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# CER0121A

2100 MHz W-CDMA Duplexer

Rev 2 – Origin Date: July 11, 2005 – Revision Date: March 3, 2006

## Features

- Low loss
- Flat Low Ripple
- High Rejection

## Description

Surface mount, silver (Ag) coated ceramic duplexer. Developed for use in W-CDMA infrastructure applications.

Weight: 3.0 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 @ 25°C	Spec. @ 25°C	Spec. Over -40°C to +85°C
<b>High Band Response (S21)</b>				
Passband Insertion Loss	2110-2170	1.09 dB	1.3 dB max	1.50 dB max
Passband Return Loss @ S22	2110-2170	18.0dB	12.5 dB min	12.0 dB min
Passband Return Loss @ ANT	2110-2170	19.0 dB	12.5 dB min	12.0 dB min
Passband Ripple	2110-2170	0.05	0.60 dB max	0.80 dB max
Attenuation:	1920-1980	61.3 dB	55.5 min	55.0 dB min
<b>Low Band Response (S13)</b>				
Passband Insertion Loss	1920-1980	0.91 dB	1.3 dB max	1.5 dB max
Passband Return Loss @ S33	1920-1980	17.0dB	12.5 dB min	12.0 dB min
Passband Return Loss @ ANT	1920-1980	18.0 dB	12.5 dB min	12.0 dB min
Passband Ripple	1920-1980	0.05 dB	0.60 dB max	0.80 dB max
Attenuation:	2110-2170	56.8 dB	55.5 dB min	55 dB min
<b>Isolation</b>				
Rejection @ High band	2110-2170	58 dB	55.5 dB min	55 dB min
Rejection @ Low band	1920-1980	65 dB	55.5 dB min	55 dB min
Power into any port	5 Watt max			

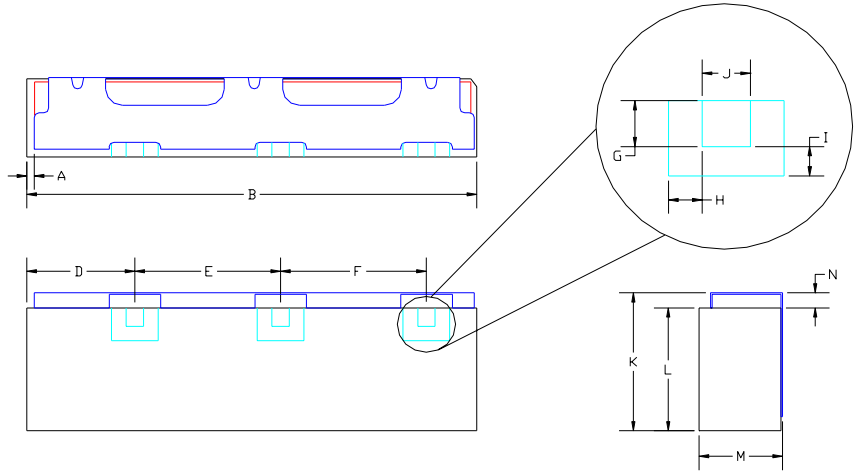
Note: Supplier shall test each filter to the critical electrical specifications of the above table. Any subsequent audits may deviate from in value due to measurement repeatability among different test systems. Such deviations shall not exceed the following limits:

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

\*This product is covered by one or more of the following U.S. and foreign patents including: US 4,692,726;US 4,742,562; US 4,800,348;US 4,829,274;US 5,146,193;EP 0573597;DE 0573597;FR 0573597;JP 508149/92;KR 142171;US 5,162,760;US 5,218,329;US 5,250,916;US 5,327,109;US 5,488,335;CA 2114029;FR 9306297;GB 2273393;JP 3205337;KR 115113;CN 93106228.4;US 5,512,866;EP 0706719;DE 0706719;FR 0706719;GB 0706719;CN 95190359.4;US 5,602,518;US 5,721,520;US 5,745,018;EP 0910875;DE 0910875;DK 0910875;FR 0910875;GB 0910875;IE 0910875;JP 505182/98;KR 10-323013;US 5,994,978;US 6,462,629;CN 00810420.4;US 6,559,735;US 6,650,202;US 6,834,429. Other US and foreign patents pending.

