



Jul. 2018 Ver.1.3a
TDK Corporation

Multilayer Diplexer

For LTE

DPX Series

2520 TYPE

P/N: **DPX255925DT-5045F3**

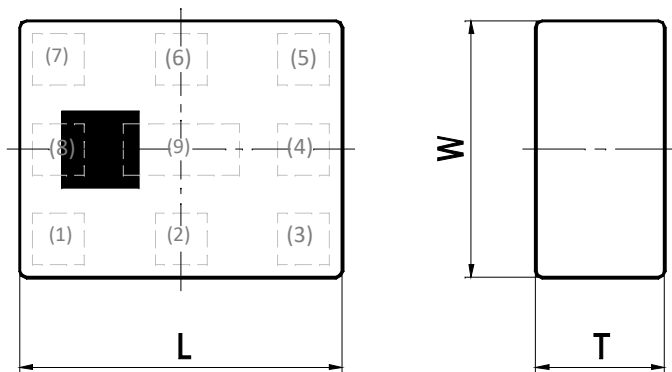
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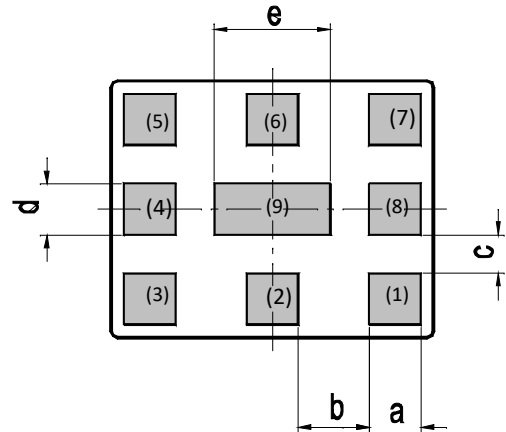
DPX255925DT-5045F3

■ SHAPES AND DIMENSIONS

[Top View]



[Bottom View]



Dimensions (mm)

L	W	T	a	b	c	d	e
2.50	2.00	0.65	0.40	0.55	0.30	0.40	0.90
+/-0.15	+/-0.15	Max	+/-0.10	+/-0.10	+/-0.10	+/-0.10	+/-0.15

Terminal functions

(1)	GND
(2)	Common Port
(3)	GND
(4)	GND
(5)	High-Band Port

(6)	GND
(7)	Low-Band Port
(8)	GND
(9)	GND

■ TERMINATION FINISH

Material
Ag

- All specifications are subject to change without notice.

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TDK Corporation**DPX255925DT-5045F3****ELECTRICAL CHARACTERISTICS**

(Measurement)

Low-Band

Parameter	Frequency (MHz)	TDK Spec		
		Min.	Typ.	Max.
Insertion Loss (dB)	617 to 960	-	0.08	0.40
	1427 to 1661	-	0.15	0.45
	1710 to 2170	-	0.23	0.45
	2300 to 2496	-	0.32	0.60
	2496 to 2690	-	0.48	0.65
Insertion Loss (dB) (-40 to +85 °C)	617 to 960	-	-	0.45
	1427 to 1661	-	-	0.50
	1710 to 2170	-	-	0.50
	2300 to 2496	-	-	0.65
	2496 to 2690	-	-	0.75
VSWR	617 to 960	-	1.17	1.50
	1427 to 2690	-	1.25	1.65
Attenuation (dB)	3300 to 3400	15	21	-
	3400 to 3800	23	28	-
	5150 to 5925	28	32	-

Ta = +25+/-5°C

High-Band

Parameter	Frequency (MHz)	TDK Spec		
		Min.	Typ.	Max.
Insertion Loss (dB)	3300 to 3400	-	0.88	1.40
	3400 to 3600	-	0.62	0.80
	3600 to 3800	-	0.46	0.70
	5150 to 5925	-	0.40	0.60
Insertion Loss (dB) (-40 to +85 °C)	3300 to 3400	-	-	1.70
	3400 to 3600	-	-	0.90
	3600 to 3800	-	-	0.80
	5150 to 5925	-	-	0.70
VSWR	3300 to 3400	-	1.38	2.00
	3400 to 3800	-	1.25	1.70
	5150 to 5925	-	1.43	2.00
Attenuation (dB)	617 to 960	30	33	-
	1427 to 1511	27	32	-
	1710 to 2690	23	27	-
	10300 to 11700	15	31	-
	15450 to 17550	5	10	-

