



# SAW Components

## SAW Duplexer

LTE Band 13

<b>Series/type:</b>	<b>B8572</b>
<b>Ordering code:</b>	<b>B39781B8572P810</b>
<b>Date:</b>	<b>June 19, 2013</b>
<b>Version:</b>	<b>2.4</b>

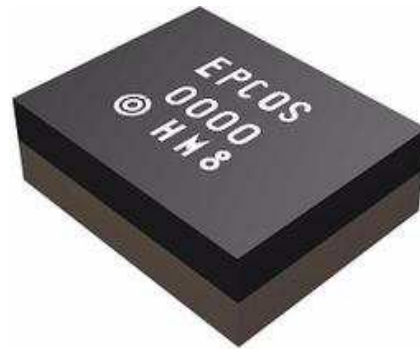
© EPCOS AG 2015. Reproduction, publication and dissemination of this publication, enclosures hereto and the information contained therein without EPCOS' prior express consent is prohibited.

EPCOS AG is a TDK Group Company.

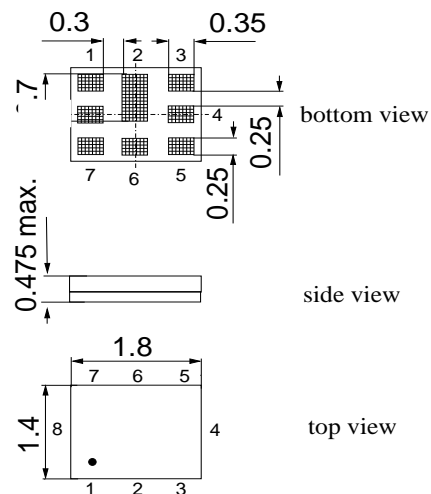
**Datasheet**

**Application**

- Low-loss SAW duplexer for mobile telephone LTE Band 13 systems
- Low insertion attenuation
- High isolation
- Usable passband 10 MHz
- Single-ended to balanced transformation in Antenna-Rx path
- Impedance transformation 50 Ω to 100 Ω in Antenna-Rx path
- Very small size and low height


**Features**

- Package size 1.8 \* 1.4 mm<sup>2</sup>
- Package height: maximum 0.475 mm
- RoHS compatible
- Package for **Surface Mount Technology (SMT)**
- Ni, Au-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- **Moisture Sensitivity Level 3**


**Pin configuration**

- 3 Tx input
- 1, 8 Rx output (balanced)
- 6 Antenna
- 2, 4, 5, 7 To be grounded

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

**Datasheet**

**Characteristics**

Temperature range for specification:	T = -30 °C to +85 °C
TX terminating impedance:	Z <sub>Tx</sub> = 50 Ω
ANT terminating impedance:	Z <sub>Ant</sub> = 50 Ω    15 nH
RX terminating impedance:	Z <sub>Rx</sub> = 100 Ω (balanced)

Characteristics Tx-Antenna		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	f <sub>c</sub>		782.0		MHz
<b>Maximum insertion attenuation</b>	α				
	777.0 ... 787.0 MHz	-	1.8	2.5	dB
<b>Amplitude ripple (p-p)</b>	Δα				
	777.0 ... 787.0 MHz	-	0.7	1.5	dB
<b>Error Vector Magnitude @ 25°C</b>					
	@ f <sub>Carrier</sub> 779.4 ... 784.6 MHz EVM <sup>1)</sup>	-	3.4	4.0	%
<b>Error Vector Magnitude</b>					
	@ f <sub>Carrier</sub> 779.4 ... 784.6 MHz EVM <sup>1)</sup>	-	3.4	4.5	%
<b>Input VSWR (Tx port)</b>					
	777.0 ... 787.0 MHz	-	1.3	2.0	
<b>Output VSWR (Ant Port)</b>					
	777.0 ... 787.0 MHz	-	1.5	2.0	
<b>Harmonic Level CW tone @ 782 MHz<sup>2)</sup></b>					
	Second Harmonic at 1564 MHz	-	-55	-38 <sup>3)</sup>	dBm

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

2) Power level +28 dBm at Tx port

3) Guaranteed by design (no 100% testing in production)

**Datasheet**

**Characteristics**

Temperature range for specification:	T = -30 °C to +85 °C
TX terminating impedance:	Z <sub>Tx</sub> = 50 Ω
ANT terminating impedance:	Z <sub>Ant</sub> = 50 Ω    15 nH
RX terminating impedance:	Z <sub>Rx</sub> = 100 Ω (balanced)

