			45	52	-	dB
	1664.0 ... 2170.0 MHz			40	55	-	dB
	2400.0 ... 2500.0 MHz			48	56	-	dB
	2500.0 ... 2620.0 MHz			40	56	-	dB
	2620.0 ... 2690.0 MHz			40	55	-	dB
	3328.0 ... 3448.0 MHz			30	44	-	dB
	4000.0 ... 6000.0 MHz			20	30	-	dB

1) At 25 °C

2) Error Vector Magnitude (EVM) based on definition in 3GPP TS 25.141

DataSheet

Characteristics

Temperature range for specification:	T =	-20 °C to +90 °C
TX terminating impedance:	Z _{Tx} =	50 Ω + 3.9nH
ANT terminating impedance:	Z _{Ant} =	50 Ω 11 nH
RX terminating impedance:	Z _{Rx} =	50 Ω

Characteristics Antenna-Rx		min.	typ. @ 25 °C	max.	
Center frequency	f _c		806.0		MHz
Maximum insertion attenuation	α				
791.0 ... 821.0 MHz		-	1.7	3.0	dB
791.0 ... 821.0 MHz		-	1.7	2.5 ¹⁾	dB
Amplitude ripple (p-p)	Δα				
791.0 ... 821.0 MHz		-	0.7	2.2	dB
Input VSWR (Ant port)					
791.0 ... 821.0 MHz		-	1.6	2.0	
Output VSWR (Rx Port)					
791.0 ... 821.0 MHz		-	1.8	2.2	
Absolute attenuation	α				
10.0 ... 771.0 MHz		40	44	-	dB
771.0 ... 782.0 MHz		10	25	-	dB
832.0 ... 862.0 MHz		50	60	-	dB
873.0 ... 903.0 MHz		40	54	-	dB
1623.0 ... 1683.0 MHz		40	47	-	dB
2373.0 ... 2570.0 MHz		40	45	-	dB
4900.0 ... 6000.0 MHz		13	17	-	dB

1) At 25 °C

DataSheet

Characteristics

Temperature range for specification:	T =	-20 °C to +90 °C
TX terminating impedance:	Z _{Tx} =	50 Ω + 3.9nH
ANT terminating impedance:	Z _{Ant} =	50 Ω 11 nH
RX terminating impedance:	Z _{Rx} =	50 Ω

Characteristics Tx-Rx		min.	typ. @ 25 °C	max.	min./max.
Isolation	α				
	791.34 ... 820.66 MHz	55	59	-	dB
	832.0 ... 862.0 MHz	57	62	-	dB
	1574.0 ... 1577.0 MHz	40	55	-	dB
	1664.0 ... 1724.0 MHz	20	55	-	dB
2496.0 ... 2586.0 MHz	20	53	-	dB	