Ta = +25+/-5°C

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TDK Corporation**DPX255925DT-5045F3****ELECTRICAL CHARACTERISTICS**

(Measurement)

Low - High

Parameter	Frequency (MHz)	TDK Spec		
		Min.	Typ.	Max.
Isolation (dB)	617 to 960	30	33	-
	1427 to 1661	27	32	-
	1710 to 2690	23	27	-
	3300 to 3400	15	23	-
	3400 to 3800	23	29	-
	5150 to 5925	28	31	-

Ta = +25+/-5°C

Common

Parameter	Frequency (MHz)	TDK Spec		
		Min.	Typ.	Max.
VSWR	617 to 960	-	1.15	1.50
	1427 to 2690	-	1.24	1.65
	3300 to 3400	-	1.40	2.00
	3400 to 3800	-	1.36	1.70
	5150 to 5925	-	1.40	2.00
Characteristic Impedance (ohm)		50 (Nominal)		

Ta = +25+/-5°C

MAXIMUM RATINGS

Parameter		TDK Spec		Conditions
		Min.	Max.	
Operating temperature (°C)		-40 to +85 °C		
Storage temperature (°C)		-40 to +85 °C		
Power Handling (W)	Common Port	-	1.5	CW at 698-2690MHz
		-	1	CW at 3300-3400MHz
		-	1.5	CW at 3400-5925MHz
	Low-Band Port	-	1.5	CW at 698-2690MHz
		-	4	Duty 50% at 824-960MHz
		-	2	Duty 50% at 1710-1990MHz
	High-Band Port	-	1	CW at 3300-3400MHz
-		1.5	CW at 3400-5925MHz	
Human Body Model : HBM	@Each Port (V)	-1000	1000	100pF / 1500ohm
Machine Model : MM	@Each Port (V)	-150	150	200pF / 0ohm
Charged Device Model : CDM	@Each Port (V)	-500	500	Relative humidity : 51%RH max

Ambient temperature : +25+/-5°C

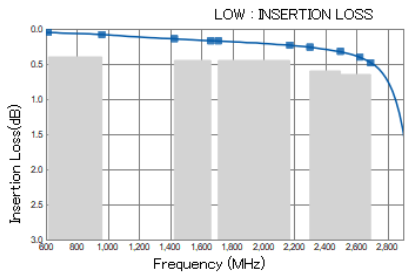
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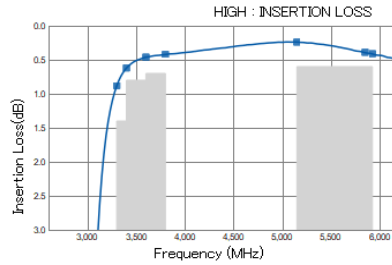
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FREQUENCY CHARACTERISTICS

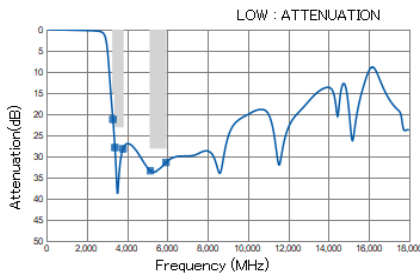
(Measurement)



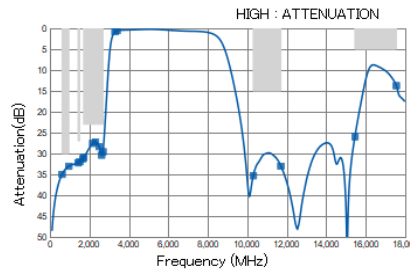
617	0.06
960	0.08
1427	0.14
1661	0.17
1710	0.17
2170	0.23
2300	0.26
2496	0.32
2620	0.40
2690	0.48



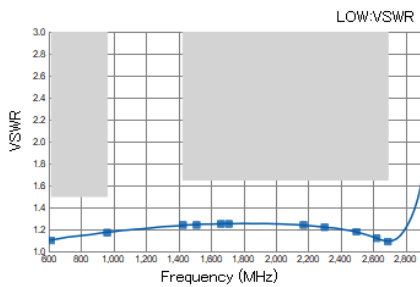
3300	0.88
3400	0.62
3600	0.46
3800	0.42
5150	0.24
5850	0.39
5925	0.41



