Jul. 2016 Ver.3.0N
TDK Corporation

Multilayer Diplexer

For 2.4GHz W-LAN & Bluetooth / 5GHz W-LAN

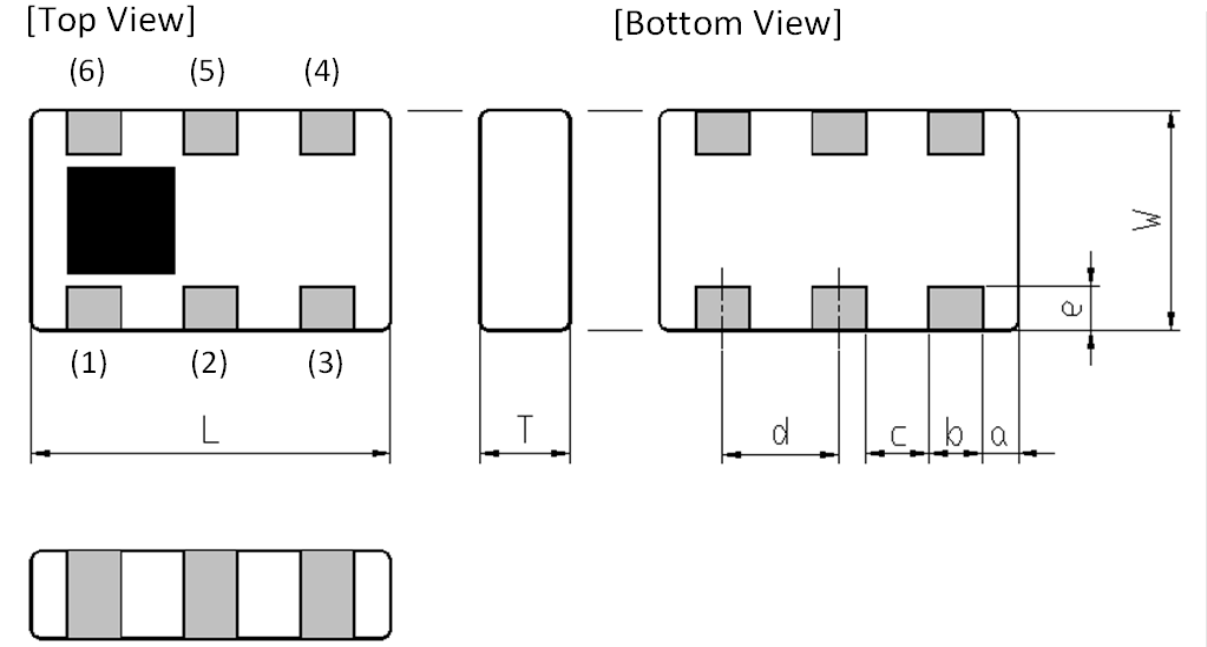
DPX Series 1.6x0.8mm [EIA 0603] TYPE

P/N: **DPX165950DT-8045A1**

Jul. 2016 Ver.3.0N
TDK Corporation

DPX165950DT-8045A1

SHAPES AND DIMENSIONS



Dimensions (mm)

L	W	T	a	b	c	d	e
1.60 +/-0.15	0.80 +/-0.15	0.60 Max	0.10 +/-0.10	0.30 +/-0.10	0.25 +/-0.10	0.55 +/-0.10	0.15 +/-0.10

Terminal functions

(1)	GND
(2)	Common Port
(3)	GND

(4)	High-Band Port
(5)	GND
(6)	Low-Band Port

TEMPERATURE RANGE

Operating temperature	Storage temperature
–40 to +90 °C	–40 to +90 °C

Jul. 2016 Ver.3.0N
TDK Corporation

DPX165950DT-8045A1

■ ELECTRICAL CHARACTERISTICS

(Measurement)

