

# Multilayer Diplexers

For 2.4/5.0 GHz W-LAN

## DPX Series

**Type:**            **DPX165850DT-8017A1 (1.6×0.8×0.6mm)**  
                      **DPX165850DT-8117A1 (1.6×0.8×0.6mm)**  
                      **DPX165950DT-8018A1 (1.6×0.8×0.6mm max.)**  
                      **DPX165950DT-8118A1 (1.6×0.8×0.6mm max.)**

**Issue date:**     May 2011

- All specifications are subject to change without notice.
  - Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.
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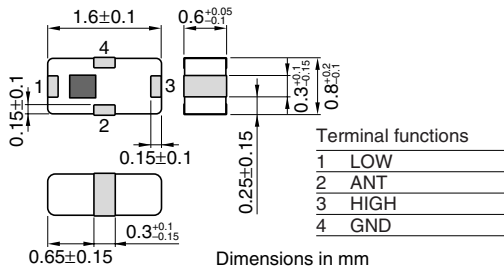
# Multilayer Chip Diplexers

## For 2.4/5GHz W-LAN

Conformity to RoHS Directive

DPX Series DPX165850DT-8017A1

### SHAPES AND DIMENSIONS



### ELECTRICAL CHARACTERISTICS

| Item              | Port      | Frequency range | Minimum value | Typical value | Maximum value |
|-------------------|-----------|-----------------|---------------|---------------|---------------|
| Insertion loss    | ANT-LOW   | 2400 to 2500MHz | (dB) —        | 0.3           | 0.4           |
|                   | ANT-HIGH  | 4900 to 5850MHz | (dB) —        | 0.37          | 0.6           |
| Attenuation       | ANT-LOW   | 4900 to 5850MHz | (dB) 20.0     | 23.1          | —             |
|                   | ANT-HIGH  | 2400 to 2500MHz | (dB) 20.0     | 35.2          | —             |
| VSWR              | ANT       | 2400 to 2500MHz | —             | 1.26          | 1.6           |
|                   | ANT       | 4900 to 5850MHz | —             | 1.34          | 1.9           |
|                   | LOW       | 2400 to 2500MHz | —             | 1.24          | 1.6           |
|                   | HIGH      | 4900 to 5850MHz | —             | 1.35          | 1.9           |
| Temperature range | Operating | (°C)            | —40           | —             | +85           |
|                   | Storage   | (°C)            | —40           | —             | +85           |

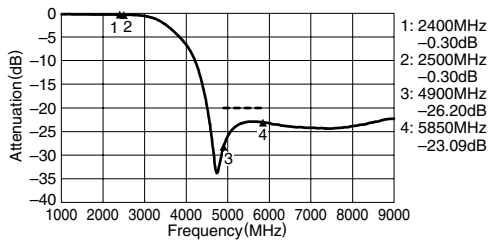
• Ta: +25±5°C

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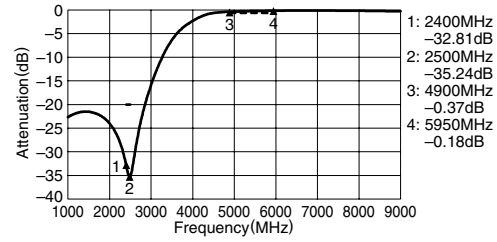
• All specifications are subject to change without notice.