Maximum Ratings

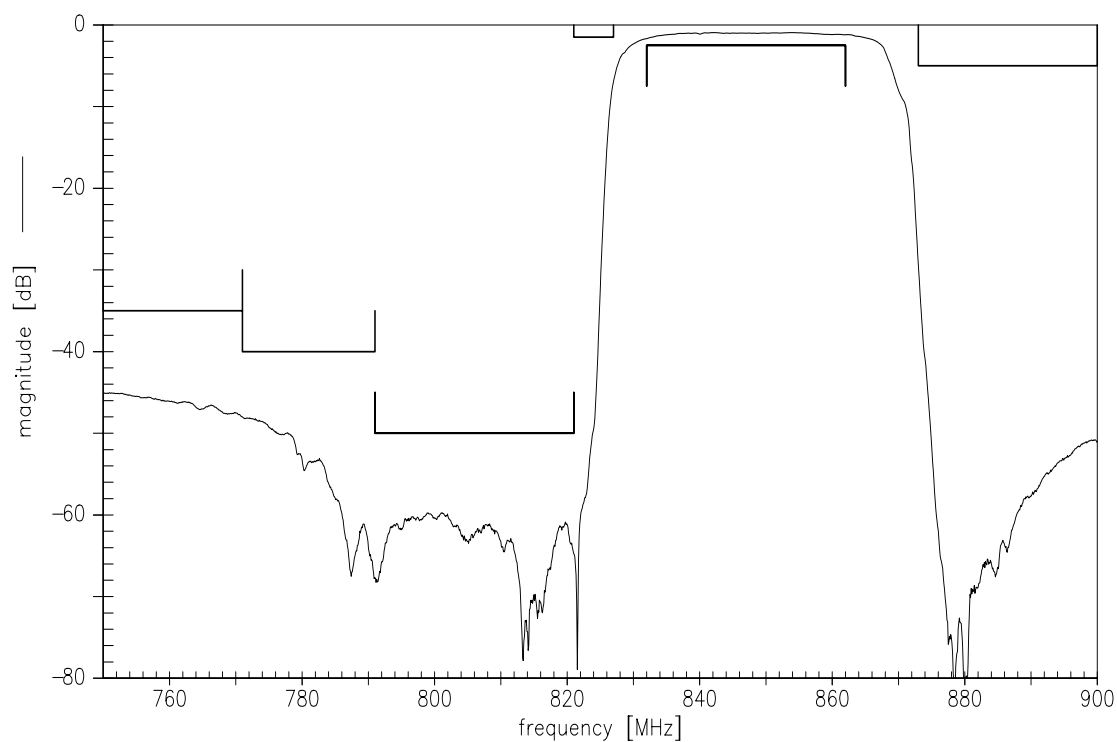
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	0	V	
ESD voltage, Tx, Ant Port	V _{ESD}	300 ¹⁾	V	HB Model
ESD voltage	V _{ESD}	600 ²⁾	V	CD Model
Input power at Tx Port				} LTE Up link 5MHz 50 °C, 5.000h
832.0 ...862.0 MHz	P _{in}	29	dBm	
elsewhere	P _{in}	10	dBm	

1) Acc. to JESD22-A114F (HBM - Human Body Level), 1 negative & 1 positive pulses.

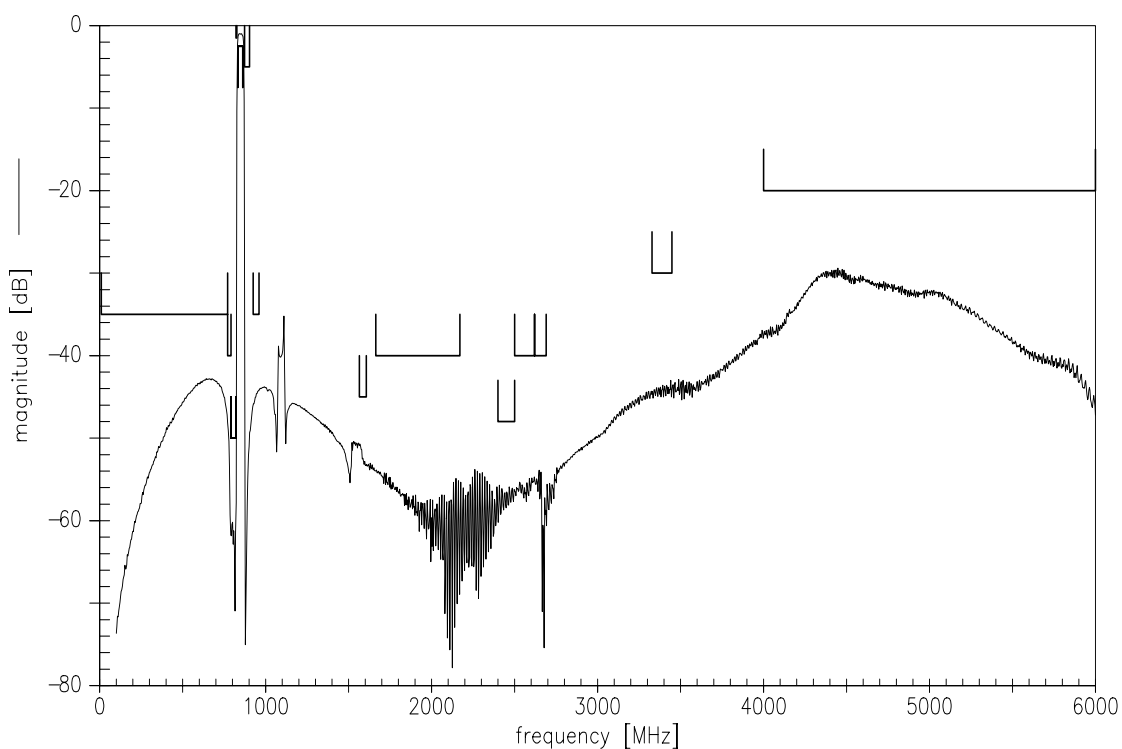
2) Acc. to JESD22-C101C (CDM - Fiel Inducted Charged Device Model), 3 negative & 3 positive pulses.