Characteristics Tx-Antenna				min.	typ. @ 25 °C	max.	
<b>Absolute attenuation</b> α							
10.0	...	716.0	MHz	35	45	-	dB
716.0	...	728.0	MHz	40	47	-	dB
728.0	...	746.0	MHz	45	50	-	dB
746.0	...	756.0	MHz	50	65	-	dB
758.0	...	767.5	MHz	35	48	-	dB
767.5	...	768.0	MHz	30	48	-	dB
768.0	...	769.0	MHz	12	42	-	dB
769.0	...	770.0	MHz	6	37	-	dB
770.0	...	771.0	MHz	3	20	-	dB
771.0	...	772.0	MHz	2.5	11	-	dB
808.0	...	869.0	MHz	28	40	-	dB
869.0	...	894.0	MHz	35	42	-	dB
1554.0	...	1565.0	MHz	35	50	-	dB
1565.0	...	1607.0	MHz	45	51	-	dB
1805.0	...	2170.0	MHz	35	48	-	dB
2331.0	...	2361.0	MHz	35	45	-	dB
2400.0	...	2484.0	MHz	40	50	-	dB
3108.0	...	3148.0	MHz	30	40	-	dB
3885.0	...	3935.0	MHz	20	30	-	dB
4662.0	...	4722.0	MHz	10	17	-	dB
5160.0	...	5845.0	MHz	10	18	-	dB

**Datasheet**

**Characteristics**

Temperature range for specification:	T = -30 °C to +85 °C
TX terminating impedance:	Z <sub>Tx</sub> = 50 Ω
ANT terminating impedance:	Z <sub>Ant</sub> = 50 Ω    15 nH
RX terminating impedance:	Z <sub>Rx</sub> = 100 Ω (balanced)

Characteristics Antenna-Rx		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	f <sub>c</sub>		751.0		MHz
<b>Maximum insertion attenuation</b>	α				
746.0 ... 756.0 MHz		-	1.8	2.5	dB
<b>Amplitude ripple (p-p)</b>	Δα				
746.0... 756.0 MHz		-	0.5	1.3	dB
<b>Input VSWR (Ant port)</b>					
746.0 ... 756.0 MHz		-	1.6	2.0	
<b>Output VSWR (Rx Port)</b>					
746.0 ... 756.0 MHz		-	1.5	2.0	
<b>Common mode rejection ratio</b>					
746.0 ... 756.0 MHz		25	32	-	dB
<b>Absolute attenuation</b>	α				
10.0 ... 650.0 MHz		50	66	-	dB
650.0 ... 730.0 MHz		35	42	-	dB
730.0 ... 736.0 MHz		26	41	-	dB
769.0 ... 775.0 MHz		5	22	-	dB
777.0 ... 787.0 MHz		55	60	-	dB
793.0 ... 805.0 MHz		45	54	-	dB
805.0 ... 1100.0 MHz		45	49	-	dB
1100.0 ... 2000.0 MHz		45	54	-	dB
2000.0 ... 3500.0 MHz		40	51	-	dB
3500.0 ... 6000.0 MHz		35	47	-	dB

**Datasheet**

**Characteristics**

Temperature range for specification:	T = -30 °C to +85 °C
TX terminating impedance:	Z <sub>Tx</sub> = 50 Ω
ANT terminating impedance:	Z <sub>Ant</sub> = 50 Ω    15 nH
RX terminating impedance:	Z <sub>Rx</sub> = 100 Ω (balanced)

Characteristics Tx-Rx				min.	typ. @ 25 °C	max.	
<b>Attenuation</b>							
			α				
	746.5 ... 749.0		MHz	55	60	-	dB
	749.0 ... 752.0		MHz	55	62	-	dB
	752.0 ... 755.5		MHz	55	66	-	dB
	777.0 ... 787.0		MHz	58	63	-	dB
	1552.0 ... 1574.0		MHz	30	70	-	dB
	2328.0 ... 2361.0		MHz	30	65	-	dB
	3104.0 ... 3148.0		MHz	30	60	-	dB
<b>Common mode attenuation</b>							
			α				
	777.0 ... 787.0		MHz	58	65	-	dB