## FREQUENCY CHARACTERISTICS

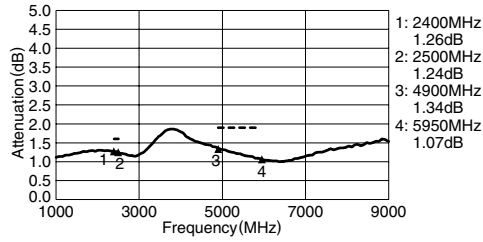
### Lo-BAND PORT S21



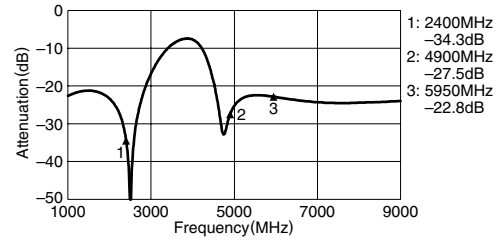
### Hi-BAND PORT S31



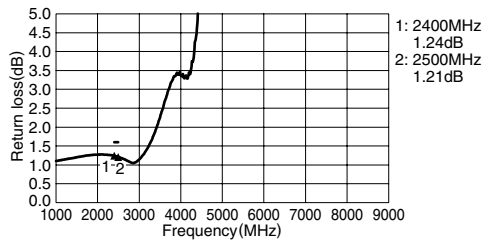
### COMMON PORT VSWR S11



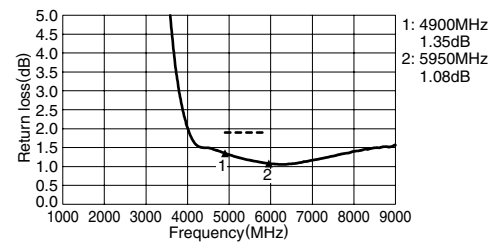
### ISOLATION S23



### Lo-BAND PORT VSWR S22



### Hi-PORT VSWR S33



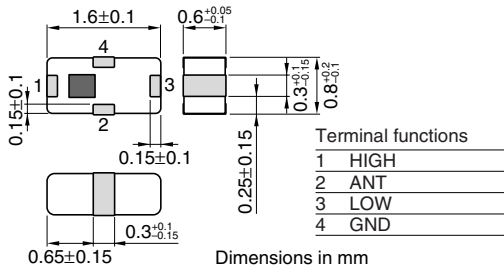
# Multilayer Chip Diplexers

## For 2.4/5GHz W-LAN

Conformity to RoHS Directive

DPX Series DPX165850DT-8117A1

### SHAPES AND DIMENSIONS



### ELECTRICAL CHARACTERISTICS

| Item              | Port      | Frequency range | Minimum value | Typical value | Maximum value |
|-------------------|-----------|-----------------|---------------|---------------|---------------|
| Insertion loss    | ANT-LOW   | 2400 to 2500MHz | (dB) —        | 0.27          | 0.4           |
|                   | ANT-HIGH  | 4900 to 5850MHz | (dB) —        | 0.45          | 0.6           |
| Attenuation       | ANT-LOW   | 4900 to 5850MHz | (dB) 20.0     | 23.5          | —             |
|                   | ANT-HIGH  | 2400 to 2500MHz | (dB) 20.0     | 36.5          | —             |
| VSWR              | ANT       | 2400 to 2500MHz | —             | 1.25          | 1.6           |
|                   | ANT       | 4900 to 5850MHz | —             | 1.55          | 1.9           |
|                   | LOW       | 2400 to 2500MHz | —             | 1.23          | 1.6           |
|                   | HIGH      | 4900 to 5850MHz | —             | 1.56          | 1.9           |
| Temperature range | Operating | (°C)            | −40           | —             | +85           |
|                   | Storage   | (°C)            | −40           | —             | +85           |

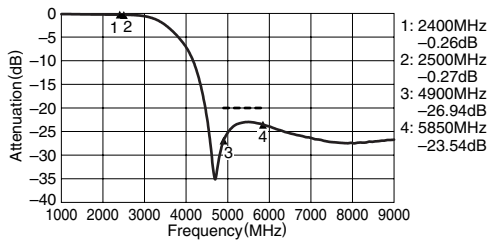
• Ta: +25±5°C

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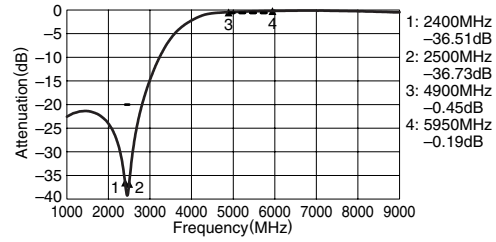
• All specifications are subject to change without notice.