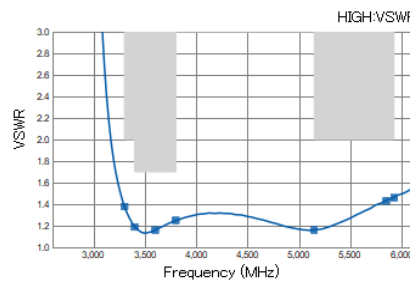
3300	21.23
3400	27.89
3800	28.21
5150	33.37
5925	31.43



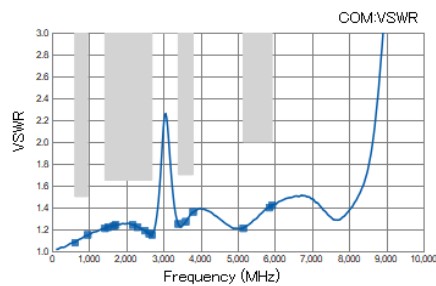
617	34.99
960	33.03
1427	32.22
1511	31.98
1661	31.26
1710	30.97
2170	27.56
2300	27.17
2496	28.35
2620	30.39
2690	29.59
3300	0.88
3400	0.62
10300	35.33
11700	33.00
15450	25.99
17850	13.75



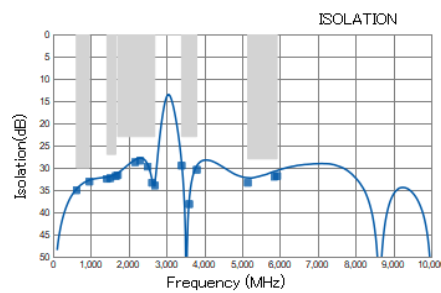
617	1.10
960	1.17
1427	1.24
1511	1.24
1661	1.25
1710	1.25
2170	1.24
2300	1.22
2496	1.18
2620	1.12
2690	1.08



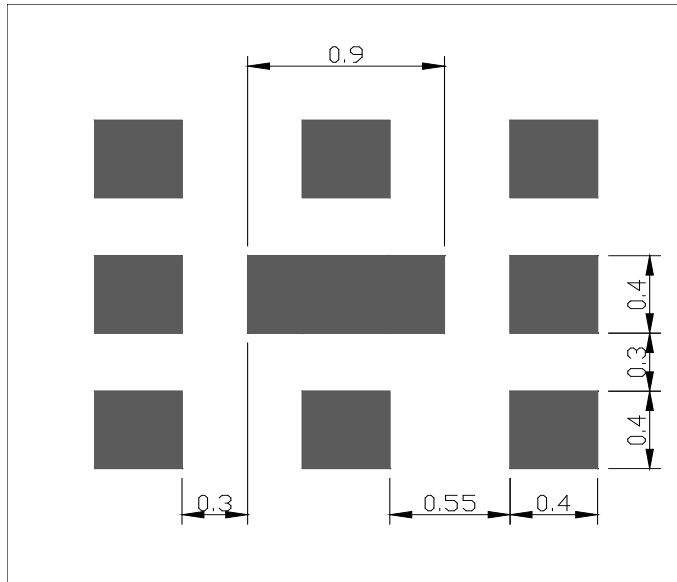
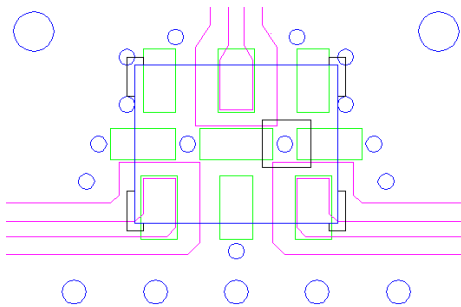
3300	1.38
3400	1.19
3600	1.16
3800	1.25
5150	1.16
5850	1.43
5925	1.46



617	1.08
960	1.15
1427	1.21
1511	1.22
1661	1.23
1710	1.24
2170	1.24
2300	1.22
2496	1.19
2620	1.16
2690	1.15
3400	1.25
3600	1.27
3800	1.26
5150	1.21