**Maximum Ratings**

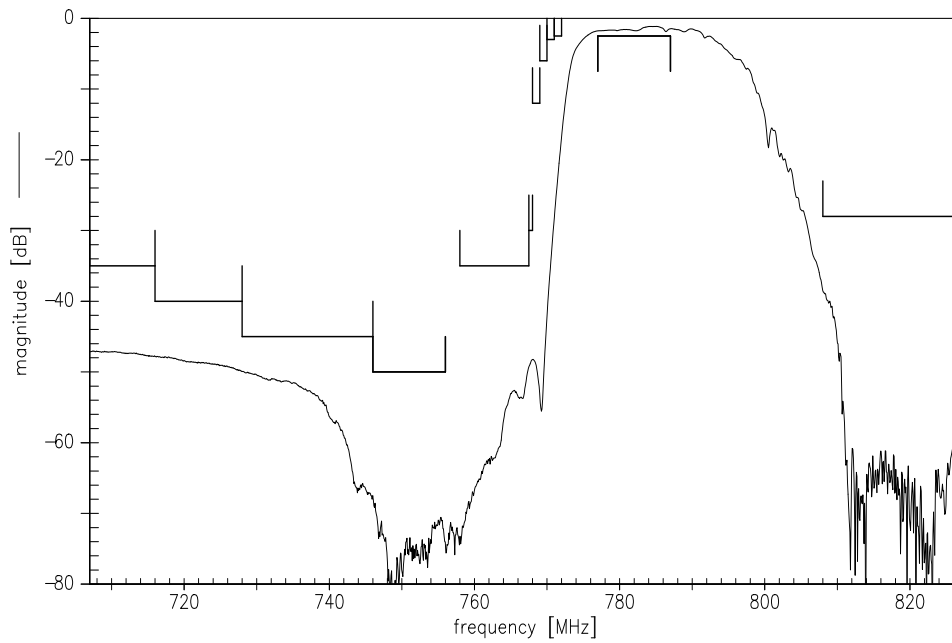
Storage temperature range	T <sub>stg</sub>	-40/+125	°C	
DC voltage	V <sub>DC</sub>	5	V	
ESD voltage	V <sub>ESD</sub>	100 <sup>1)</sup>	V	M model
	V <sub>ESD</sub>	325 <sup>2)</sup>	V	HB model
	V <sub>ESD</sub>	500 <sup>3)</sup>	V	CD model
Input power at Tx Port				
	777.0 ...787.0 MHz	P <sub>in</sub>	29	} continuous wave 50 °C, 5000h
elsewhere	P <sub>in</sub>	10		

<sup>1)</sup> According to JESD22- A115A (Machine model)

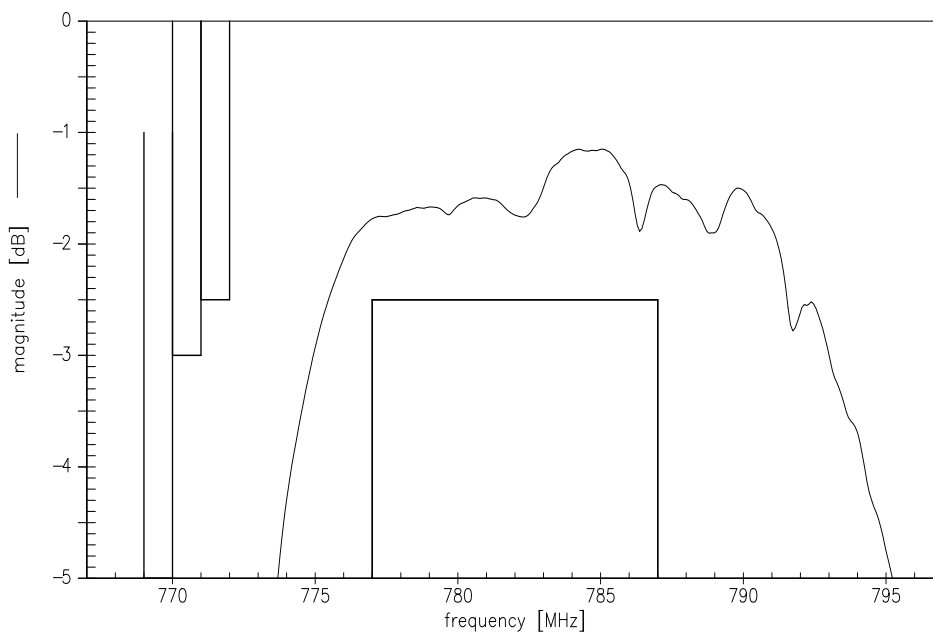
<sup>2)</sup> According to JESD22-A114E (Human Body model)

<sup>3)</sup> According to JESD22-C101 (Charged Device model)