## FREQUENCY CHARACTERISTICS

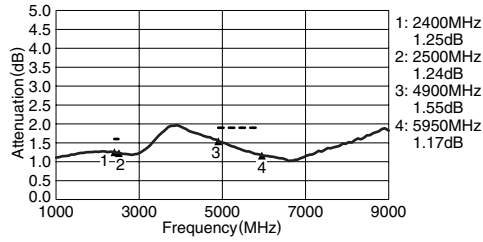
### Lo-BAND PORT S21



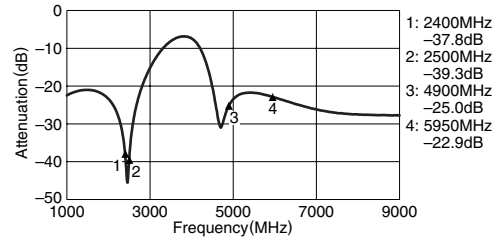
### Hi-BAND PORT S31



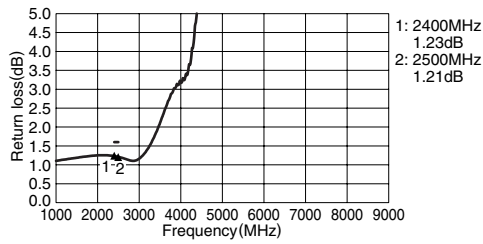
### COMMON PORT VSWR S11



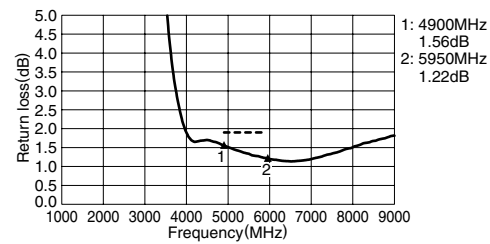
### ISOLATION S23



### Lo-BAND PORT VSWR S22



### Hi-PORT VSWR S33

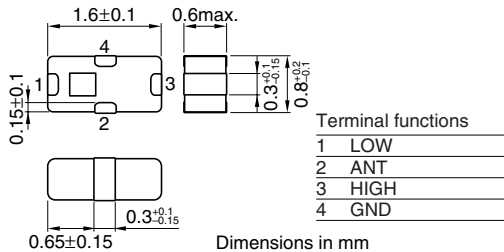


# Multilayer Chip Diplexers For 2.4/5GHz W-LAN

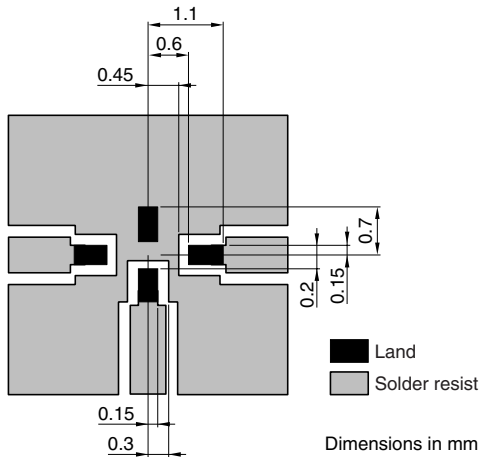
Conformity to RoHS Directive

DPX Series DPX165950DT-8018A1

## SHAPES AND DIMENSIONS



## RECOMMENDED PC BOARD PATTERNS



Line width is designed to match 50Ω characteristic impedance depending on PCB material and thickness.

## ELECTRICAL CHARACTERISTICS

| Item              | Port      | Frequency range  |      | Minimum value | Typical value | Maximum value |
|-------------------|-----------|------------------|------|---------------|---------------|---------------|
| Insertion loss    | LOW       | 2400 to 2500MHz  | (dB) | —             | 0.57          | 0.8           |
|                   | HIGH      | 4900 to 5950MHz  | (dB) | —             | 0.67          | 0.9           |
| Attenuation       | LOW       | 4800 to 6000MHz  | (dB) | 20.0          | 24.4          | —             |
|                   | LOW       | 7200 to 7500MHz  | (dB) | 20.0          | 26.4          | —             |
|                   | HIGH      | 1800 to 2500MHz  | (dB) | 20.0          | 26.3          | —             |
|                   | HIGH      | 9800 to 11900MHz | (dB) | 20.0          | 32.1          | —             |
| VSWR              | LOW       | 2400 to 2500MHz  |      | —             | 1.51          | 2.0           |
|                   | HIGH      | 4900 to 5950MHz  |      | —             | 1.63          | 2.0           |
| Temperature range | Operating |                  | (°C) | −40           | —             | +85           |
|                   | Storage   |                  | (°C) | −40           | —             | +85           |