Low-Band

Parameter	Frequency (MHz)	TDK Spec		
		Min.	Typ.	Max.
Insertion Loss (dB)	2400 to 2500	-	0.35	0.55
VSWR	2400 to 2500	-	1.20	2.0
Attenuation (dB)	4800 to 5000	30	37	-
	7200 to 7500	30	33	-
Isolation (dB)	4900 to 5950	28	30	-

Ta = +25+/-5°C

High-Band

Parameter	Frequency (MHz)	TDK Spec		
		Min.	Typ.	Max.
Insertion Loss (dB)	4900 to 5950	-	0.60	0.80
VSWR	4900 to 5950	-	1.52	2.0
Attenuation (dB)	30 to 2700	32	36	-
	9800 to 11900	15	19	-
	14700 to 17850	11	15	-
Isolation (dB)	30 to 2700	32	36	-

Ta = +25+/-5°C

Common

Parameter	Frequency (MHz)	TDK Spec		
		Min.	Typ.	Max.
VSWR	2400 to 2500	-	1.27	2.0
	4900 to 5950	-	1.43	2.0

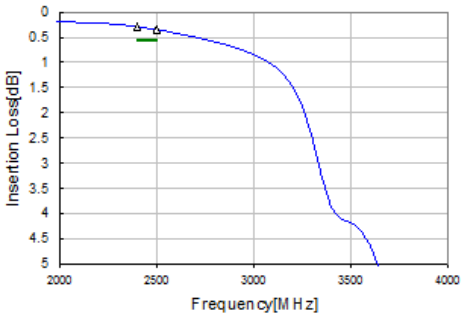
Ta = +25+/-5°C

Jul. 2016 Ver.3.0N
TDK Corporation

DPX165950DT-8045A1

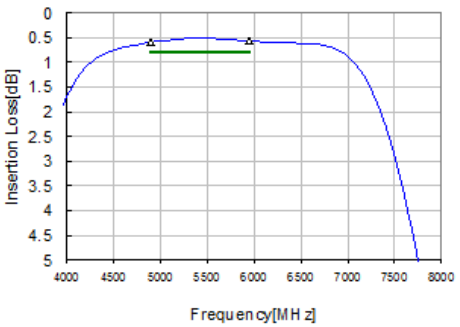
FREQUENCY CHARACTERISTICS

Insertion Loss (Low-Band)



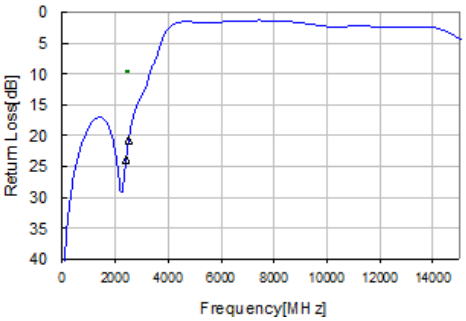
Insertion Loss		
2400 MHz	0.29	dB
2500 MHz	0.35	dB

Insertion Loss (High-Band)



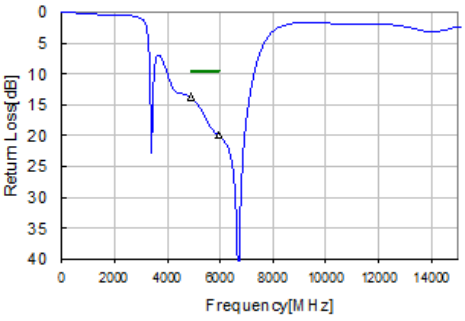
Insertion Loss		
4900 MHz	0.60	dB
5950 MHz	0.57	dB

Return Loss (Low-Band)



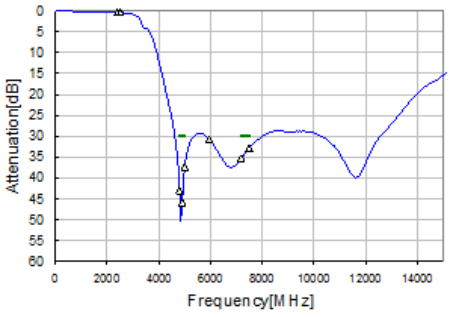
2400 MHz	23.96	dB
2500 MHz	20.72	dB

Return Loss (high-Band)