Frequency Response TX-ANT

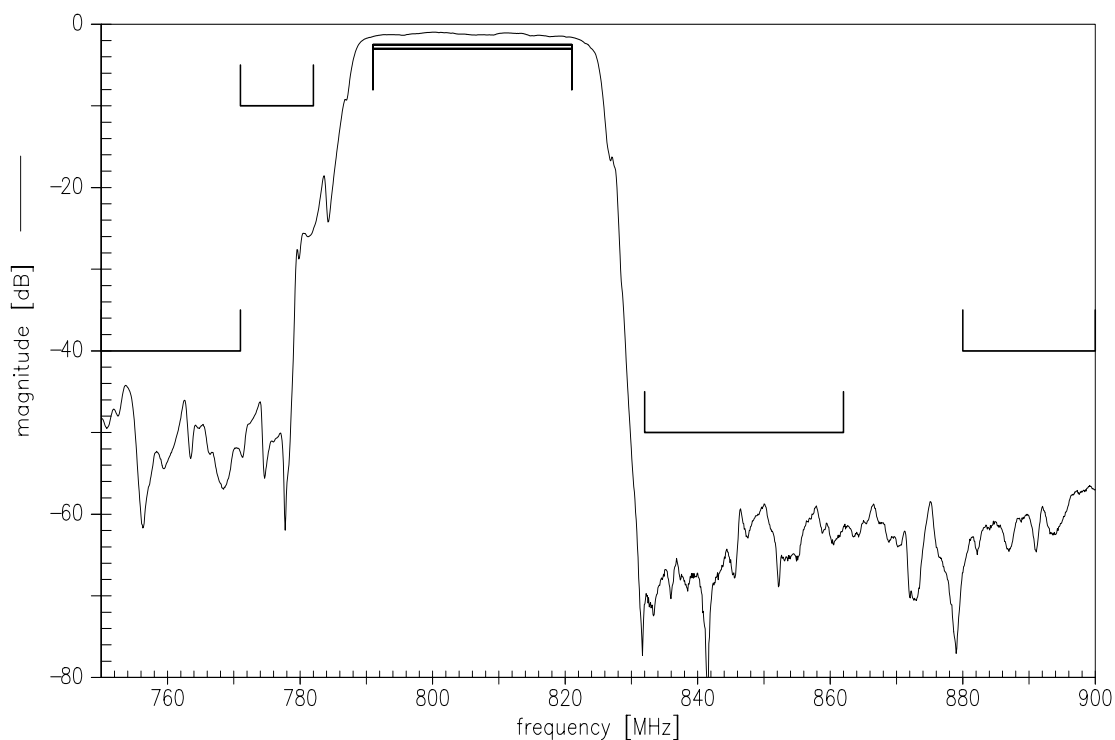


Frequency Response TX-ANT

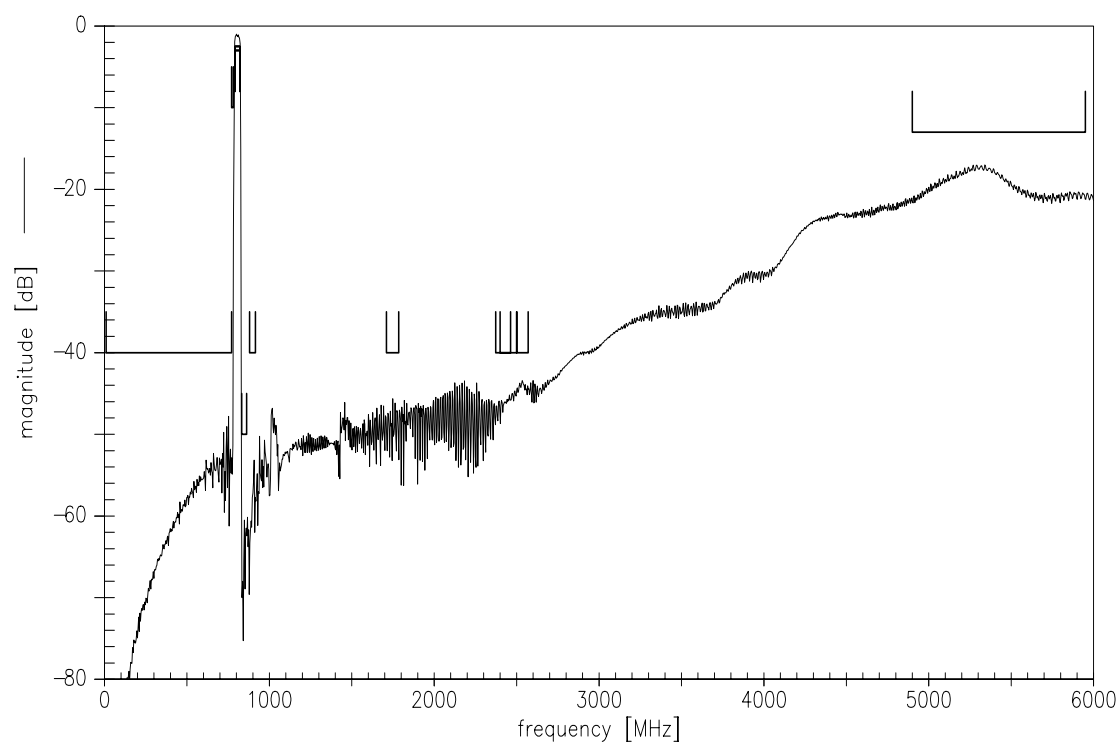




