

## Diplexer Surface Mount

## DPL-EDU0985+

### Important Note

This model has been designed, built and tested in our engineering department. Performance data represents model capability. At present it is a non-catalog model. On request, we can supply a final specification sheet, part number and price/delivery information.

Please click "Back", and then click "Contact Us" for Applications support.

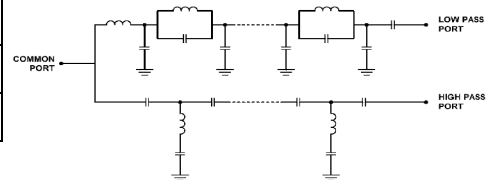


CASE STYLE : HU1186

| ELECTRICAL SPECIFICATIONS 50Ω @ +25°C |                |                     |                 |      |      |      |       |
|---------------------------------------|----------------|---------------------|-----------------|------|------|------|-------|
| Parameter                             |                | Port                | Frequency (MHz) | Min. | Typ. | Max. | Units |
| Passband                              | Insertion Loss | Lowpass             | 800-2200        |      | 1    | 3.5  | dB    |
|                                       |                | Highpass            | 2400-2500       |      | 1.5  | 3    | dB    |
|                                       | Return Loss    | Lowpass             | 800-2200        | 8.5  | 20   |      | dB    |
|                                       |                | Highpass            | 2400-2500       | 8.5  | 20   |      | dB    |
|                                       |                | Common              | 800-2200        | 8.5  | 20   |      | dB    |
|                                       |                |                     | 2400-2500       | 8.5  | 20   |      | dB    |
| Stop band isolation                   |                | Lowpass             | 2400-2500       | 20   | 35   |      | dB    |
|                                       |                | Highpass            | 800-2200        | 20   | 35   |      | dB    |
| Crossover isolation                   |                | Lowpass to Highpass | 2200-2400       | 10   | 18   |      | dB    |

Functional Schematic

| MAXIMUM RATINGS       |                |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C  |
| Storage Temperature   | -55°C to 100°C |
| RF Power Input        | 0.5W           |



| PIN CONNECTIONS |                           |
|-----------------|---------------------------|
| Highpass port   | 13                        |
| Lowpass port    | 9                         |
| Common port     | 2                         |
| Ground          | 1,3,4,5,6,7,8,10,11,12,14 |

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## Typical Performance Data

| FREQUENCY<br>(MHz) | INSERTION LOSS<br>(dB) |                   | CROSS OVER<br>ISOLATION<br>(dB)<br>Between<br>LPF and HPF | RETURN LOSS<br>(dB) |                  |                   |
|--------------------|------------------------|-------------------|-----------------------------------------------------------|---------------------|------------------|-------------------|
|                    | Low Pass<br>Port       | High Pass<br>Port |                                                           | Common<br>Port      | Low Pass<br>Port | High Pass<br>Port |
| 10                 | 0.05                   | 70.57             | 77.10                                                     | 46.11               | 45.71            | 0.00              |
| 50                 | 0.07                   | 61.91             | 61.62                                                     | 35.43               | 35.58            | 0.01              |
| 100                | 0.09                   | 55.78             | 55.88                                                     | 30.26               | 30.45            | 0.00              |
| 200                | 0.14                   | 49.98             | 50.06                                                     | 25.20               | 25.53            | 0.02              |
| 400                | 0.23                   | 44.43             | 44.98                                                     | 20.45               | 21.00            | 0.05              |
| 600                | 0.33                   | 41.46             | 42.71                                                     | 18.59               | 19.30            | 0.12              |
| 800                | 0.40                   | 39.30             | 40.89                                                     | 18.32               | 19.22            | 0.19              |
| 1000               | 0.46                   | 37.08             | 38.14                                                     | 19.85               | 21.27            | 0.23              |
| 1500               | 0.62                   | 33.88             | 34.41                                                     | 23.58               | 23.29            | 0.36              |
| 1800               | 0.83                   | 35.76             | 35.39                                                     | 23.84               | 22.34            | 0.65              |
| 1900               | 0.98                   | 27.66             | 28.06                                                     | 22.52               | 18.47            | 1.17              |
| 2000               | 1.29                   | 28.37             | 29.68                                                     | 15.84               | 13.14            | 2.89              |
| 2100               | 1.68                   | 34.11             | 41.56                                                     | 13.45               | 11.27            | 2.07              |
| 2200               | 2.27                   | 33.45             | 32.13                                                     | 31.79               | 17.93            | 1.76              |
| 2250               | 4.91                   | 15.17             | 21.34                                                     | 13.77               | 8.00             | 3.10              |
| 2275               | 8.49                   | 8.46              | 19.01                                                     | 13.82               | 4.03             | 5.88              |
| 2300               | 13.20                  | 4.89              | 19.48                                                     | 23.69               | 2.15             | 10.87             |
| 2400               | 25.94                  | 1.70              | 28.37                                                     | 14.02               | 0.85             | 14.11             |
| 2450               | 30.68                  | 1.37              | 32.00                                                     | 13.93               | 0.74             | 14.74             |
| 2500               | 34.72                  | 1.18              | 35.04                                                     | 14.25               | 0.68             | 15.42             |

