Multilayer Diplexer
For 800-945MHz / 1572-1990MHz

DPX201990DT-4051A2

2.0x1.25mm [EIA 0805]*
* Dimensions Code JIS[EIA]
Multilayer Diplexer
For 800-945MHz / 1572-1990MHz

DPX201990DT-4051A2

SHAPES AND DIMENSIONS

[Top view]

<table>
<thead>
<tr>
<th>Terminal functions</th>
<th>Dimensions in mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 GND</td>
<td>0.20±0.15</td>
</tr>
<tr>
<td>2 Common</td>
<td>0.20±0.15</td>
</tr>
<tr>
<td>3 GND</td>
<td>0.35±0.15</td>
</tr>
<tr>
<td>4 High-band</td>
<td>1.25±0.15</td>
</tr>
<tr>
<td>5 GND</td>
<td>0.90±0.10</td>
</tr>
<tr>
<td>6 Low-band</td>
<td>2.00±0.15</td>
</tr>
</tbody>
</table>

RECOMMENDED LAND PATTERN

Dimensions in mm:
- 0.89
- 0.33
- 0.32
- 0.77


All specifications are subject to change without notice.
Before using these products, be sure to request the delivery specifications.
# ELECTRICAL CHARACTERISTICS
## LOW-BAND

<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency Range (MHz)</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion Loss (dB)</td>
<td>800 to 945</td>
<td>—</td>
<td>0.38</td>
<td>0.50</td>
</tr>
<tr>
<td></td>
<td>800 to 945</td>
<td>—</td>
<td>—</td>
<td>0.65 (–40 to +85°C)</td>
</tr>
<tr>
<td>Attenuation (dB)</td>
<td>1572 to 2000</td>
<td>25</td>
<td>31.3</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>2400 to 2700</td>
<td>35</td>
<td>41.2</td>
<td>—</td>
</tr>
<tr>
<td>Characteristic Impedance (Ω)</td>
<td></td>
<td></td>
<td>50 (Nominal)</td>
<td></td>
</tr>
</tbody>
</table>

- Ta: +25±5°C

## HIGH-BAND

<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency Range (MHz)</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion Loss (dB)</td>
<td>1572 to 1578</td>
<td>—</td>
<td>0.38</td>
<td>0.50</td>
</tr>
<tr>
<td></td>
<td>1710 to 1990</td>
<td>—</td>
<td>0.42</td>
<td>0.55</td>
</tr>
<tr>
<td></td>
<td>1572 to 1578</td>
<td>—</td>
<td>—</td>
<td>0.65 (–40 to +85°C)</td>
</tr>
<tr>
<td></td>
<td>1710 to 1990</td>
<td>—</td>
<td>—</td>
<td>0.70 (–40 to +85°C)</td>
</tr>
<tr>
<td>Attenuation (dB)</td>
<td>800 to 945</td>
<td>23</td>
<td>28.4</td>
<td>—</td>
</tr>
<tr>
<td>Characteristic Impedance (Ω)</td>
<td></td>
<td></td>
<td>50 (Nominal)</td>
<td></td>
</tr>
</tbody>
</table>

- Ta: +25±5°C

## COMMON

<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency Range (MHz)</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Handling (W)</td>
<td></td>
<td>—</td>
<td>—</td>
<td>3</td>
</tr>
<tr>
<td>Characteristic Impedance (Ω)</td>
<td></td>
<td>50 (Nominal)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Ta: +25±5°C

## TEMPERATURE RANGE

<table>
<thead>
<tr>
<th>Operating temperature (°C)</th>
<th>Storage temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-40 to +85</td>
<td>-40 to +85</td>
</tr>
</tbody>
</table>

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**FREQUENCY CHARACTERISTICS**

**LOW-BAND**

- **Insertion Loss**
- **Return Loss**
- **Attenuation**

**HIGH-BAND**

- **Insertion Loss**
- **Return Loss**
- **Attenuation**

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FREQUENCY CHARACTERISTICS

COMMON

Return Loss

Isolation

Return Loss (dB)

Isolation (dB)

0 500 1000 1500 2000 2500 3000

0 500 1000 1500 2000 2500 3000

Frequency (MHz)

Frequency (MHz)

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RECOMMENDED REFLOW PROFILE

<table>
<thead>
<tr>
<th>Preheating</th>
<th>Soldering (T3 to T4)</th>
<th>Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temp.</td>
<td>Time</td>
<td>Temp.</td>
</tr>
<tr>
<td>T1</td>
<td>150°C</td>
<td>200°C</td>
</tr>
</tbody>
</table>

* t3 : Time within 5°C of actual peak temperature
The maximum number of reflow is 3.
REMINDERS FOR USING THESE PRODUCTS

Before using these products, be sure to request the delivery specifications.

SAFETY REMINDERS

Please pay sufficient attention to the warnings for safe designing when using these products.

⚠️ REMINDERS

The products listed on this catalog are intended for use in general electronic equipment (AV equipment, telecommunications equipment, home appliances, amusement equipment, computer equipment, personal equipment, office equipment, measurement equipment, industrial robots) under a normal operation and use condition.

The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society, person or property.

Please understand that we are not responsible for any damage or liability caused by use of the products in any of the applications below or for any other use exceeding the range or conditions set forth in this catalog.

(1) Aerospace/Aviation equipment
(2) Transportation equipment (cars, electric trains, ships, etc.)
(3) Medical equipment
(4) Power-generation control equipment
(5) Atomic energy-related equipment
(6) Seabed equipment
(7) Transportation control equipment
(8) Public information-processing equipment
(9) Military equipment
(10) Electric heating apparatus, burning equipment
(11) Disaster prevention/crime prevention equipment
(12) Safety equipment
(13) Other applications that are not considered general-purpose applications

When using this product in general-purpose applications, you are kindly requested to take into consideration securing protection circuit/equipment or providing backup circuits, etc., to ensure higher safety.

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