Frequency Response RX-ANT

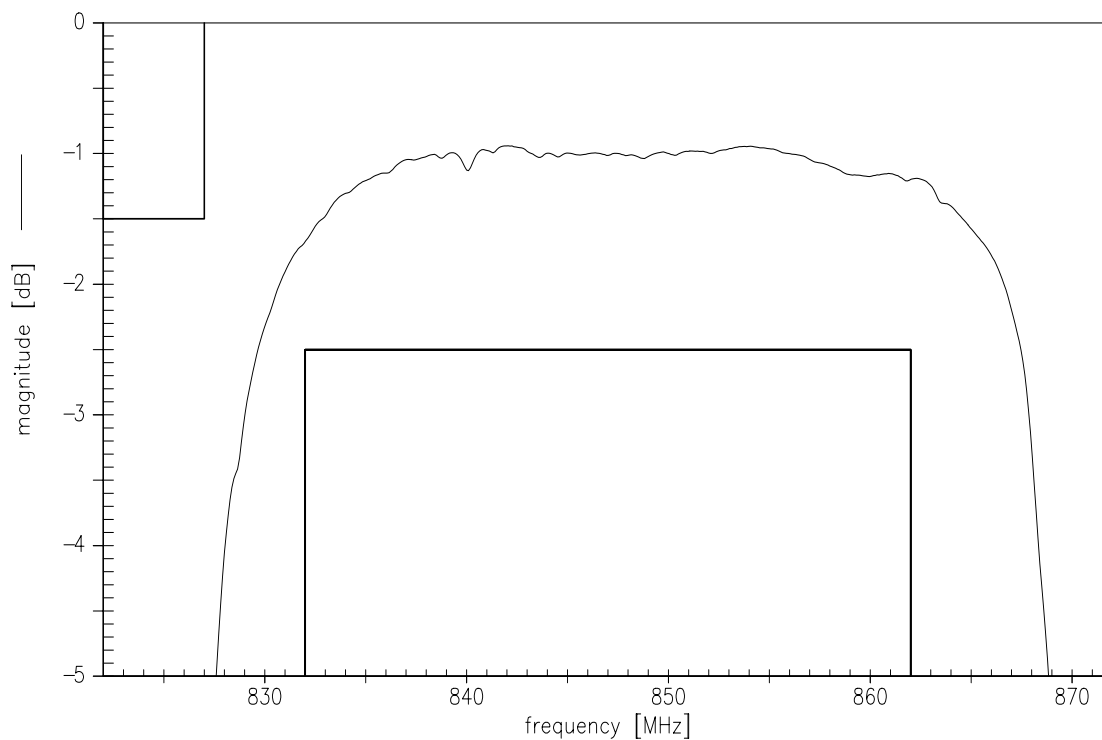


Frequency Response RX-ANT