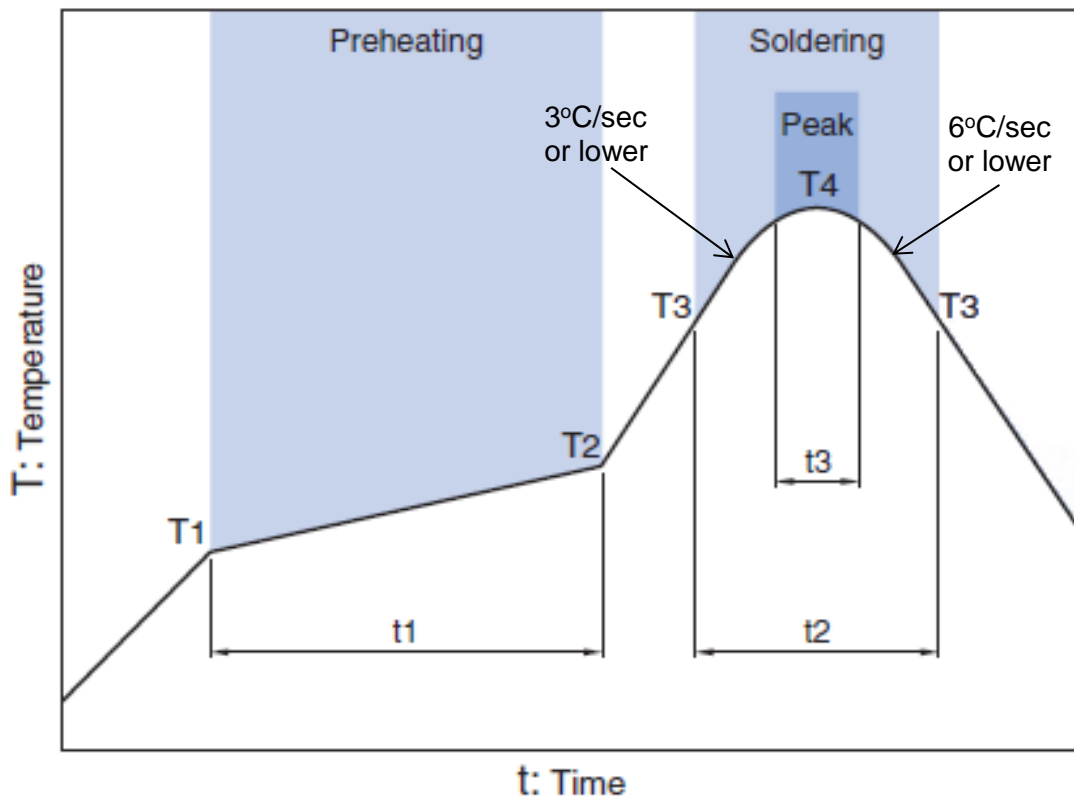


617	35.05
960	33.10
1427	32.46
1511	32.34
1661	31.85
1710	31.63
2170	28.75
2300	28.39
2496	29.72
2620	33.36
2690	33.99
3400	29.51
3600	38.17
3800	30.46
5150	33.36
5850	32.00
5925	31.85

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TDK Corporation**DPX255925DT-5045F3****RECOMMENDED LAND PATTERN****EVALUATION BOARD**

Material, Layer	Thickness
Top Resist	Resist
Copper Surface Pattern	0.035mm
FR-4	0.10mm
Copper Inner GND	0.018mm
FR-4	0.30mm
Copper Bottom GND	0.035mm

ENVIRONMENT INFORMATIONRoHS Statement
RoHS Compliance

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TDK Corporation**DPX255925DT-5045F3****RECOMMENDED REFLOW PROFILE**

Preheating			Soldering			
			Critical zone (T3 to T4)		Peak	
Temp.	Temp.	Time	Temp.	Time	Temp.	Time
T1	T2	t1	T3	t2	T4	t3 *
150°C	200°C	60 to 120sec	217°C	60 to 120sec	240 to 260°C	30 sec Max

* t3 : Time within 5°C of actual peak temperature

The maximum number of reflow is 3.

