PRELIMINARY

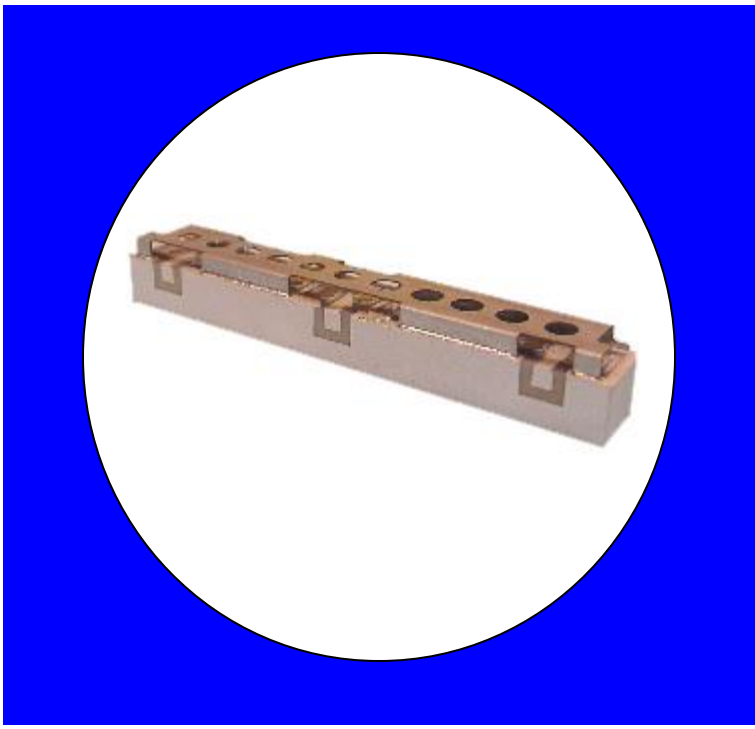
USD007A

Band 7 USD Series Duplexer

Preliminary Rev A – Origin Date: September 30, 2014 – Revision Date: January 9, 2015

Features

- Low Loss
- Low Ripple
- High Rejection



Description

Surface mount, silver (Ag) coated ceramic duplexer. Developed for use in Small Cell Wireless Infrastructure applications.

Weight: 14.1 grams typical

Material: Filter is composed of a ceramic block plated with Ag and a shield made of nickel silver plated steel.

Filter complies with RoHS standards.

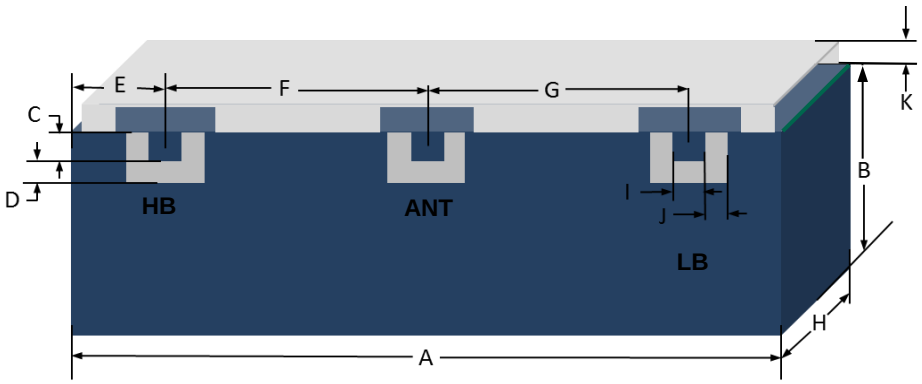
Electrical Specifications

Parameter	Frequency (MHz)	Typical @ 25ºC	Spec. @ 25ºC	Spec. over -40ºC to +85ºC
Antenna to RX Response				
Passband Insertion Loss	2500 - 2570	2.4 dB	2.7 dB max	3.0 dB max
Passband Insertion Loss Over Any 5 MHz	2500 - 2570	2.1 dB	2.4 dB max	2.6 dB max
Passband Return Loss @ TX	2500 - 2570	15.0 dB	12.0 dB min	12.0 dB min
Attenuation:	2620 - 2690	69.0 dB	66.0 dB min	66.0 dB min
TX to Antenna Response				
Passband Insertion Loss	2620 - 2690	2.4 dB	2.7 dB max	3.0 dB max
Passband Insertion Loss Over Any 5 MHz	2620 - 2690	2.1 dB	2.4 dB max	2.6 dB max
Passband Return Loss @ ANT	2620 - 2690	15.0 dB	12.0 dB min	12.0 dB min
Attenuation:	2500 - 2570	74.0 dB	72.0 dB min	72.0 dB min
TX to RX Response				
Rejection @ RX	2500 - 2570	74.0 dB	72.0 dB min	72.0 dB min
Rejection @ TX	2620 - 2690	69.0 dB	66.0 dB min	66.0 dB min
Average Power		4 Watt max		
Peak Power		25 Watt max		