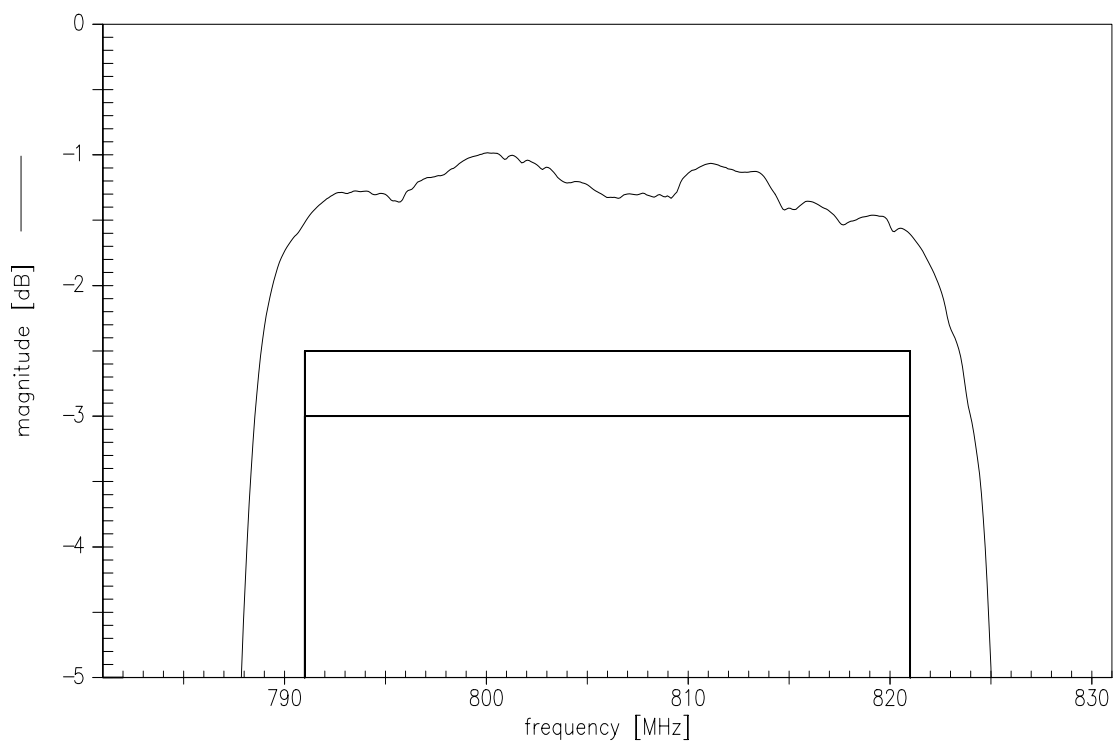




Frequency Response ANT-TX

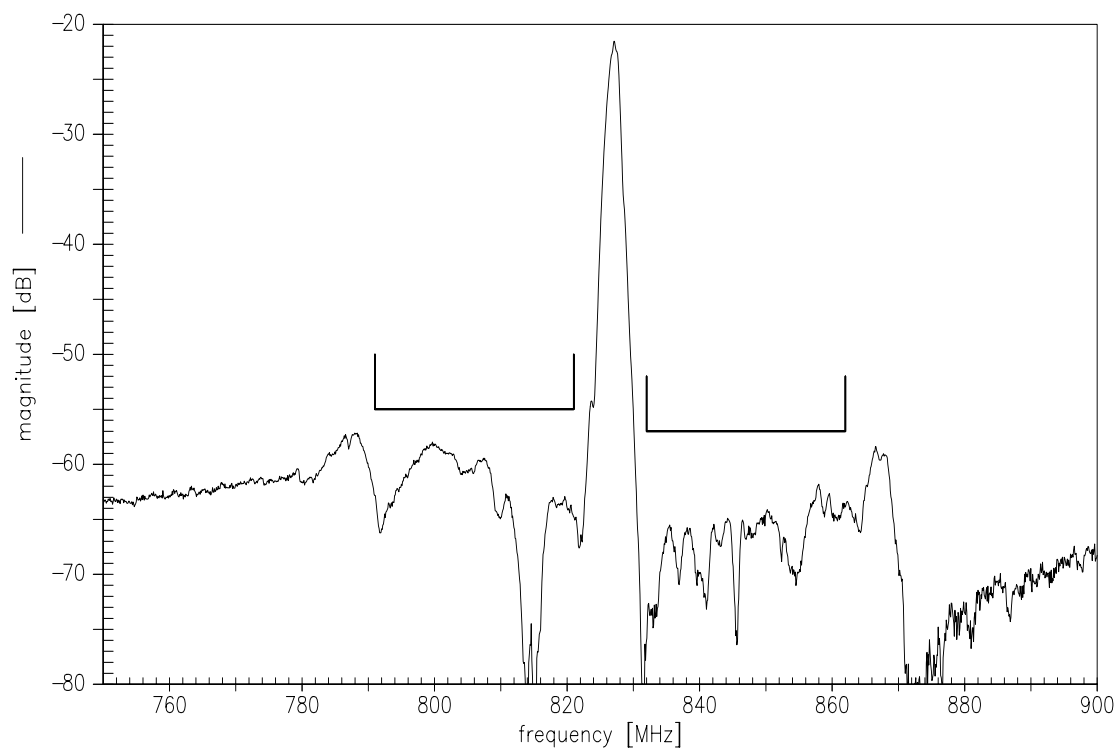


Frequency Response ANT-RX



