

### Features

- Low Ripple
- High Rejection
- Low Loss

### Description

Surface mount, silver (Ag) coated ceramic filter.

Weight: 4.0 grams typical

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

Filter complies with RoHS standards.

Filter complies with:

MIL-STD-202, Method 213, Condition C

MIL-STD-202, Method 201 and 204.



### Electrical Specifications

| Parameter                           | Frequency MHz | Typical @ 25°C | Specification @ 25°C | Spec over -40°C to +110°C |
|-------------------------------------|---------------|----------------|----------------------|---------------------------|
| Passband Iloss                      | 3950 - 4050   | -1.9           | -2.2                 | -2.5                      |
| Passband Flatness                   | 3950 - 4050   | 0.6            | 0.8                  | 1.0                       |
| Passband Group Delay Variation (ns) | 3950 - 4050   | 3.0            | 4.0                  | 5.0                       |
| Passband Return Loss @ Port 1       | 3950 - 4050   | -14.0          | -12.0                | -12.0                     |
| Passband Return Loss @ Port 2       | 3950 - 4050   | -14.0          | -12.0                | -12.0                     |
| Attenuation                         | 0.1 - 3745    | -63.0          | -59.0                | -59.0                     |
|                                     | 3844          | -43.0          | -41.0                | -40.0                     |
|                                     | 4150          | -43.0          | -41.0                | -40.0                     |
|                                     | 4250 - 5000   | -63.0          | -60.0                | -60.0                     |
|                                     | 5000 - 6450   | -38.0          | -34.0                | -34.0                     |
| Power into any port                 |               | 2 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:

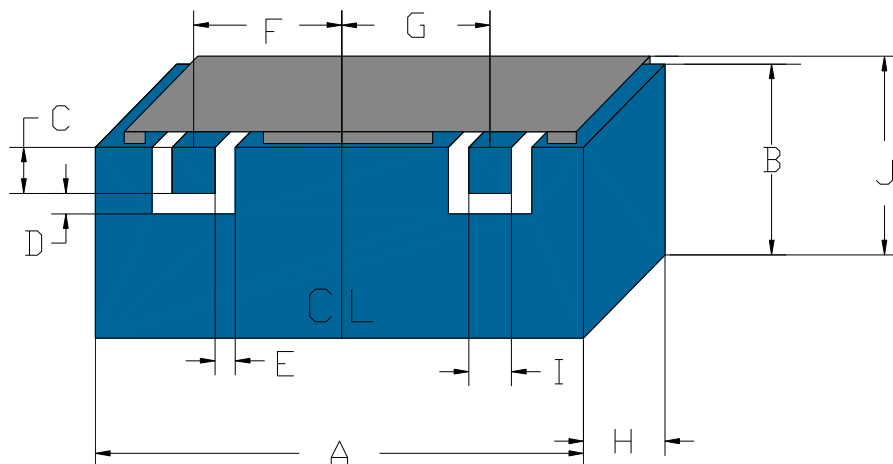
#### Specification Allowance

|                |        |
|----------------|--------|
| 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.

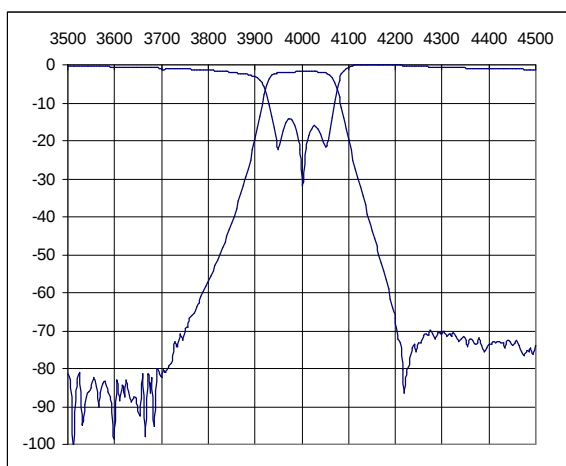
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## Mechanical Drawing