Note: Supplier shall test each filter to the critical electrical specifications of the above table. Any subsequent audits may deviate from in value due to measurement repeatability among different test systems. Such deviations shall not exceed the following limits:

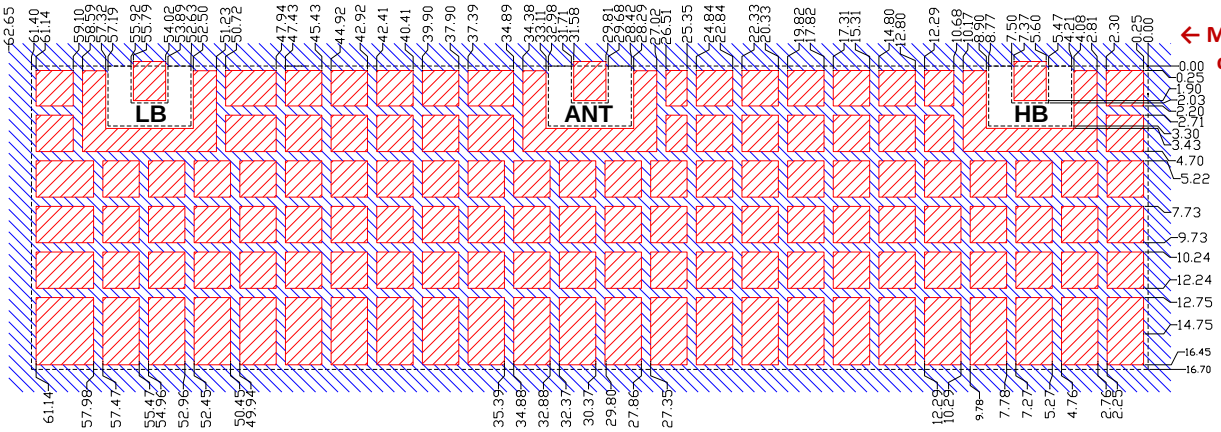
Specification	Allowance
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Stopbands	1.0 dB

Mechanical Drawing



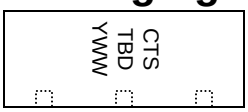
Dim	Nominal (mm)	Tolerance (mm) +/- or max
A	61.40	Max
B	5.80	Max
C	2.03	0.13
D	1.27	0.13
E	6.49	0.13
F	24.21	0.13
G	24.21	0.13
H	10.90	Max
I	2.03	0.13
J	1.27	0.13
K	2.00	0.13

PCB Layout

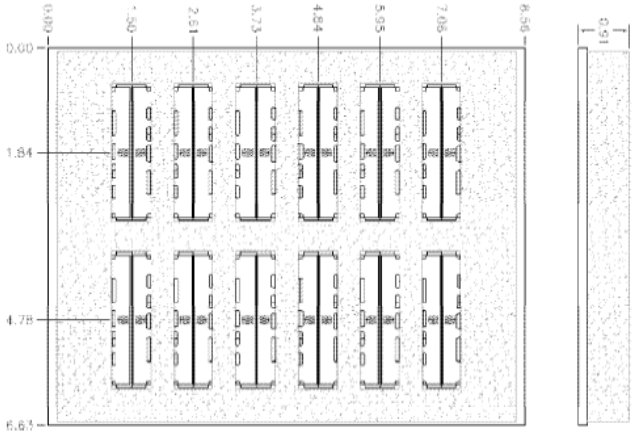


← Must also allocate 2mm of room for the shield.

Packaging and Marking



Product is shipped in preformed foam trays



The trays have 12 slots each with 2 filters per slot. Boxes are packed with 5 Trays per box for a total of 120 filters per box.

Electrical response