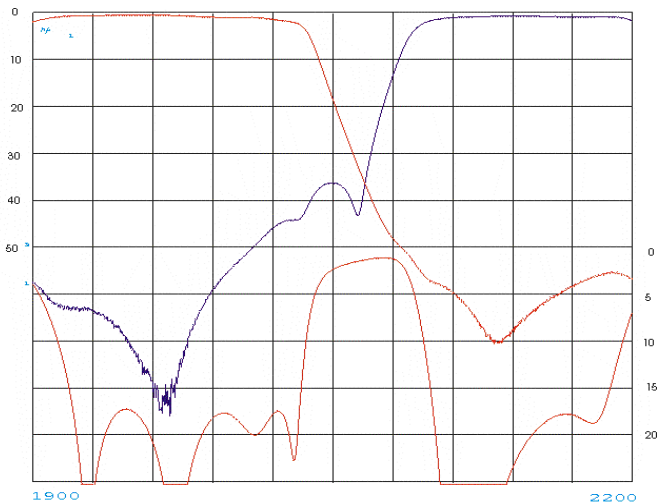
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### Mechanical Drawing

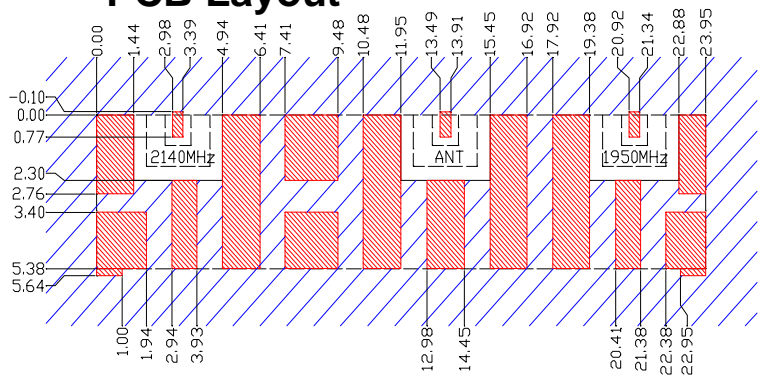


Dim	Nominal (mm)	Tolerance (mm) +/- or max
A	0.25	0.25
B	24.04	max
C		
D	2.72	0.25
E	7.44	0.13
F	10.52	0.13
G	1.02	0.13
H	0.79	0.13
I	0.79	0.13
J	0.89	0.13
K	6.75	max
L	5.64	max
M	4.60	max
N	0.84	0.13

### Electrical response

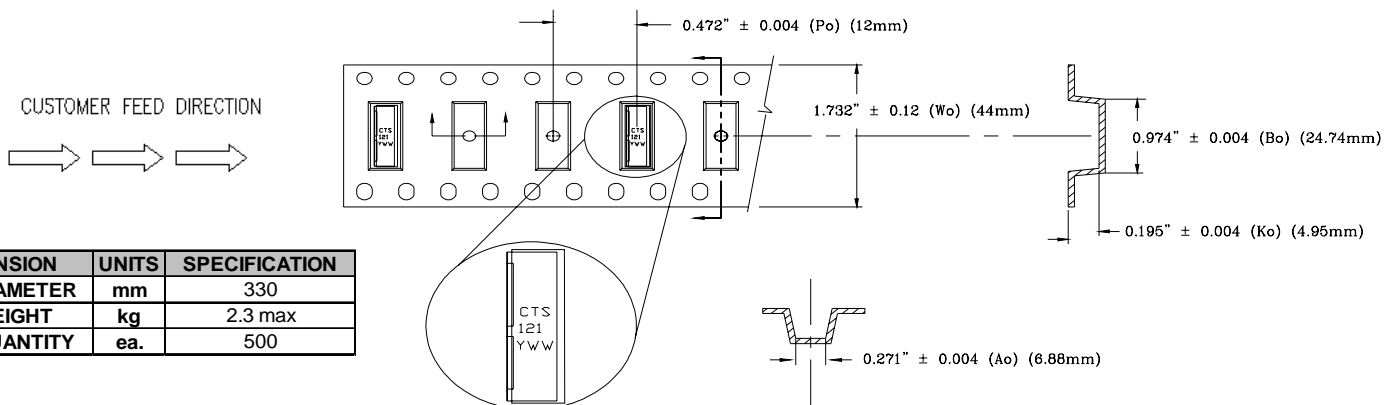


### PCB Layout



- Filter Outline
- Exposed Conductor
- Solder Resist Over Dielectric
- Solder Resist Over Conductor Shield

### Packaging and Marking



DIMENSION	UNITS	SPECIFICATION
REEL DIAMETER	mm	330
REEL WEIGHT	kg	2.3 max
REEL QUANTITY	ea.	500