Frequency Response TX-ANT

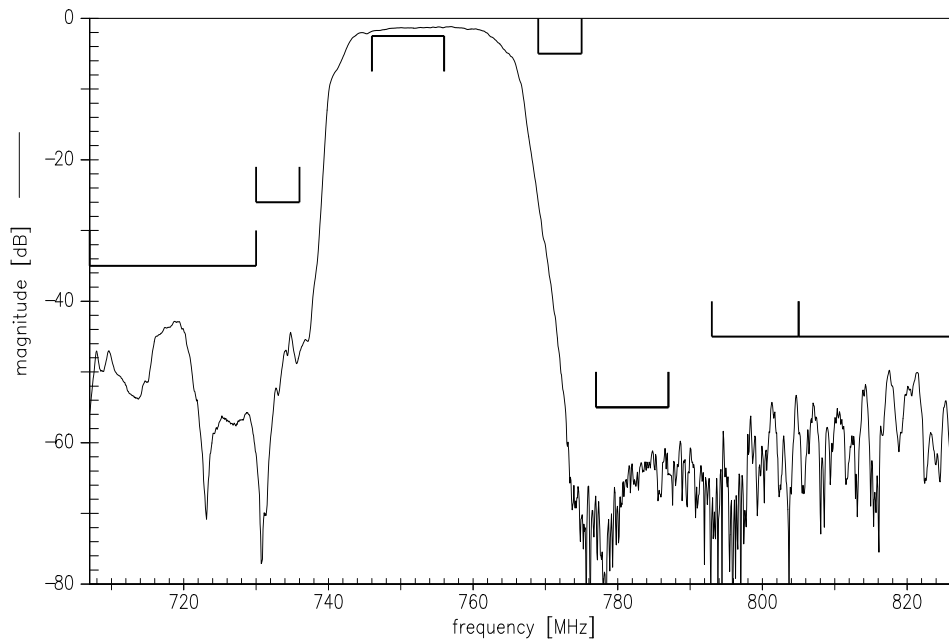


Frequency Response TX-ANT

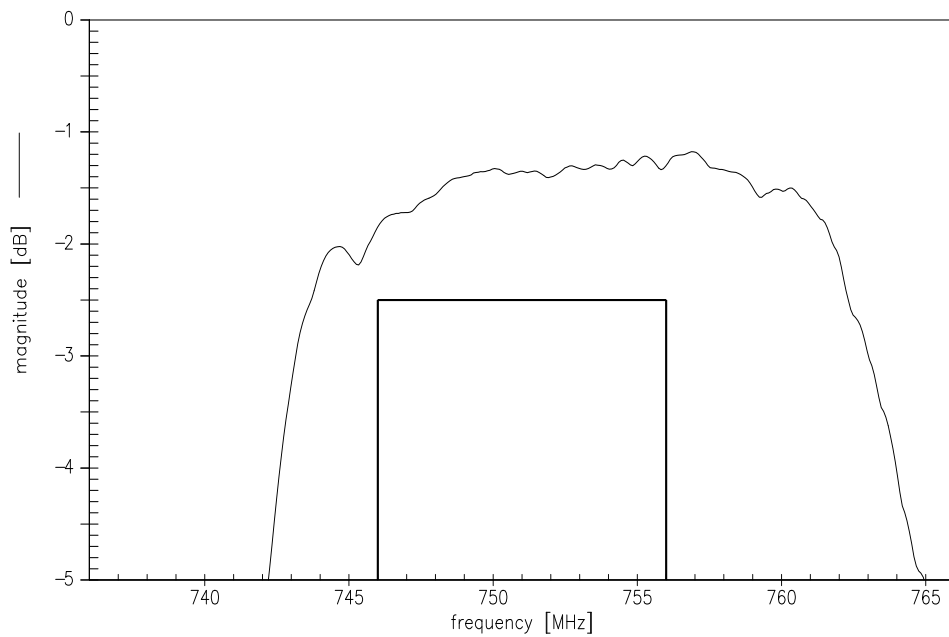


Please read *cautions and warnings* and *important notes* at the end of this document.