REV. X1

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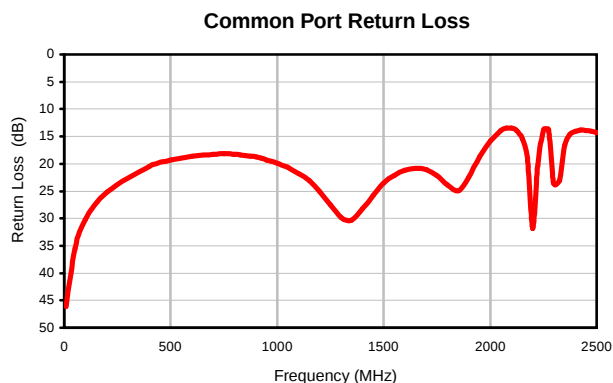
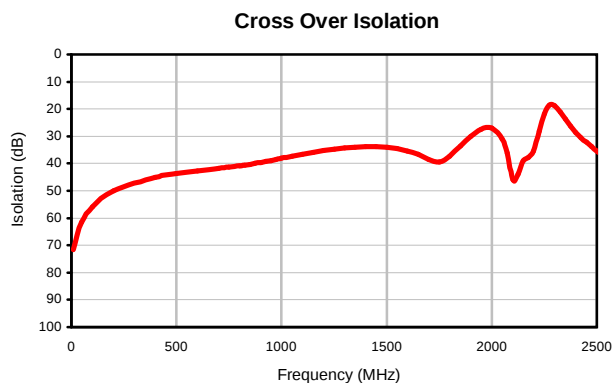
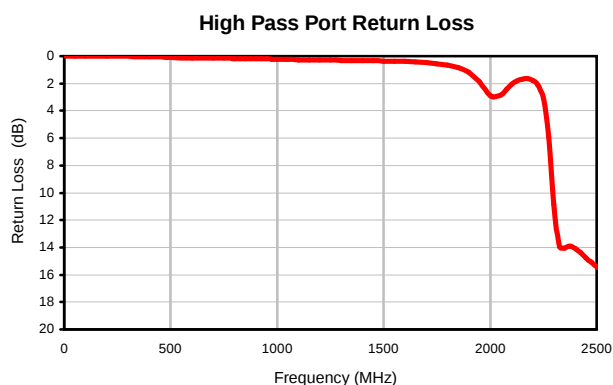
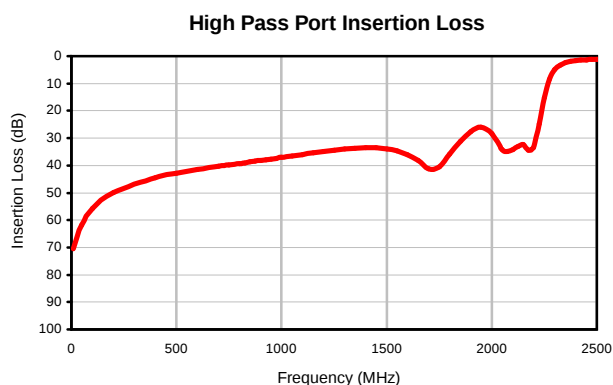
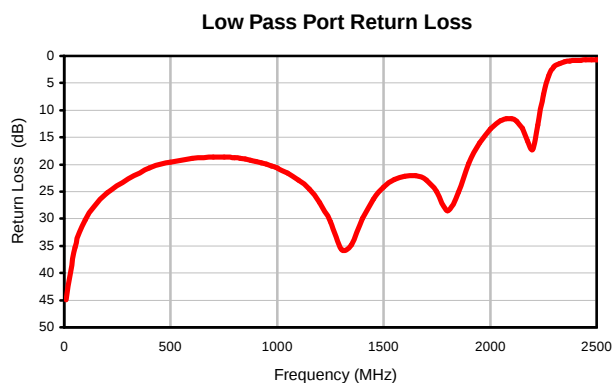
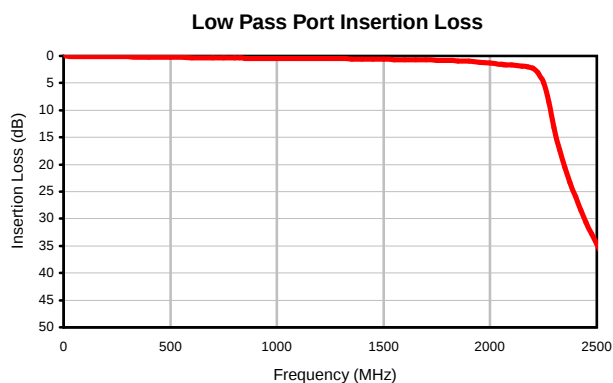
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# Surface Mount Diplexer

