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# CER0239A

947.5 Mhz GSM BPF

Rev 1 – Origin Date: August 9, 2005 – Revision Date: August 15, 2005

## Features

- Low Loss
- Low Ripple
- High Rejection

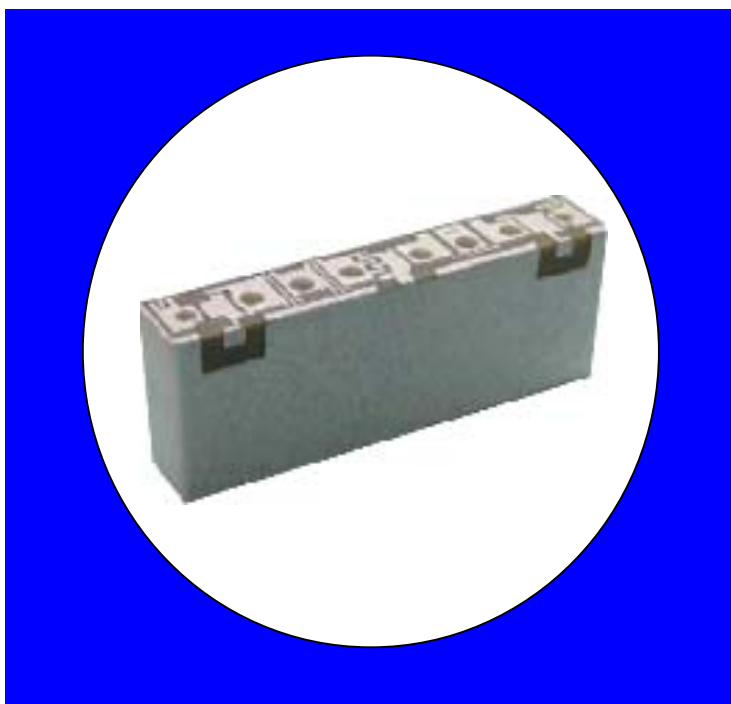
## Description

Surface mount, silver (Ag) coated ceramic duplexer. Developed for use in 800 MHz subscriber and infrastructure applications.

Weight: 3.9 grams typical

Material: Filter is composed of a ceramic block plated with Ag.

Filter complies with RoHS standards.



## Electrical Specifications

| Parameter                | Frequency (MHz) | Typical @25°C | Spec. @ 25°C | Spec. over -40°C to + 85°C |
|--------------------------|-----------------|---------------|--------------|----------------------------|
| Pass band Insertion Loss | 935-960         | 3.0 dB        | 3.3 dB       | 3.5 dB                     |
| Pass band Ripple         | 935-960         | 0.4 dB        | 0.6 dB       | 0.7 dB                     |
| Pass band Return Loss    | 935-960         | 13.0 dB       | 10.0 dB      | 10.0 dB                    |
| Rejection                | 890-915         | 43.0 dB       | 40.0 dB      | 40.0 dB                    |
|                          | 980             | 30.0 dB       | 10.0 dB      | 10.0 dB                    |
| Power into any port      |                 |               | 5.0 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;E 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.

\*CTS Corporation 2006 reserves all copyrights in the layout, design and configuration of the patterns on this product.\*

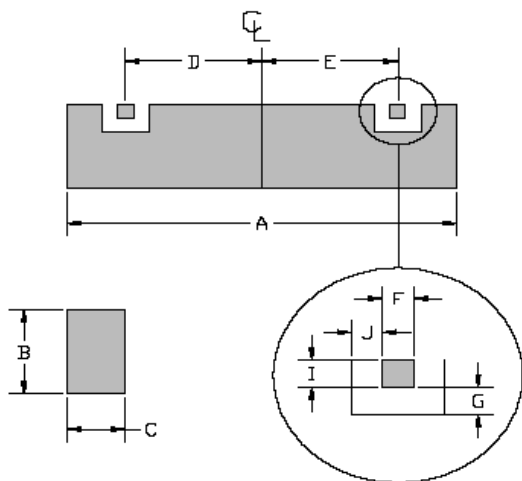
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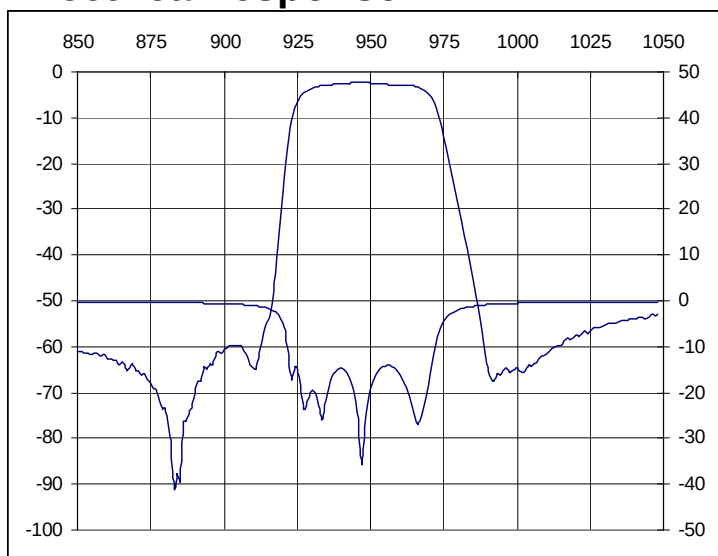
## Mechanical Drawing