Frequency Response ANT-RX



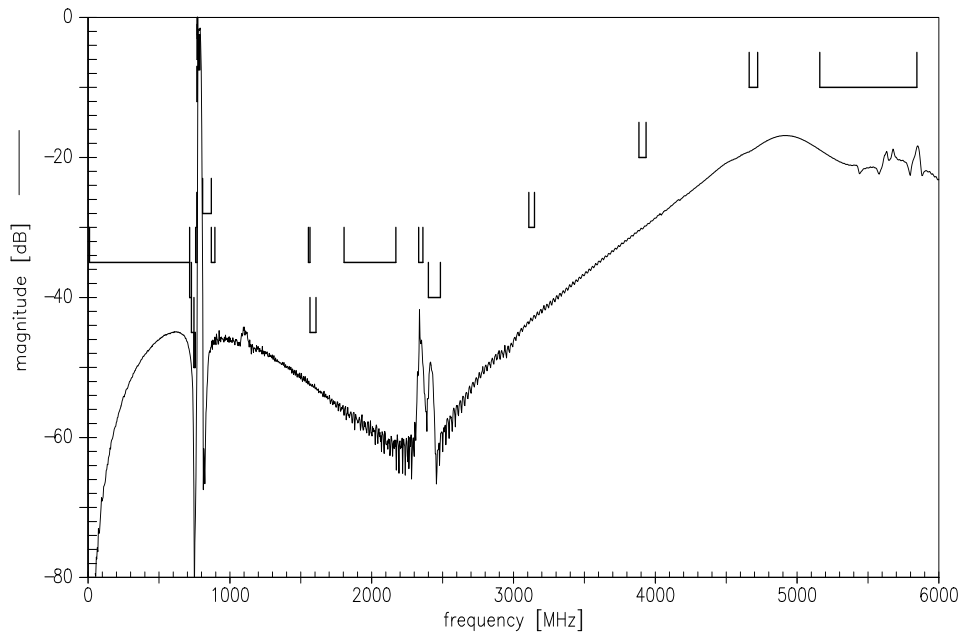
Frequency Response ANT-RX



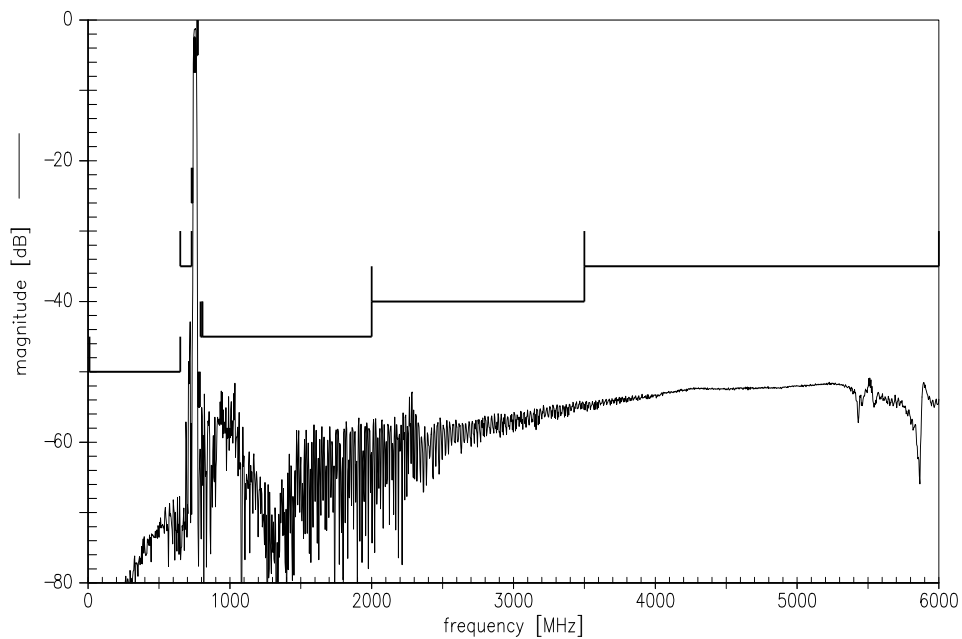
Please read *cautions and warnings* and *important notes* at the end of this document.