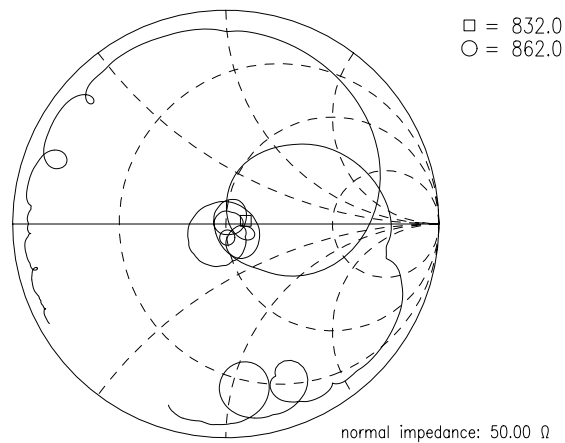
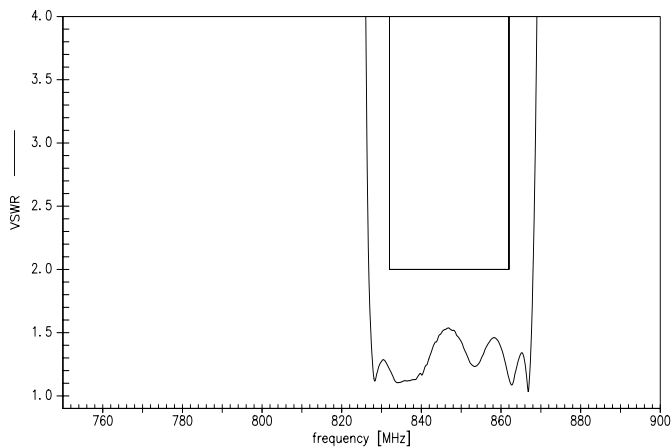


Frequency Response TX-RX (ISOLATION)