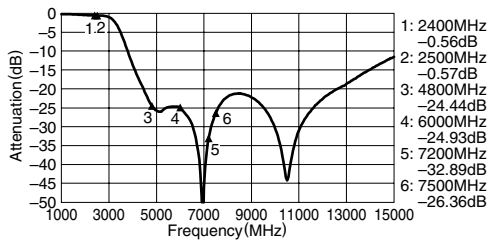
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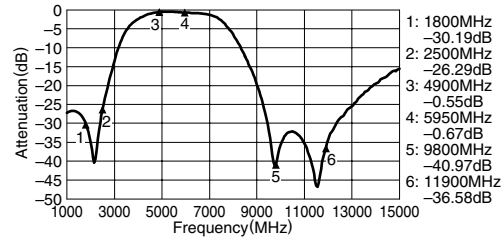
• All specifications are subject to change without notice.

## FREQUENCY CHARACTERISTICS

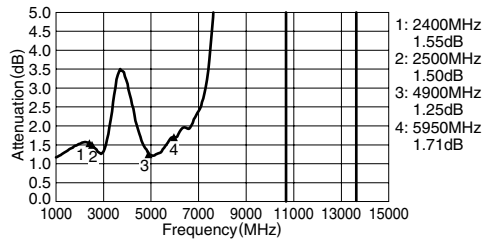
### Lo-BAND PORT S21



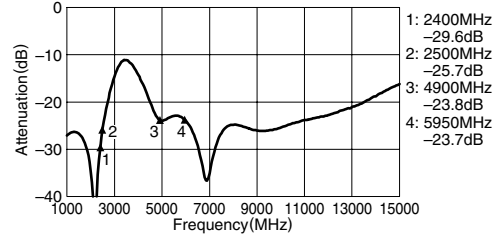
### Hi-BAND PORT S31



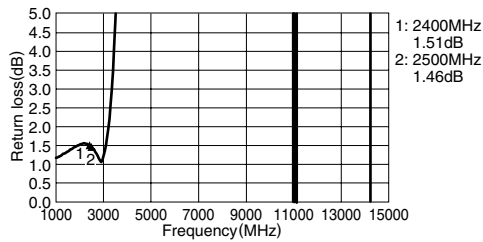
### COMMON PORT VSWR S11



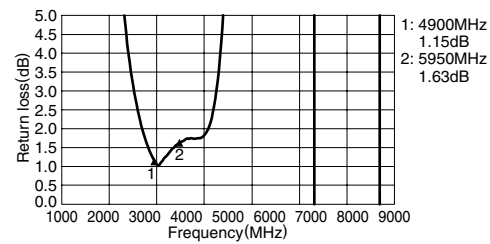
### ISOLATION S23



### Lo-BAND PORT VSWR S22



### Hi-PORT VSWR S33

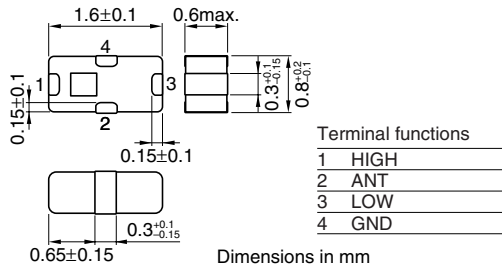


# Multilayer Chip Diplexers For 2.4/5GHz W-LAN

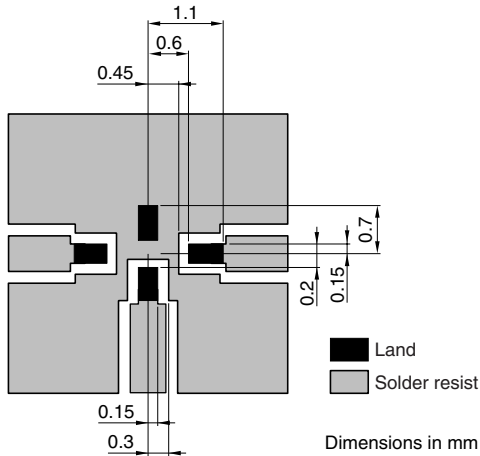
Conformity to RoHS Directive

DPX Series DPX165950DT-8118A1

## SHAPES AND DIMENSIONS



## RECOMMENDED PC BOARD PATTERNS



Line width is designed to match 50Ω characteristic impedance depending on PCB material and thickness.