Frequency Response TX-ANT

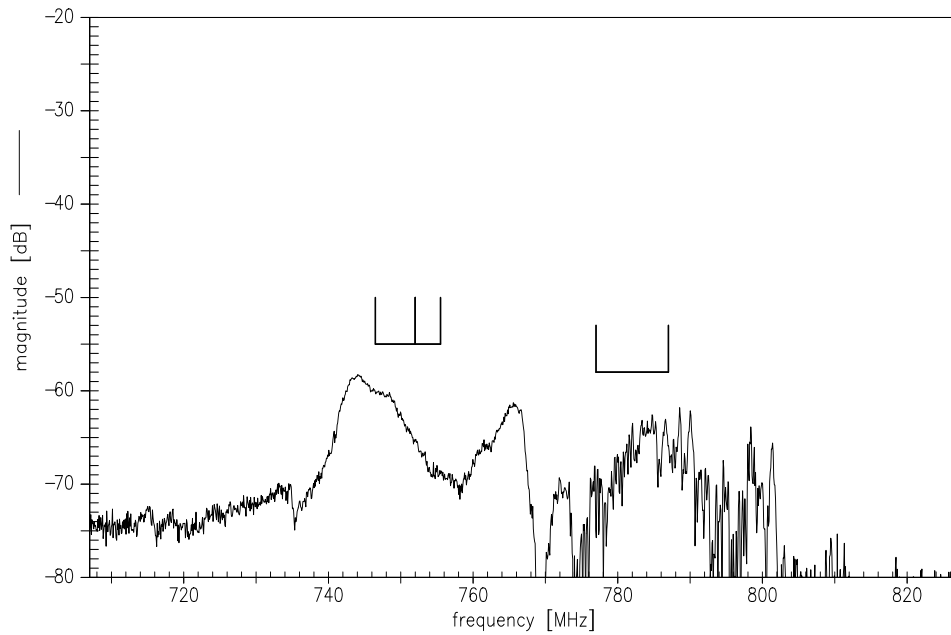


Frequency Response ANT-RX

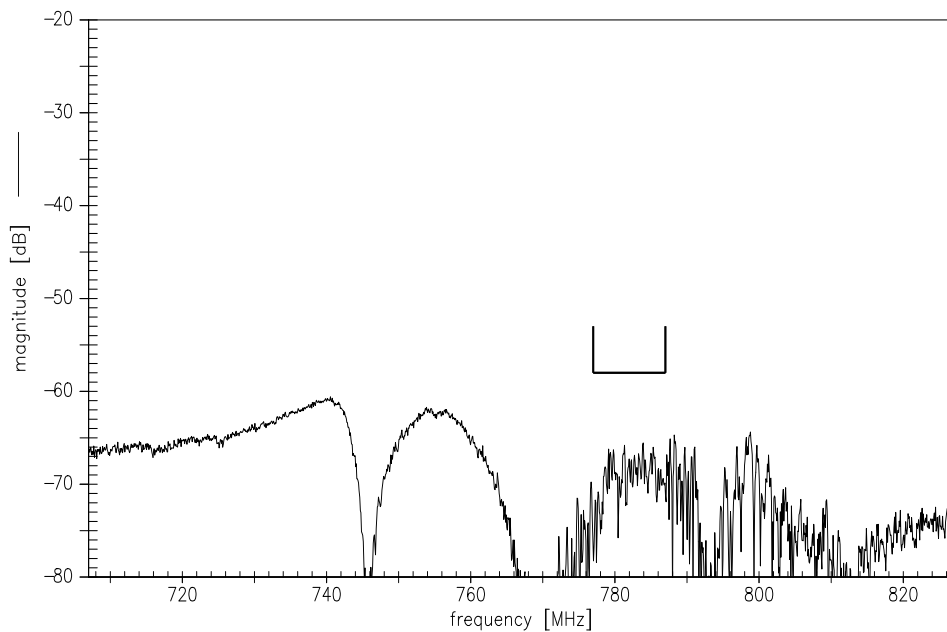


Please read *cautions and warnings* and *important notes* at the end of this document.

Frequency Response TX-RX : Differential mode isolation

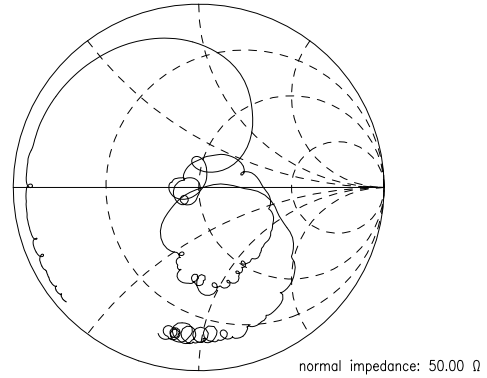
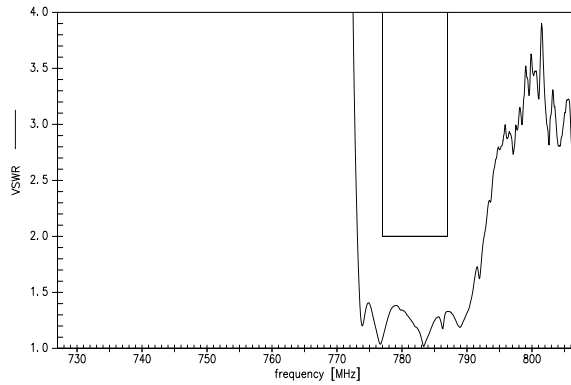


Frequency Response TX-RX : Common mode isolation

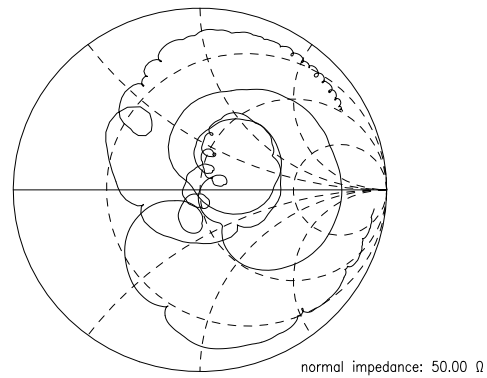
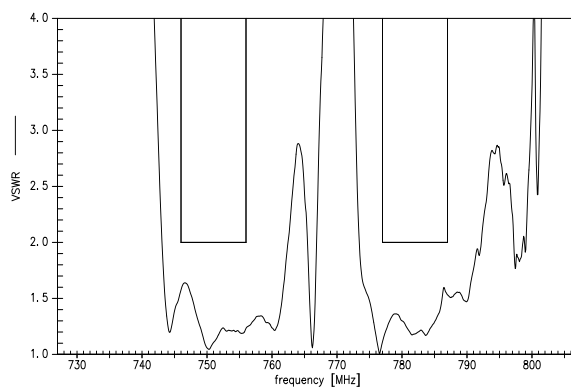


Please read *cautions and warnings* and *important notes* at the end of this document.