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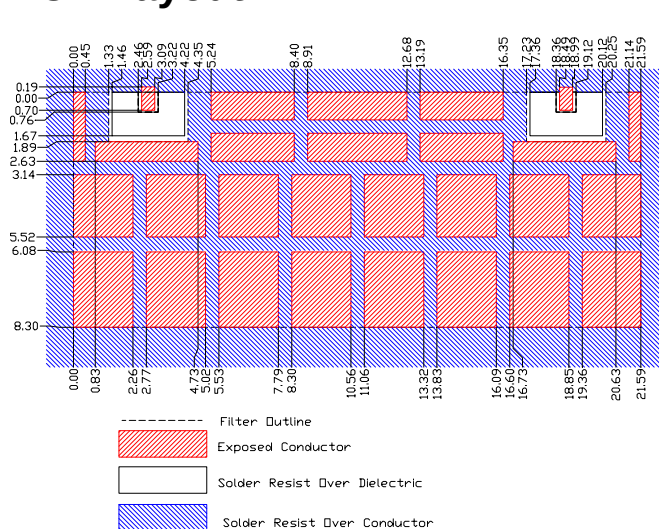


| Dim | Nominal (mm) | Tolerance (mm)<br>+/- or max |
|-----|--------------|------------------------------|
| A   | 21.54        | max                          |
| B   | 8.3          | max                          |
| C   | 4.00         | max                          |
| D   | 7.95         | 0.25                         |
| E   | 7.95         | 0.25                         |
| F   | 0.76         | 0.13                         |
| G   | 1.00         | 0.13                         |
| H   |              |                              |
| I   | 0.76         | 0.13                         |
| J   | 1.0          | 0.13                         |

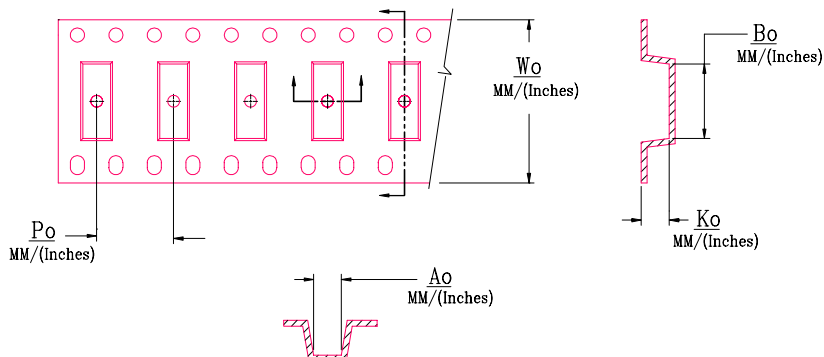
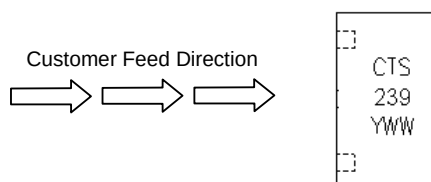
## Electrical response



## PCB Layout



## Packaging and Marking



| DIMENSION     | UNITS | SPECIFICATION |
|---------------|-------|---------------|
| REEL DIAMETER | mm    | 330           |
| REEL WEIGHT   | kg    | 2.7           |
| REEL QUANTITY | ea.   | 500           |

| MODEL NO. | Wo           | Ao           | Bo            | Ko           | Po           |
|-----------|--------------|--------------|---------------|--------------|--------------|
| CER0239   | 44.0/(1.732) | 9.91/(0.390) | 21.97/(0.865) | 4.19/(0.165) | 16.0/(0.630) |