4900 MHz	13.74	dB
5950 MHz	19.97	dB

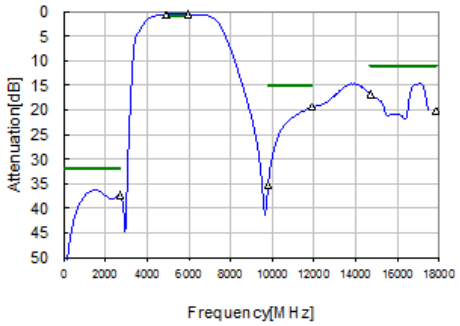
Attenuation (Low-Band)



Insertion Loss		
2400 MHz	0.29	dB
2500 MHz	0.35	dB

Attenuation		
4800 MHz	43.03	dB
5000 MHz	37.37	dB
7200 MHz	35.26	dB
7500 MHz	32.84	dB
4900 MHz	45.80	dB
5950 MHz	30.78	dB

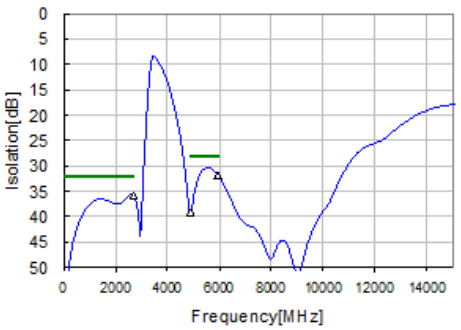
Attenuation (High-Band)



Insertion Loss		
4900 MHz	0.60	dB
5950 MHz	0.57	dB

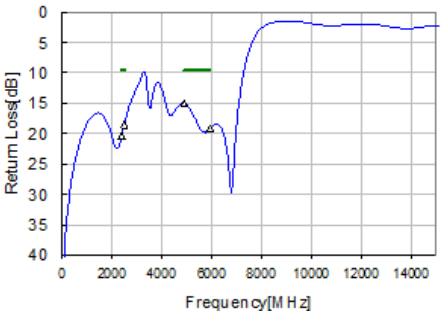
Attenuation		
30 MHz	80.00	dB
2700 MHz	37.32	dB
9800 MHz	35.39	dB
11900 MHz	19.42	dB
14700 MHz	16.78	dB
17850 MHz	20.15	dB