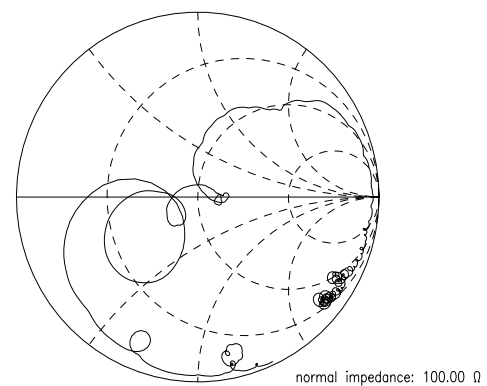
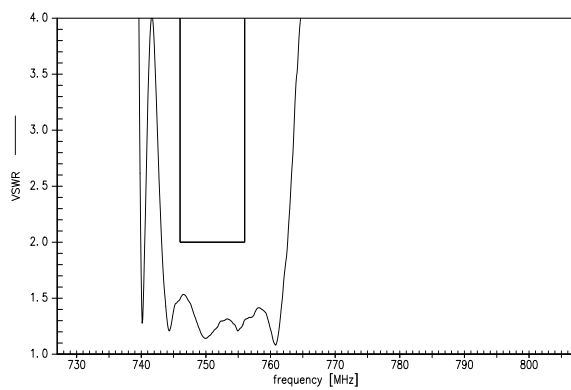
**S11 VSWR (TX)**



**S22 VSWR (ANT)**



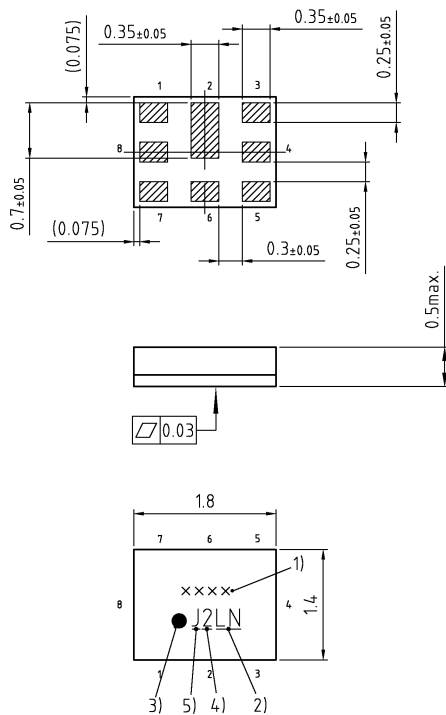
**S33 VSWR (RX)**



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

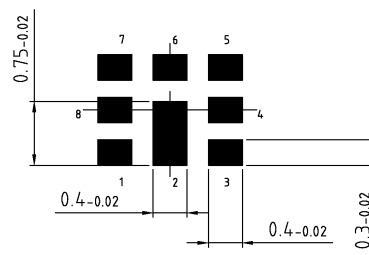
**Package drawings**

General tolerance : +/- 0.1 mm

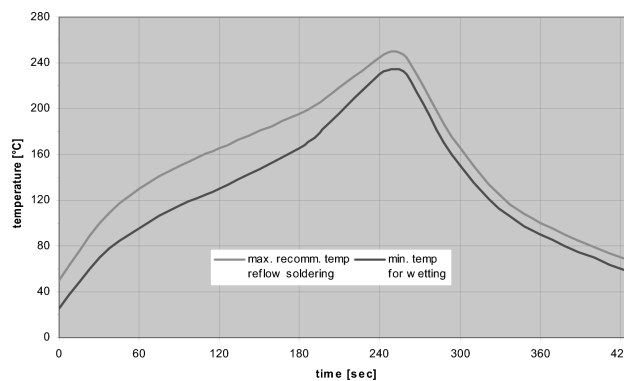


- 5) Indicating production site (" " =Muc, J=Sin)
- 4) Date code acc. to EPCOS (day)
- 3) Marking for pad number 1
- 2) Date code acc. to EN60062 (year, month)
- 1) Position for type designation

**Recommended terminal landing area**



**Recommended Soldering profile**



for Convection and Infrared Soldering - Lead-free

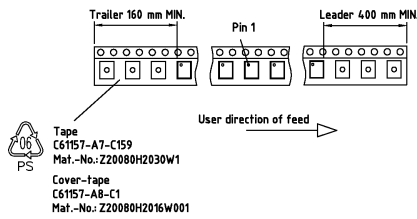
Please read *cautions and warnings and important notes* at the end of this document.