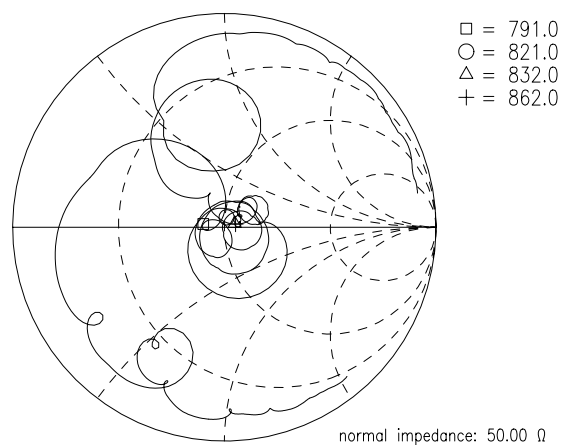
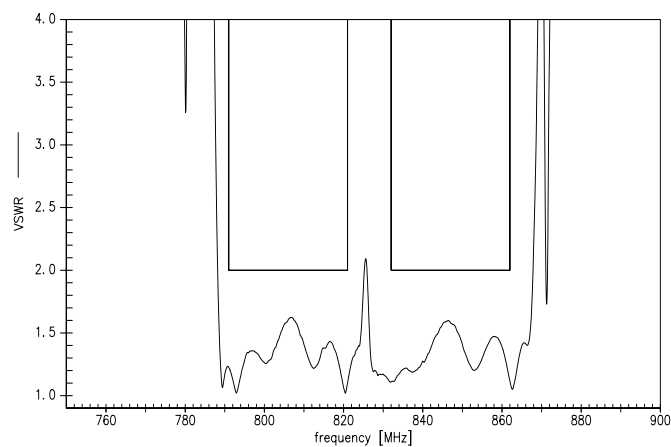




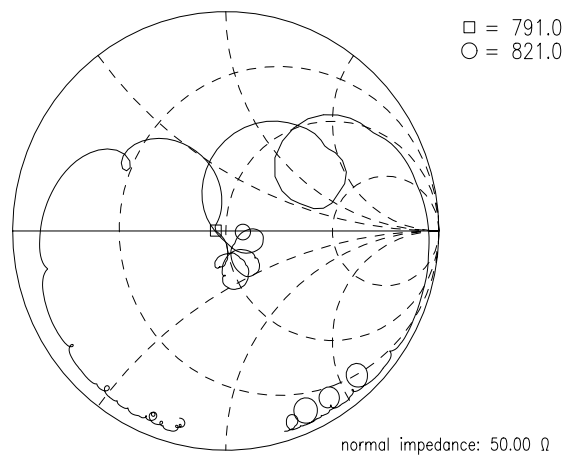
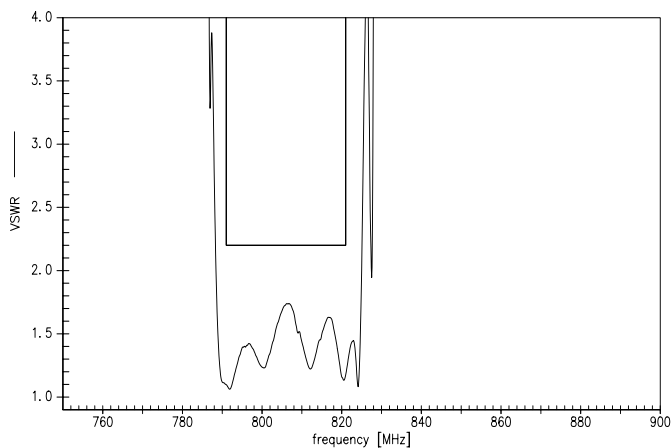
S11 VSWR (TX)



S22 VSWR (ANT)



S33 VSWR (RX)



DataSheet



References

Type	B8622
Ordering code	B39851B8622P810 B39851B8622P810S 5
Marking and package	C61157-A8-A68
Packaging	F61074-V8259-Z000
Date codes	L_1126
S-parameters	B8622_NB_UN.s3p, B8622_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.
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