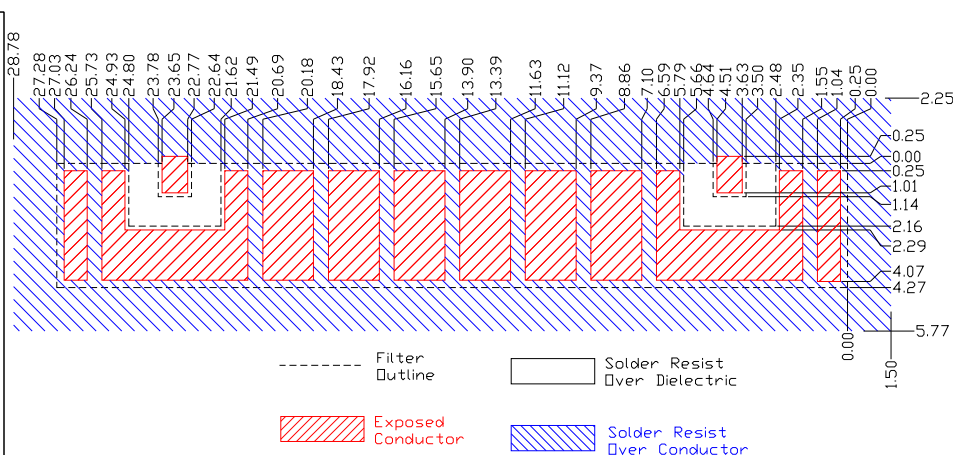


| Dim | Nominal (mm) | Tolerance (mm) +/- or max |
|-----|--------------|---------------------------|
| A   | 27.3         | max                       |
| B   | 4.28         | max                       |
| C   | 1.14         | 0.13                      |
| D   | 1.02         | 0.13                      |
| E   | 1.02         | 0.13                      |
| F   | 9.57         | 0.13                      |
| G   | 9.57         | 0.13                      |
| H   | 6.20         | max                       |
| I   | 1.14         | 0.13                      |
| J   | 5.79         | max                       |

## Electrical response

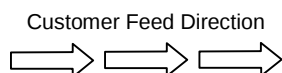


## PCB Layout



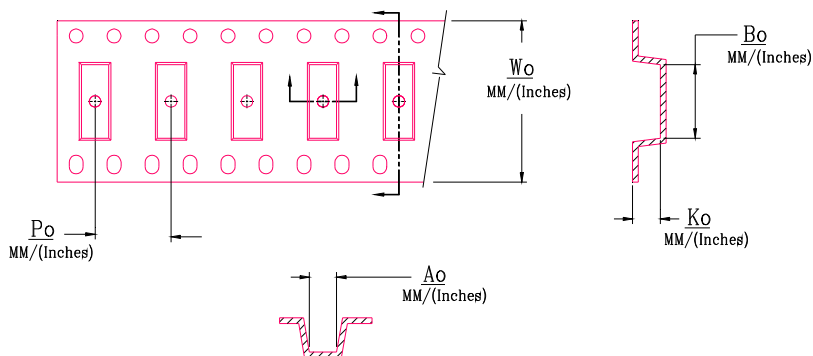
## Packaging and Marking

| DIMENSION     | UNITS | SPECIFICATION |
|---------------|-------|---------------|
| REEL DIAMETER | mm    | 330           |
| REEL WEIGHT   | kg    | 2.6           |
| REEL QUANTITY | ea.   | 500           |



### Product Marking

CTS  
813  
YWW



| Wo        | Ao          | Bo          | Ko         | Po          |
|-----------|-------------|-------------|------------|-------------|
| Inches/mm | Inches/mm   | Inches/mm   | Inches/mm  | Inches/mm   |
| 1.732"/44 | 0.240"/6.10 | 1.087"/27.6 | 0.169"/4.3 | 0.472"/12.0 |