Datasheet



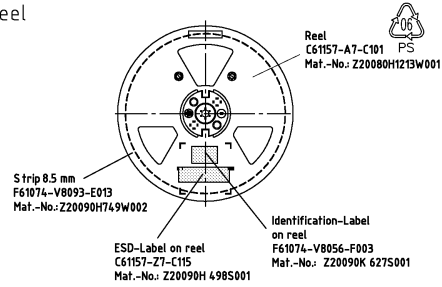
Packaging - Tape and Reel

1. Tape

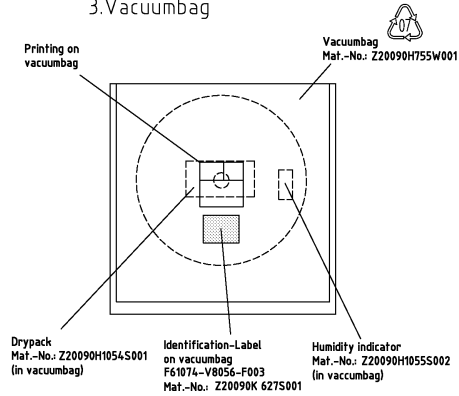


Quantity components for 13" reel : 15k pcs.

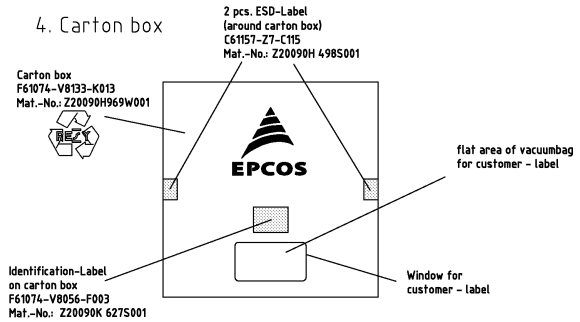
2. Reel



3. Vacuum bag



4. Carton box



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

<b>SAW Components</b>	<b>B8572</b>
<b>SAW Duplexer</b>	<b>782.0 / 751.0 MHz</b>

Datasheet



References

<b>Type</b>	B8572
<b>Ordering code</b> 15K pcs - 13" reel	B39781B8572P810
<b>Marking and package</b>	C61157-A8-A57
<b>Packaging</b>	F61074-V8259-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B8572_NB.S4P, B8572_WB.S4P see file header for port/pin assignment table
<b>Soldering profile</b>	S_6001
<b>RoHS compatible</b>	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."
<b>Matching coils</b>	See Inductor pdf-catalog <a href="http://www.tdk.co.jp/tefe02/coil.htm#aname1">http://www.tdk.co.jp/tefe02/coil.htm#aname1</a> and Data Library for circuit simulation <a href="http://www.tdk.co.jp/etvcl/index.htm">http://www.tdk.co.jp/etvcl/index.htm</a>

For further information please contact your local EPCOS sales office or visit our webpage at [www.epcos.com](http://www.epcos.com).

**Published by EPCOS AG**  
**Systems, Acoustics, Waves Business Group**  
**P.O. Box 80 17 09, 81617 Munich, GERMANY**

© EPCOS AG 2013. This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.

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

## Important notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statements about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application**. As a rule, EPCOS is either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether an EPCOS product with the properties described in the product specification is suitable for use in a particular customer application.
2. We also point out that **in individual cases, a malfunction of electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified**. In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of an electronic component.
3. **The warnings, cautions and product-specific notes must be observed.**
4. In order to satisfy certain technical requirements, **some of the products described in this publication may contain substances subject to restrictions in certain jurisdictions (e.g. because they are classed as hazardous)**. Useful information on this will be found in our Material Data Sheets on the Internet ([www.epcos.com/material](http://www.epcos.com/material)). Should you have any more detailed questions, please contact our sales offices.
5. We constantly strive to improve our products. Consequently, **the products described in this publication may change from time to time**. The same is true of the corresponding product specifications. Please check therefore to what extent product descriptions and specifications contained in this publication are still applicable before or when you place an order.  
We also **reserve the right to discontinue production and delivery of products**. Consequently, we cannot guarantee that all products named in this publication will always be available. The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products.
6. Unless otherwise agreed in individual contracts, **all orders are subject to the current version of the "General Terms of Delivery for Products and Services in the Electrical Industry" published by the German Electrical and Electronics Industry Association (ZVEI)**.
7. The trade names EPCOS, BAOKE, Alu-X, CeraDiode, CeraLink, CSMP, CSSP, CTVS, DeltaCap, DigiSiMic, DSSP, FilterCap, FormFit, MiniBlue, MiniCell, MKD, MKK, MLSC, MotorCap, PCC, PhaseCap, PhaseCube, PhaseMod, PhiCap, SIFERRIT, SIFI, SIKOREL, SilverCap, SIMDAD, SiMic, SIMID, SineFormer, SIOV, SIP5D, SIP5K, ThermoFuse, WindCap are **trademarks registered or pending** in Europe and in other countries. Further information will be found on the Internet at [www.epcos.com/trademarks](http://www.epcos.com/trademarks).

单击下面可查看定价，库存，交付和生命周期等信息

[>>Qualcomm-RF360](#)