



Thin-Film Balun

For 1805-1990MHz (50-100Ω)

TFS Series 0.65x0.5mm [EIA 0202] TYPE

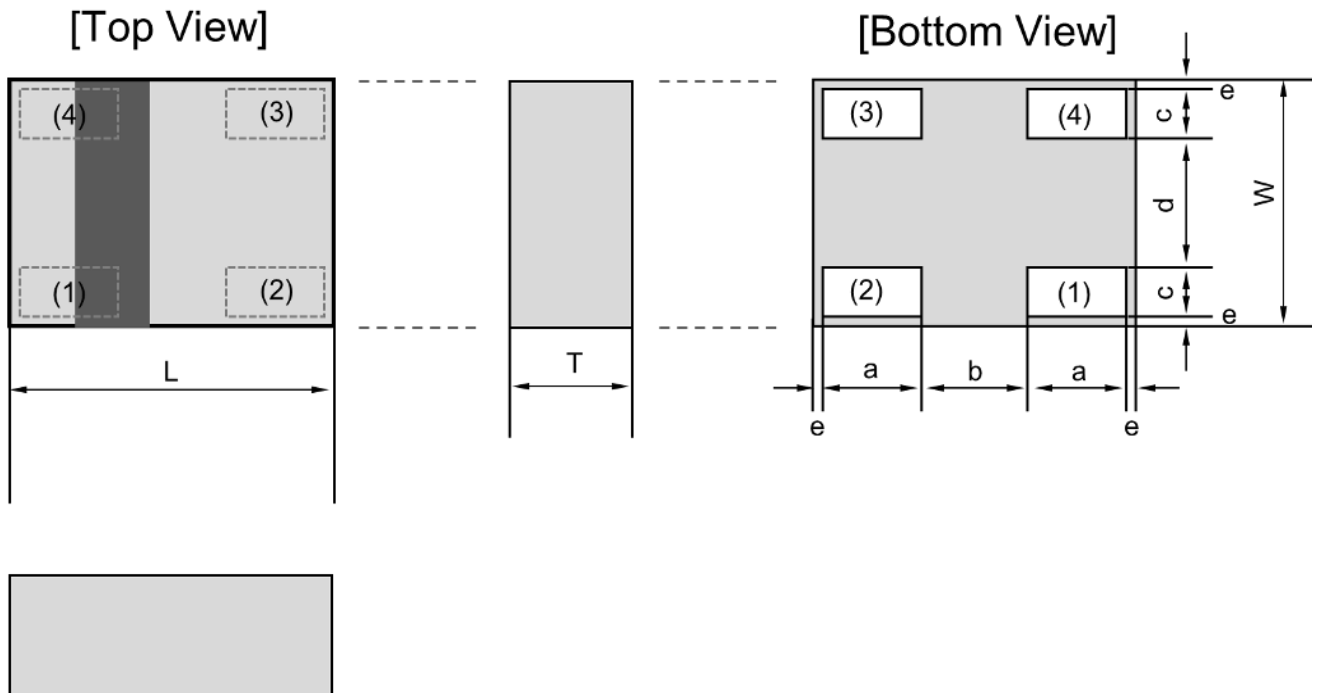
P/N: **TFSZ06051897-3317A1X**

[Features]

- Small Size (0.65mm * 0.5mm)
- Low Profile (0.25mm)

TFSZ06051897-3317A1X

■ SHAPES AND DIMENSIONS



Dimensions (mm)

L	W	T	a	b	c	d	e
0.65	0.50	0.25	0.20	0.20	0.10	0.25	0.025
+/-0.04	+/-0.04	+/-0.05	+/-0.04	+/-0.04	+/-0.04	+/-0.04	+/-0.025

Terminal functions

(1)	GND
(2)	Unbalanced Port
(3)	Balanced Port
(4)	Balanced Port

■ TEMPERATURE RANGE

Operating temperature	Storage temperature
-40 to +85 °C	-40 to +85 °C

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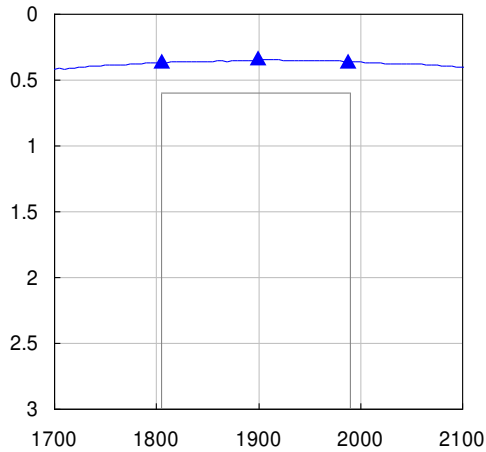
■ ELECTRICAL CHARACTERISTICS