## Typical Performance Curves

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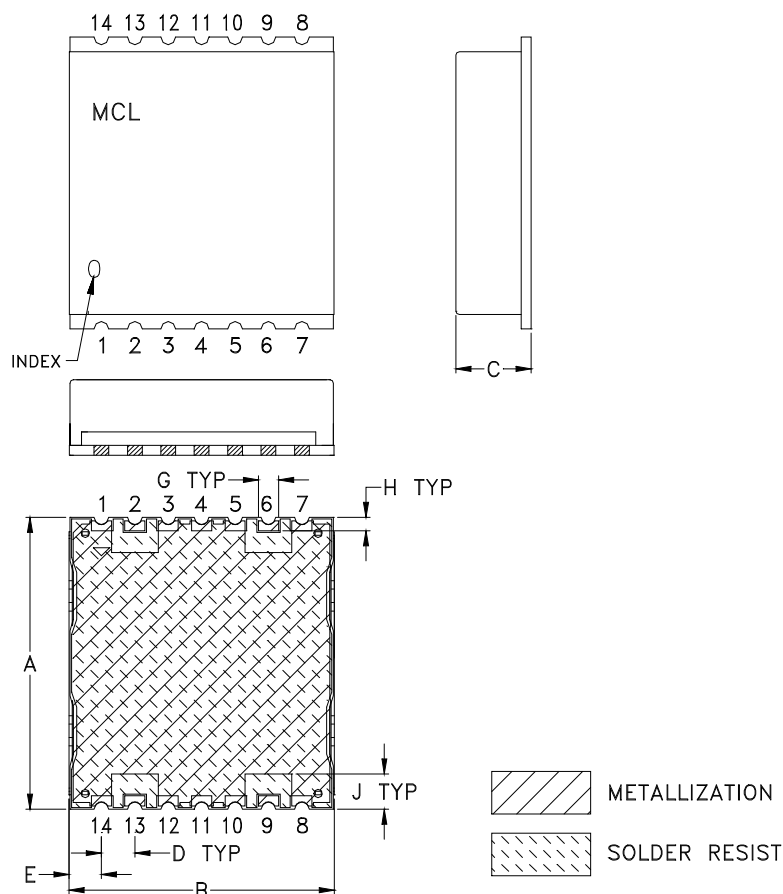
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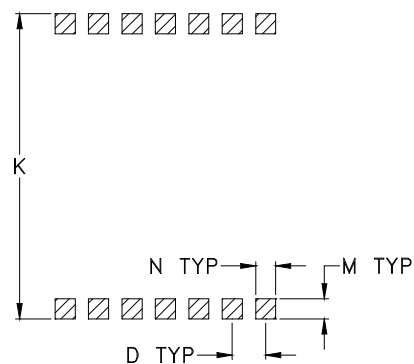


