



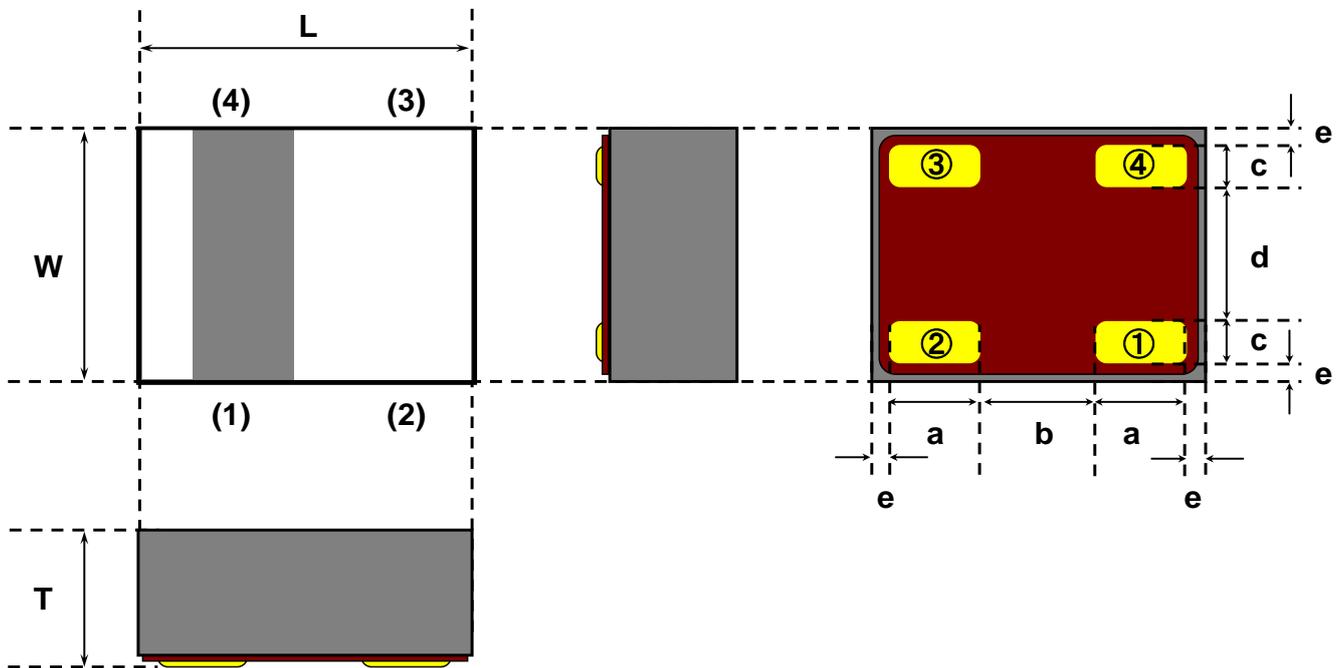
Nov. 2014 Ver.0.1  
TDK Corporation

## Thin-Film Balun

For Band1-Band3 Rx (1805-2170MHz)

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

P/N: **TF SZ06051987-3315A4**

**PRELIMINARY**Nov. 2014 Ver.0.1  
TDK Corporation**TFSZ06051987-3315A4****SHAPES AND DIMENSIONS**

Dimensions (mm)

L	W	T	a	b	c	d	e	f
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
(5)	

(6)	
(7)	
(8)	
(9)	
(10)	

**TEMPERATURE RANGE**

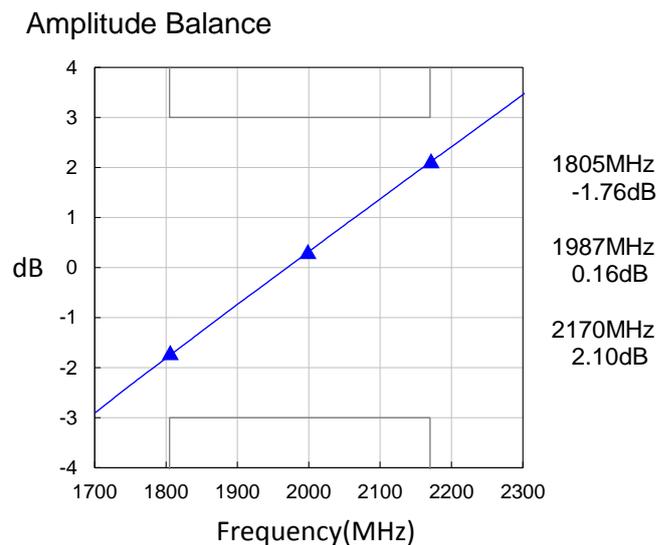
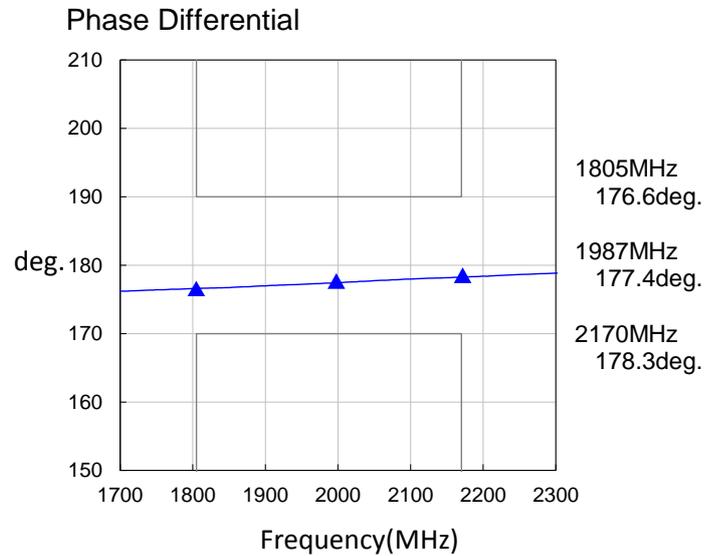
Operating temperature	Storage temperature
-40 to +85 °C	-40 to +85 °C