Parameter	Frequency (MHz)	TDK spec
Unbalanced Impedance	-	50 ohm
Balanced Impedance	-	100 ohm
Unbalanced Port Return Loss	1805 to 1990	10 dB Min.
Phase Differential at Balanced Port	1805 to 1990	180 ±10deg
Amplitude Balance at Balanced Port	1805 to 1990	0 ±1.8dB
Insertion Loss Ta=+25°C	1805 to 1990	0.60 dB Max.
Insertion Loss Ta=-40 / +85°C	1805 to 1990	0.65 dB Max.

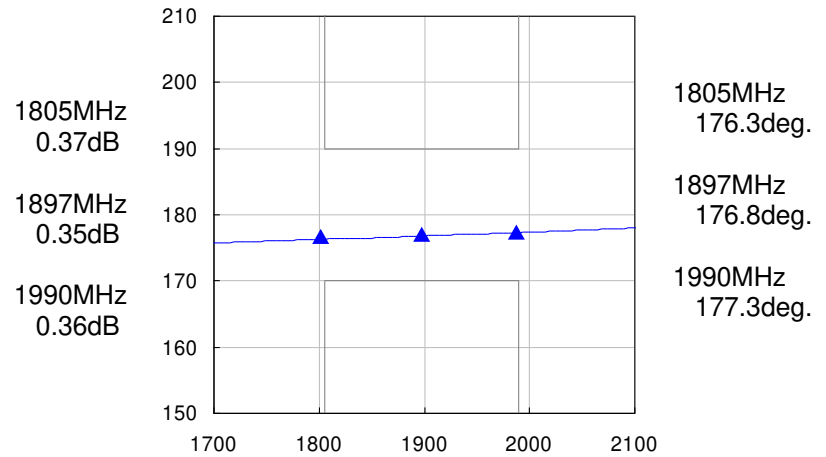
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■ FREQUENCY CHARACTERISTICS