## Outline Dimensions

HU1186



## PCB Land Pattern



Suggested Layout,  
Tolerance to be within  $\pm 0.002$

| CASE#  | A               | B               | C             | D              | E              | F      | G              | H              | J              | K               | L      | M              | N              | P      | WT,<br>GRAM |
|--------|-----------------|-----------------|---------------|----------------|----------------|--------|----------------|----------------|----------------|-----------------|--------|----------------|----------------|--------|-------------|
| HU1186 | .870<br>(22.10) | .800<br>(20.32) | .25<br>(6.35) | .100<br>(2.54) | .097<br>(2.46) | -<br>- | .060<br>(1.52) | .040<br>(1.02) | .105<br>(2.67) | .910<br>(23.11) | -<br>- | .060<br>(1.52) | .060<br>(1.52) | -<br>- | 2.85        |

Dimensions are in inches (mm). Tolerances: 2PL. +/- .03; 3PL. +/- .015

### Notes:

1. Case material: Nickel-Silver alloy.
2. Base: Printed wiring laminate.
3. Termination finish:

For RoHS Case Styles: 2-5  $\mu$  inch (.05-.13 microns) Gold over 120-240  $\mu$  inch (3.05-6.10 microns) Nickel plate.  
For RoHS-5 Case Styles: Tin-Lead plate.

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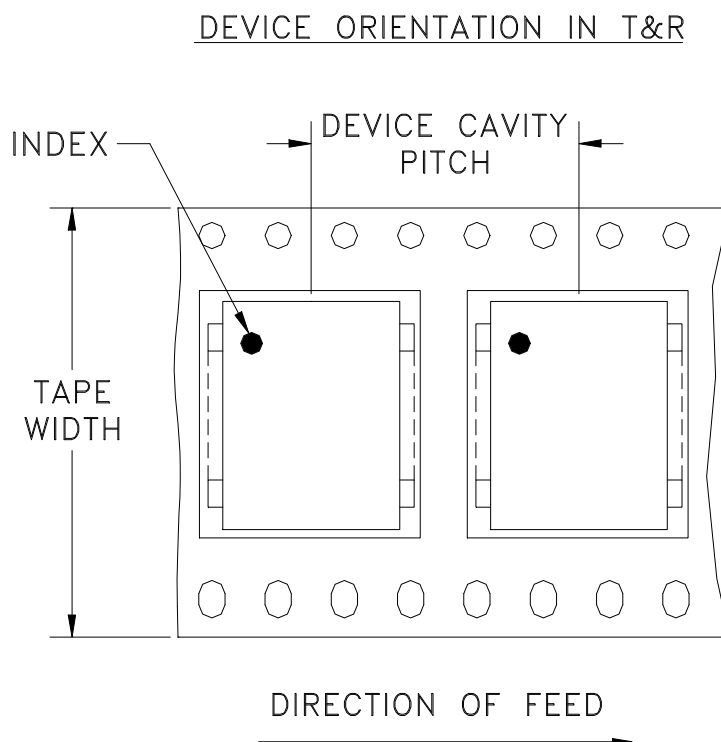
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RF/IF MICROWAVE COMPONENTS

# Tape & Reel Packaging TR-F21



| Tape Width,<br>mm | Device Cavity<br>Pitch, mm | Reel Size,<br>inches | Devices per Reel |
|-------------------|----------------------------|----------------------|------------------|
| 32                | 32                         | 13                   | 200              |

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