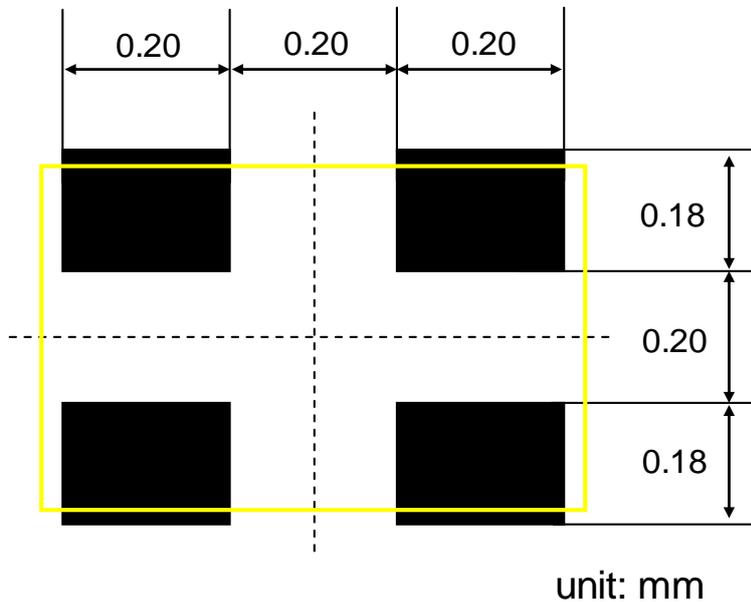
**PRELIMINARY**Nov. 2014 Ver.0.1  
TDK Corporation**TFSZ06051987-3315A4**
■ ELECTRICAL CHARACTERISTICS

( Measurement )

Parameter	Frequency (MHz)	Request			TDK Spec		
		Min.	Typ.	Max.	Min.	Typ.	Max.
Unbalanced Port Characteristic Impedance	-	50			50		
Balanced Port Characteristic Impedance	-	100			100		
Return Loss at Unbalanced Port (dB)	1805 to 2170	-	-	-	10	21.0	-
Phase Differential (deg.)	1805 to 2170	-	-	-	170	176.6	190
Amplitude Balance (dB)	1805 to 2170	-	-	-	-3.0	2.10	3.0
Insertion Loss (dB)	1805 to 2170	-	-	-	-	0.42	0.70
Power Handling (W)	-	-	-	-	-	-	-