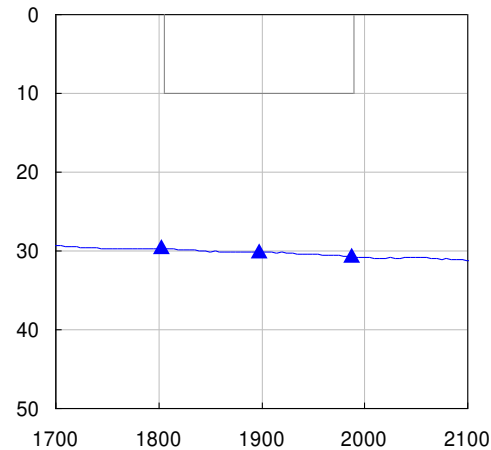
Insertion Loss



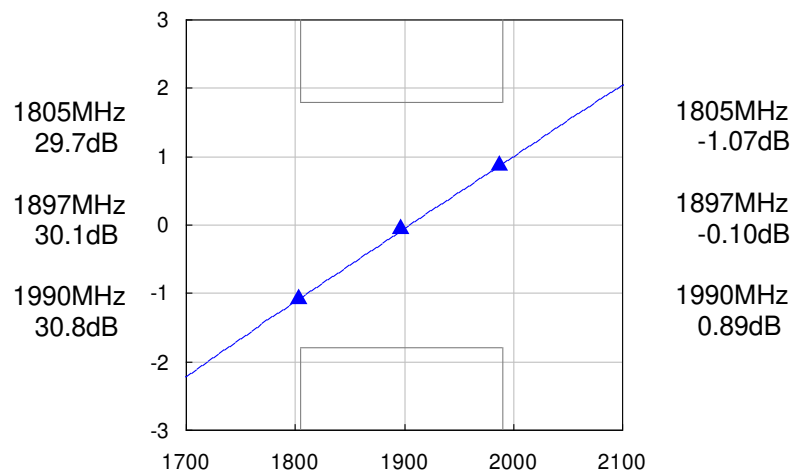
Phase Differential



Return Loss

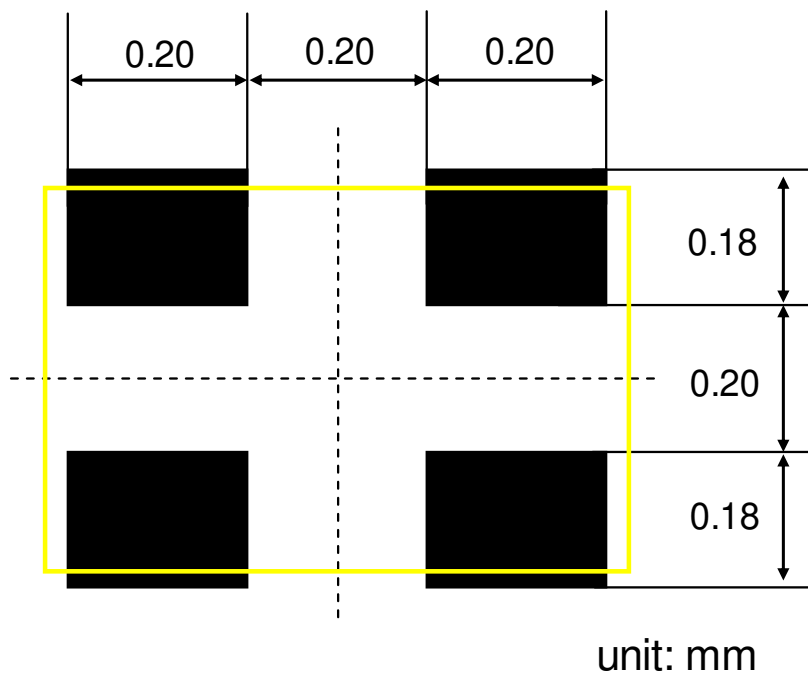


Amplitude Balance



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RECOMMENDED LAND PATTERN



Line width be designed to match 50 ohm characteristic impedance depending on PCB Material and thickness.

ENVIRONMENT INFORMATION

RoHS Statement
RoHS Compliance

Moisture Sensitivity Level (MSL) : 1

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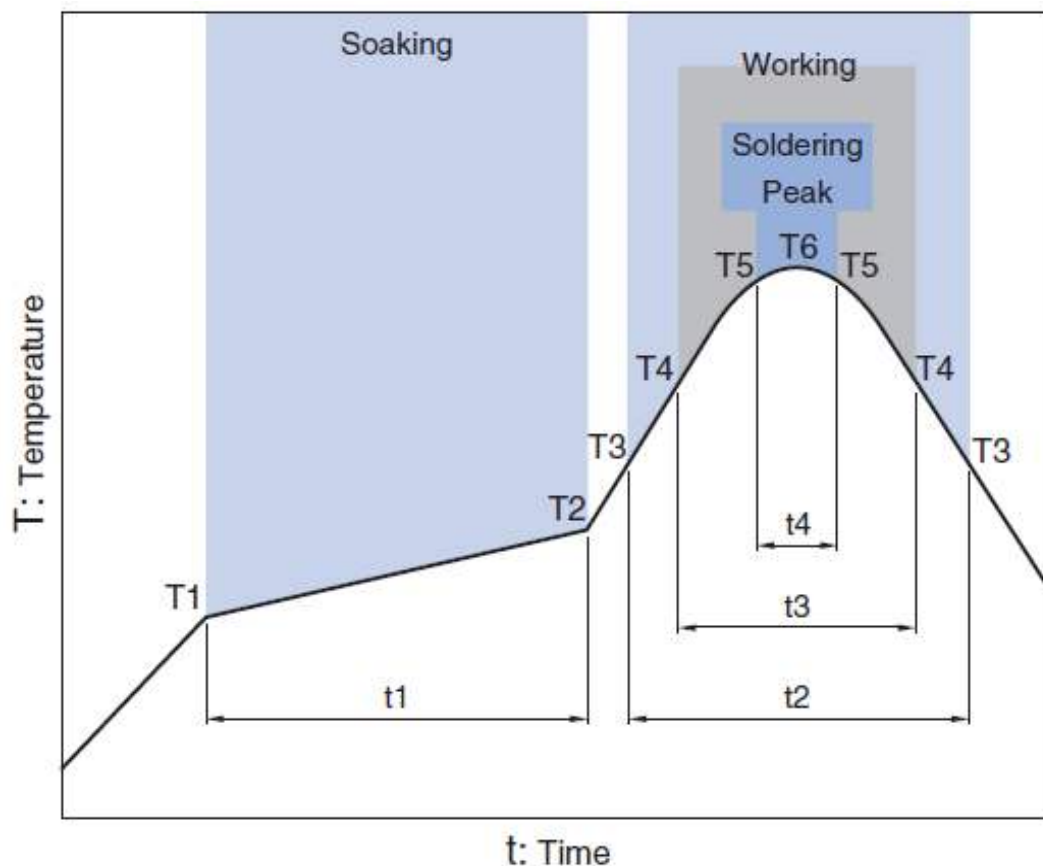
RECOMMENDED REFLOW PROFILE

In this product, the recommended soldering condition is 'reflow'.