## ELECTRICAL CHARACTERISTICS

| Item              | Port      | Frequency range  |      | Minimum value | Typical value | Maximum value |
|-------------------|-----------|------------------|------|---------------|---------------|---------------|
| Insertion loss    | LOW       | 2400 to 2500MHz  | (dB) | —             | 0.51          | 0.8           |
|                   | HIGH      | 4900 to 5950MHz  | (dB) | —             | 0.64          | 0.9           |
| Attenuation       | LOW       | 4800 to 6000MHz  | (dB) | 20.0          | 23.4          | —             |
|                   | LOW       | 7200 to 7500MHz  | (dB) | 20.0          | 27.9          | —             |
|                   | HIGH      | 1800 to 2500MHz  | (dB) | 20.0          | 27.1          | —             |
|                   | HIGH      | 9800 to 11900MHz | (dB) | 20.0          | 32.0          | —             |
|                   | HIGH      | 4900 to 5950MHz  |      | —             | 1.5           | 2.0           |
| VSWR              | LOW       | 2400 to 2500MHz  |      | —             | 1.39          | 2.0           |
|                   | HIGH      | 4900 to 5950MHz  |      | —             | 1.5           | 2.0           |
| Temperature range | Operating |                  | (°C) | −40           | —             | +85           |
|                   | Storage   |                  | (°C) | −40           | —             | +85           |

• Ta: +25±5°C

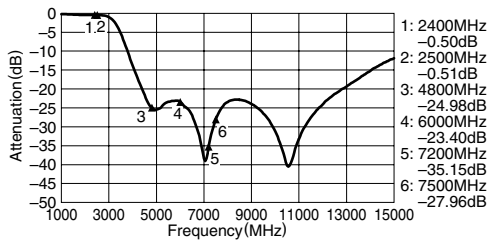
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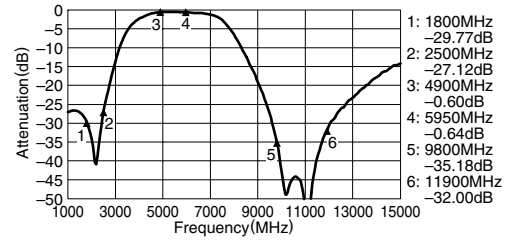


## FREQUENCY CHARACTERISTICS

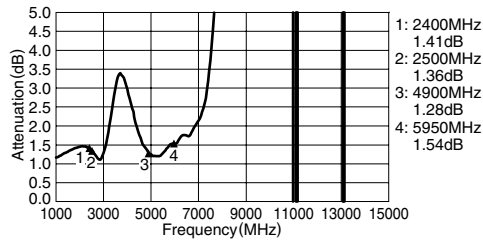
### Lo-BAND PORT S21



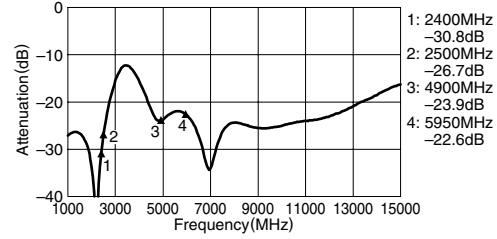
### Hi-BAND PORT S31



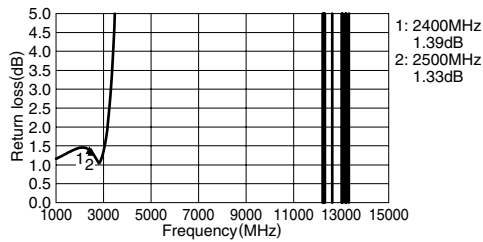
### COMMON PORT VSWR S11



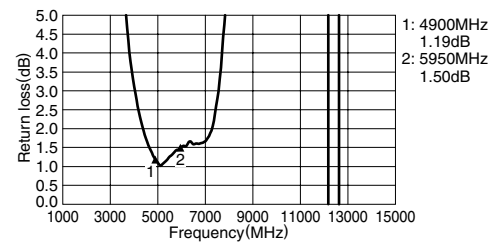
### ISOLATION S23



### Lo-BAND PORT VSWR S22



### Hi-PORT VSWR S33



# AMEYA360

## Components Supply Platform

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