Isolation



30 MHz	81.0	dB
2700 MHz	35.8	dB
4900 MHz	39.1	dB
5950 MHz	31.9	dB

Common port Return Loss



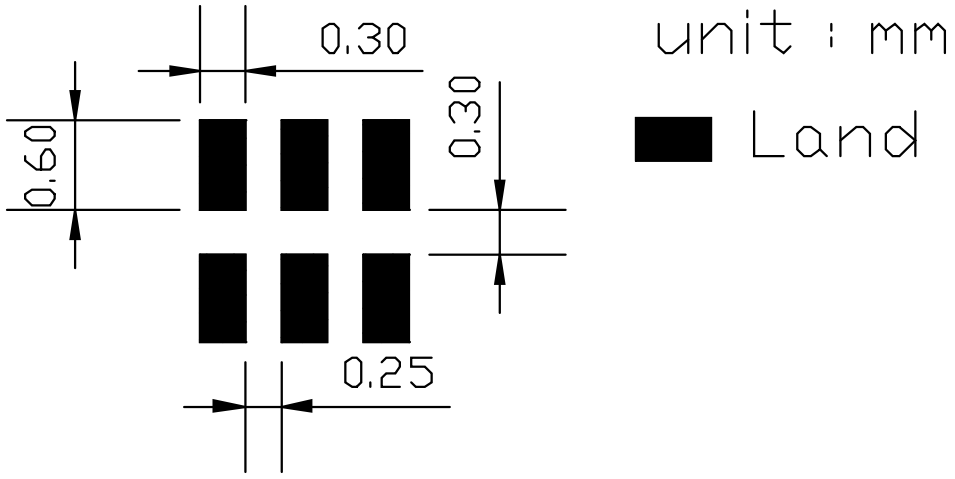
2400 MHz	20.34	dB
2500 MHz	18.56	dB

4900 MHz	15.06	dB
5950 MHz	19.14	dB

Jul. 2016 Ver.3.0N
TDK Corporation

DPX165950DT-8045A1

RECOMMENDED LAND PATTERN



ENVIRONMENT INFORMATION

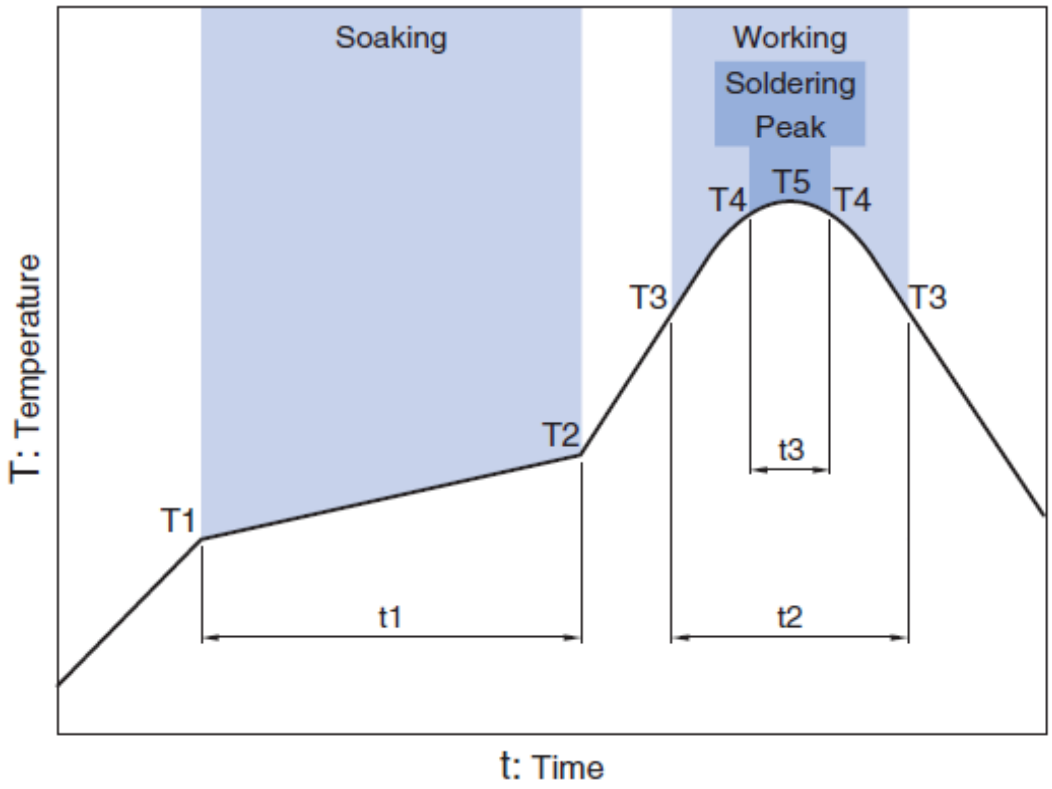
RoHS Statement
RoHS Compliance

Jul. 2016 Ver.3.0N
TDK Corporation

DPX165950DT-8045A1

■ RECOMMENDED REFLOW PROFILE

Pb free solder



Soaking			Working		Soldering		Peak
Temp.		Time	Temp.	Time	Temp.	Time	Temp.
T1	T2	t1	T3	t2	T4	t3	T5
150°C	180°C	60 to 120sec	230°C	more than 30sec	247 to 253°C	within 10sec	260°C Max.

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 specification sheet 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 specification sheet.

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.