Note: Lead free solder is recommended.
Recommended solder is Sn-3.0Ag-0.5Cu. (M705 by Senju Metal Industry)

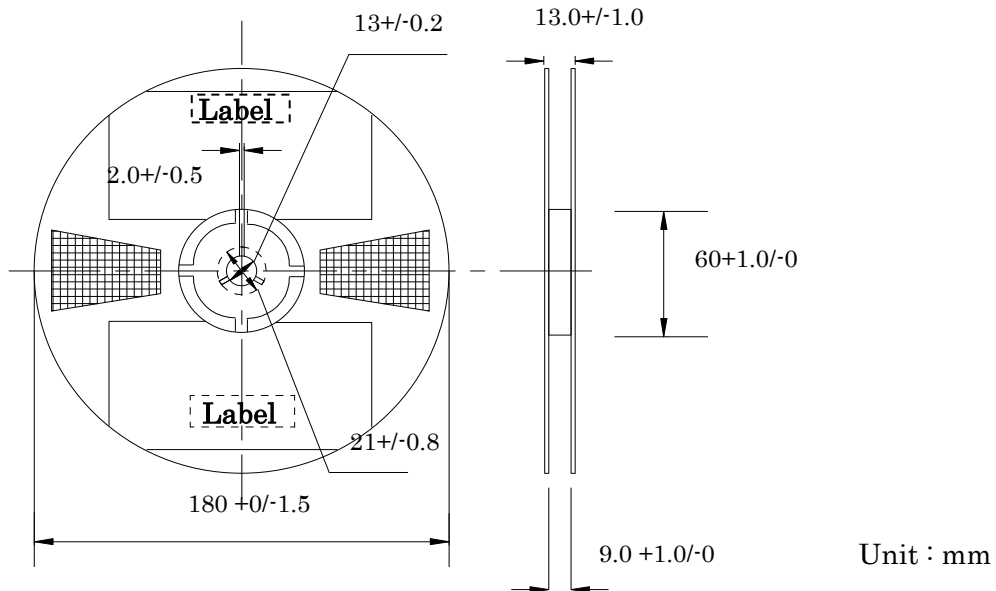
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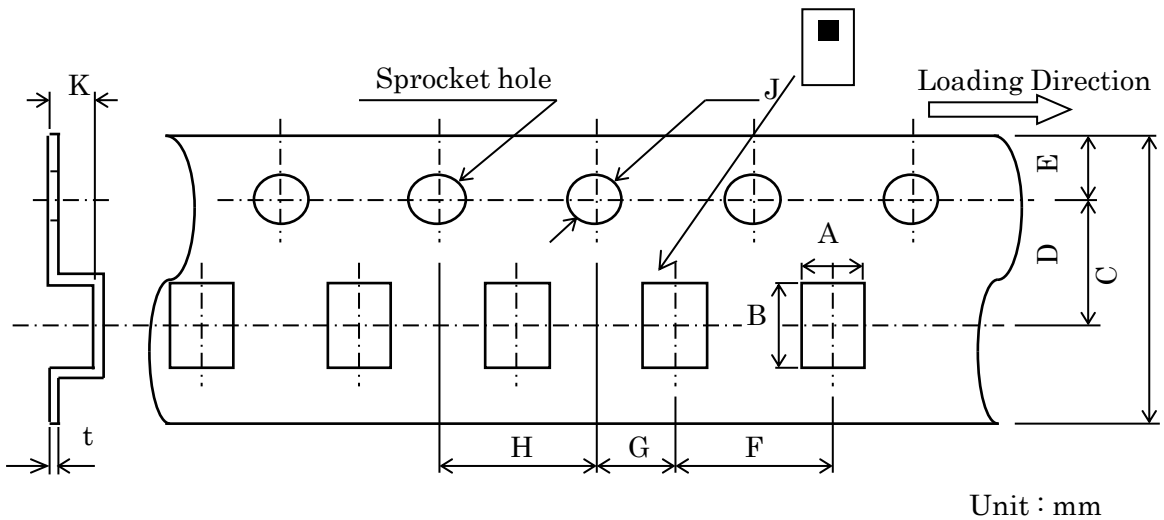
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PACKAGING STYLE

Reel Dimensions



Carrier Tape



Dimensions (mm)

A	B	C	D	E	F	G	H	J	K	t
2.2	2.7	8.0	3.5	1.75	4.0	2.0	4.0	1.5	0.85	0.25
+/-0.05	+/-0.05	+0.3/-0.1	+/-0.05	+/-0.1	+/-0.1	+/-0.05	+/-0.1	+0.1/0	MAX	+/-0.05

STANDARD PACKAGE QUANTITY (pieces/reel)
2,000

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.