The recommended temperature profile is shown in below.

Lead Free Reflow Soldering (Sn-3Ag-0.5Cu)

Reflow Soldering : Maximum 2 times



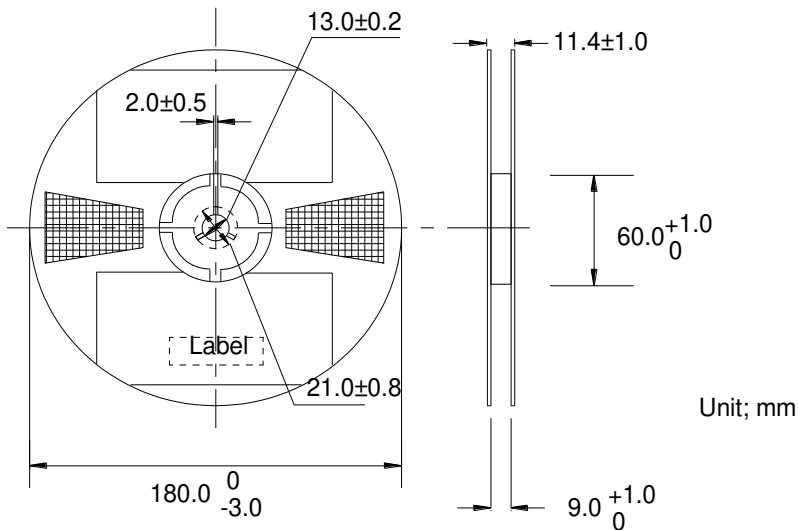
Soaking			Working			
Temp.		Time	Temp.		Time	
T1	T2	t1	T3	T4	t2	t3
150°C	180°C	60 to 120sec	217°C	230°C	60 to 150sec	more than 45sec

Soldering		Peak
Temp.	Time	Temp.
T5	t4	T6
247 to 253°C	within 10sec	260°C Max.

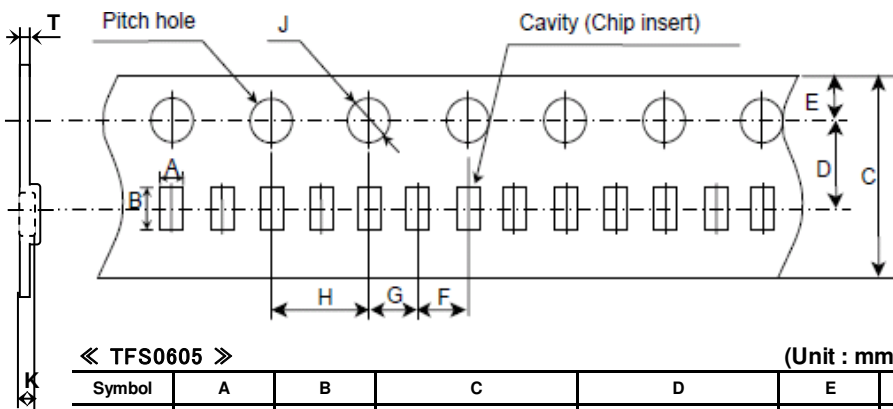
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PACKAGING STYLE

Reel Dimensions



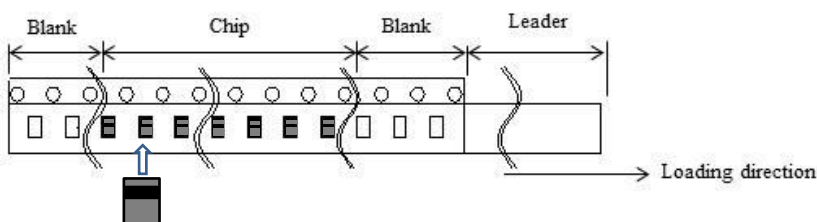
Carrier Tape



« TFS0605 » (Unit : mm)

Symbol	A	B	C	D	E	F
Dimension	0.63 ± 0.03	0.81 ± 0.03	8.0 ± 0.2	3.5 ± 0.05	1.75 ± 0.1	2.0 ± 0.05

Symbol	G	H	J	K	T
Dimension	2.0 ± 0.05	4.0 ± 0.1	Ø1.5 +0.1 0	0.34 ± 0.03	0.20 ± 0.05



STANDARD PACKAGE QUANTITY
(pieces/reel)
10,000

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

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.