Ta = +25+/-5°C

**PRELIMINARY**Nov. 2014 Ver.0.1  
TDK Corporation**TFSZ06051987-3315A4****FREQUENCY CHARACTERISTICS**

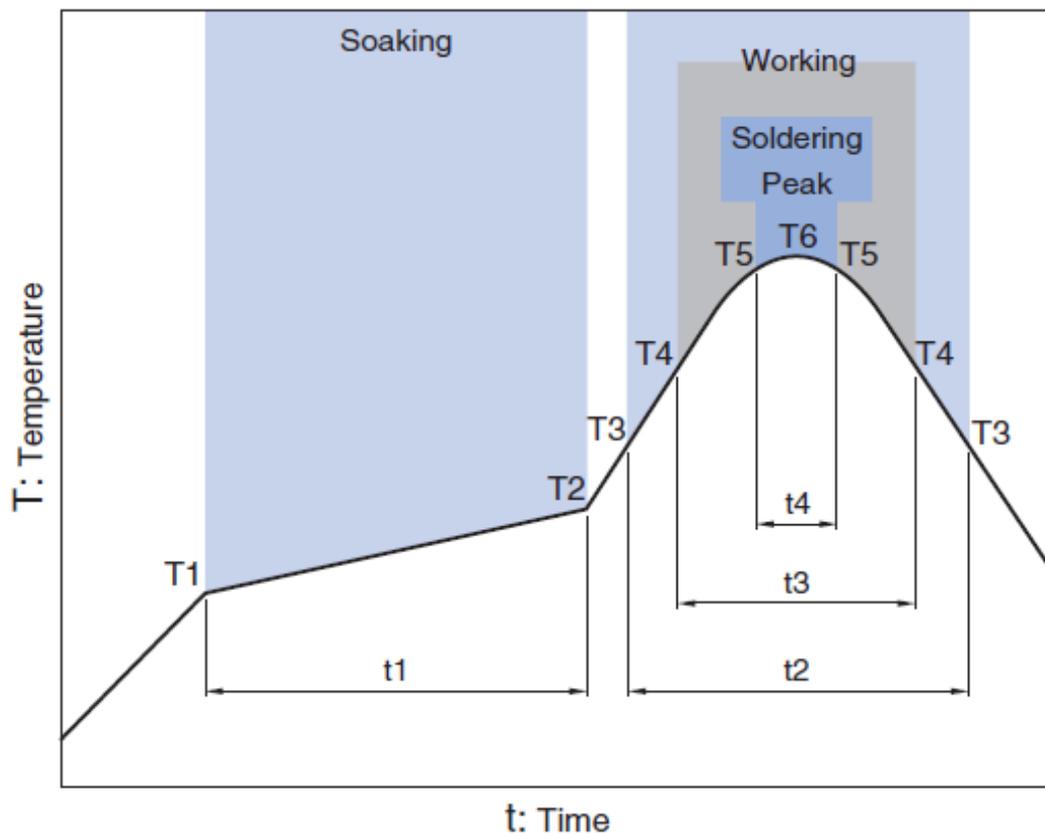
**PRELIMINARY**Nov. 2014 Ver.0.1  
TDK Corporation**TFSZ06051987-3315A4****RECOMMENDED LAND PATTERN****EVALUATION BOARD****ENVIRONMENT INFORMATION**RoHS Statement  
RoHS Compliance

Moisture Sensitivity Level (MSL) : 1

All specifications are subject to change without notice.  
TDK Technology - Proprietary and Confidential Information of TDK Group Companies

**PRELIMINARY**Nov. 2014 Ver.0.1  
TDK Corporation**TFSZ06051987-3315A4****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.



## 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.

# REVISION TABLE

## TFSZ06051987-3315A4

No.	Version	Date	PIC	Change item and changes
1	Ver.0.1	2014/11/25	ENDO Makoto	First Version
2				
3				
4				
5				
6				
7				
8				
9				
10				

Note:

These samples are marked with trial sample identification.

In mass production, this sample marking will be changed to show in the TDK full

3.2x2.5mm [EIA 1210]

3.2x1.6mm [EIA 1206]

2.5x2.0mm [EIA 1008]

2.0x1.5mm

2.0x1.25mm [EIA 0805]

1.6x0.8mm [EIA 0603]

1.4x1.1mm

1.0x0.5mm [EIA 0402]

0.65x0.5mm [EIA 0202]

0.6x0.3mm [EIA 0201]

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[78P7200-IH/F](#) [MLP2012S1R5TT](#) [ACH3218-682-TD01](#) [ACT45B-KIT](#) [NL565050T-822J-PF](#) [C1005JB1H471K050BA](#)  
[C1608CH1H151J080AA](#) [C2012JB1H105K125AB](#) [C4532NP01H154J250KA](#) [SLF12575T-680M2R0-PF](#) [CD75-B2GA331KYGKA](#)  
[CLF10040T-221M](#) [CLF12555T-220M](#) [R22095\\*REPAIRED](#) [MLF1005LR12K](#) [MLP2520S1R0ST](#) [MLP2520S1R5MT](#) [VLS252015T-](#)  
[3R3M1R0](#) [VLS4012T-150MR65](#) [ZCAT-KIT](#) [MPZ2012-KIT](#) [NLV32T-R27J-EFD](#) [CKCM25C0G2A101K060AK](#) [CLF10040T-4R7N](#)  
[VLS252010HBX-R24M-1](#) [CGJ2B2X7R1C222K](#) [CGA8M3X7R1H475K](#) [CGA9M1X7T2J334K](#) [CGA8P3X7T2E105M/SOFT](#)  
[CGA6J4C0G2J392J](#) [CGA6M3X7R2E154K](#) [CGA3E3C0G2E181J](#) [CGA2B2C0G1H331J](#) [CEU-AC01-E6-KIT](#) [CERB3UX5R0G105M](#)  
[RLF12545T-100M5R1-PF](#) [PFE500F28/T](#) [CCT406393-600-36-02](#) [PFC3819QM-181K09B-00](#) [VLF3010AT-100MR49](#) [MMZ0603D330C](#)  
[MPZ2012S102ATD25](#) [MLG1608B18NJ](#) [UHV-251A](#)